

This letter forwards proprietary information in accordance with 10 CFR 2.390. The balance of this letter may be considered non-proprietary upon removal of Attachment 3.

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CENGSM

a joint venture of



Constellation
Energy



**NINE MILE POINT
NUCLEAR STATION**

January 19, 2011

U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTENTION: Document Control Desk

SUBJECT: Nine Mile Point Nuclear Station
Unit No. 2; Docket No. 50-410

Response to Request for Additional Information Regarding Nine Mile Point Nuclear Station, Unit No. 2 – Re: The License Amendment Request for Extended Power Uprate Operation (TAC No. ME1476) – Loss of Coolant Accident Analysis

REFERENCE: (a) Letter from K. J. Polson (NMPNS) to Document Control Desk (NRC), dated May 27, 2009, License Amendment Request (LAR) Pursuant to 10 CFR 50.90: Extended Power Uprate

Nine Mile Point Nuclear Station, LLC (NMPNS) hereby transmits supplemental information in support of a previously submitted request for amendment to Nine Mile Point Unit 2 (NMP2) Renewed Operating License (OL) NPF-69. The request, dated May 27, 2009 (Reference a), proposed an amendment to increase the power level authorized by OL Section 2.C.(1), Maximum Power Level, from 3467 megawatts-thermal (MWt) to 3988 MWt.

During a conference call conducted on November 18, 2010, the NRC requested additional information regarding the limiting small break and large break loss of coolant accident (LOCA) analyses performed to support the Extended Power Uprate License Amendment Request. This request was clarified in an NRC E-mail sent on November 24, 2010, and a conference call conducted on December 16, 2010. Attachment 1 (non-proprietary) and Attachment 3 (proprietary) provide:

- 1) Plots for water level, reactor vessel pressure, break flow rates, peak clad temperature (PCT), heat transfer coefficient, emergency core cooling system flow rates, and
- 2) Values for enthalpy and pressure in the hot node at various times post-accident.

*Adol
NRR*

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Document Control Desk

January 19, 2011

Page 3

Attachments:

1. Enclosure 2 to GE-PPO-1GYEF-KG1-575 R1, NRC Requested LOCA Plots and Data (Non-Proprietary)
2. Affidavit from GE-Hitachi Nuclear Energy Americas LLC (GEH) Justifying Withholding Proprietary Information
3. Enclosure 1 to GE-PPO-1GYEF-KG1-575 R1, NRC Requested LOCA Plots and Data (Proprietary)

cc: NRC Regional Administrator, Region I
NRC Resident Inspector
NRC Project Manager
A. L. Peterson, NYSERDA (w/o Attachment 3)

ATTACHMENT 1

**ENCLOSURE 2 TO GE-PPO-1GYEF-KG1-575 R1
NRC REQUESTED LOCA PLOTS AND DATA
(NON-PROPRIETARY)**

Certain information, considered proprietary by GE-Hitachi Nuclear Energy Americas LLC, has been deleted from this Attachment. The deletions are identified by double square brackets.

ENCLOSURE 2

GE-PPO-1GYEF-KG1-575 R1

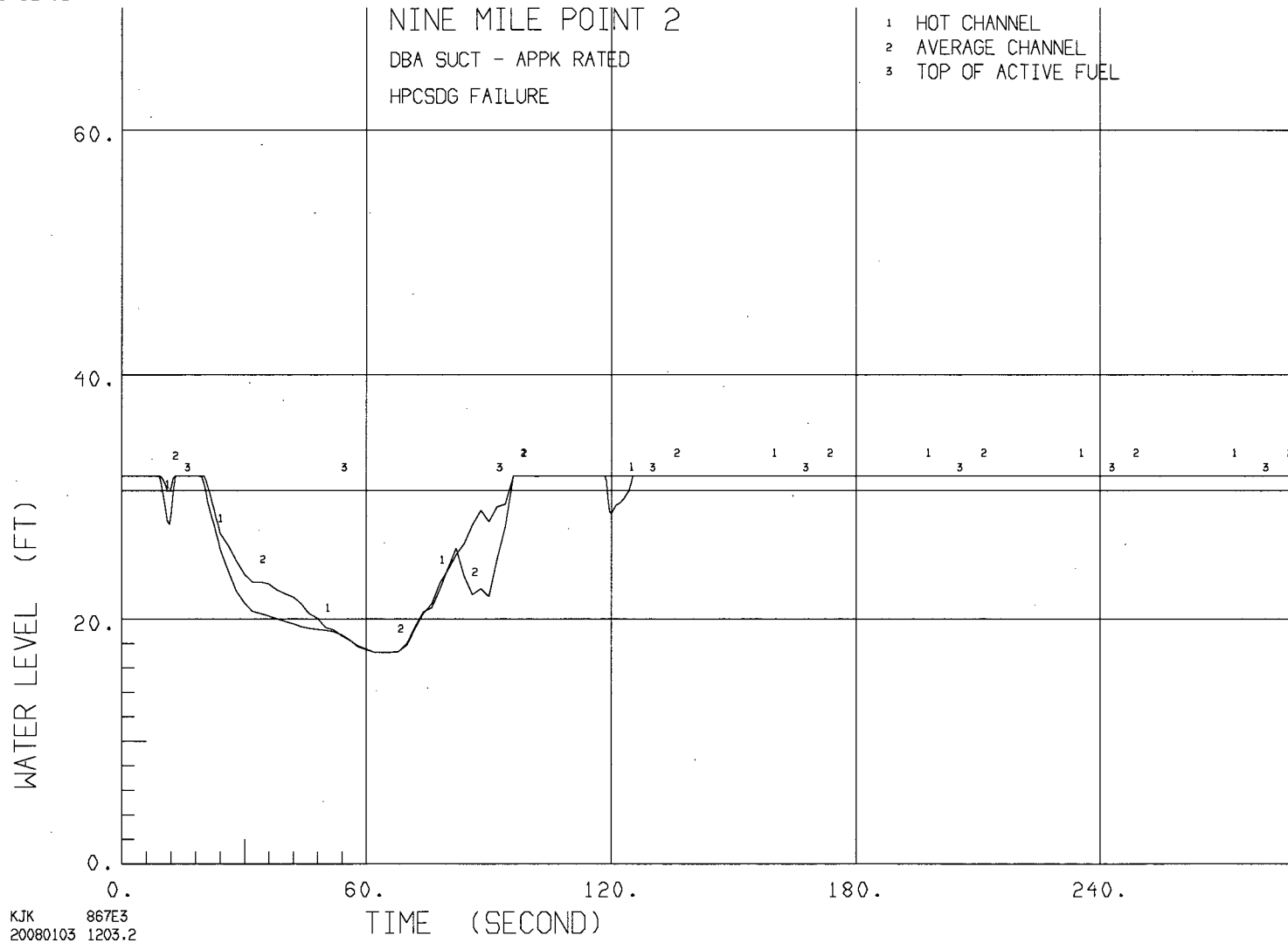
NRC Requested LOCA plots and data (Non-proprietary)

NON-PROPRIETARY NOTICE

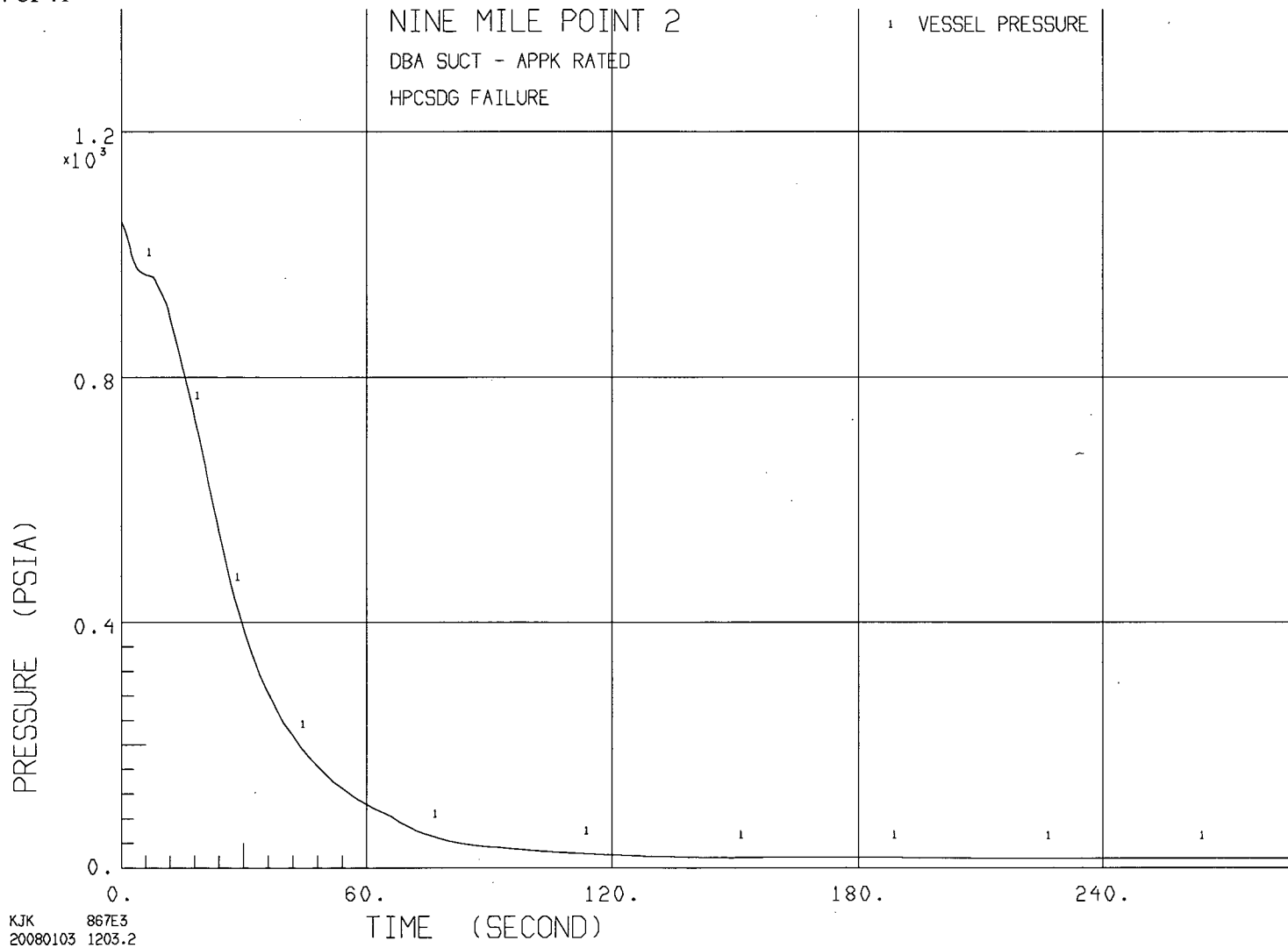
This is a non-proprietary version of the Enclosure 1 of GE-PPO-1GYEF-KG1-575 R1 which has the proprietary information removed. Portions of the document that have been removed are indicated by an open and closed bracket as shown here [[]].

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GE-PPO-1GYEF-KG1-575 R1 Non-proprietary Information
Enclosure 2
Page 2 of 41

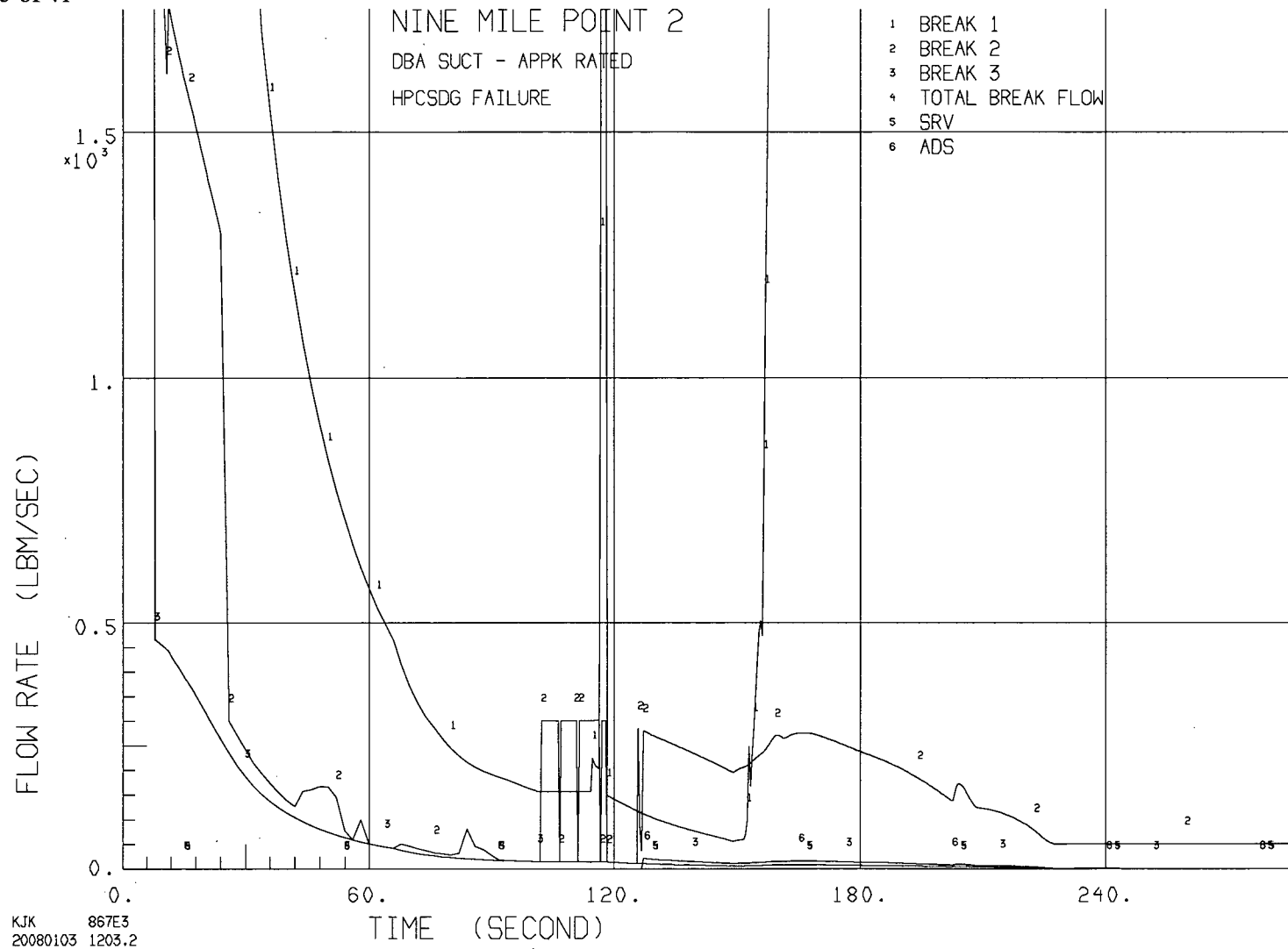
Based on a conference call held on November 18, 2010, subsequent email request from R Guzman (NRC) to T Darling (Nine Mile Point Nuclear Station) dated November 24, 2010 and clarification call held on December 16, 2010, the following plots (water level, pressure, break flow, peak cladding temperature (PCT), heat transfer coefficient (HTC), and Emergency Core Cooling System (ECCS) flow rate) for the limiting large and small break Loss of Coolant Accident (LOCA) events are being provided for NRC review. The email dated November 24, 2010, also requested sink temperature at PCT location. During a clarification call held December 16, 2010, GEH agreed to provide enthalpy and pressure in the hot node as an alternative to temperature.



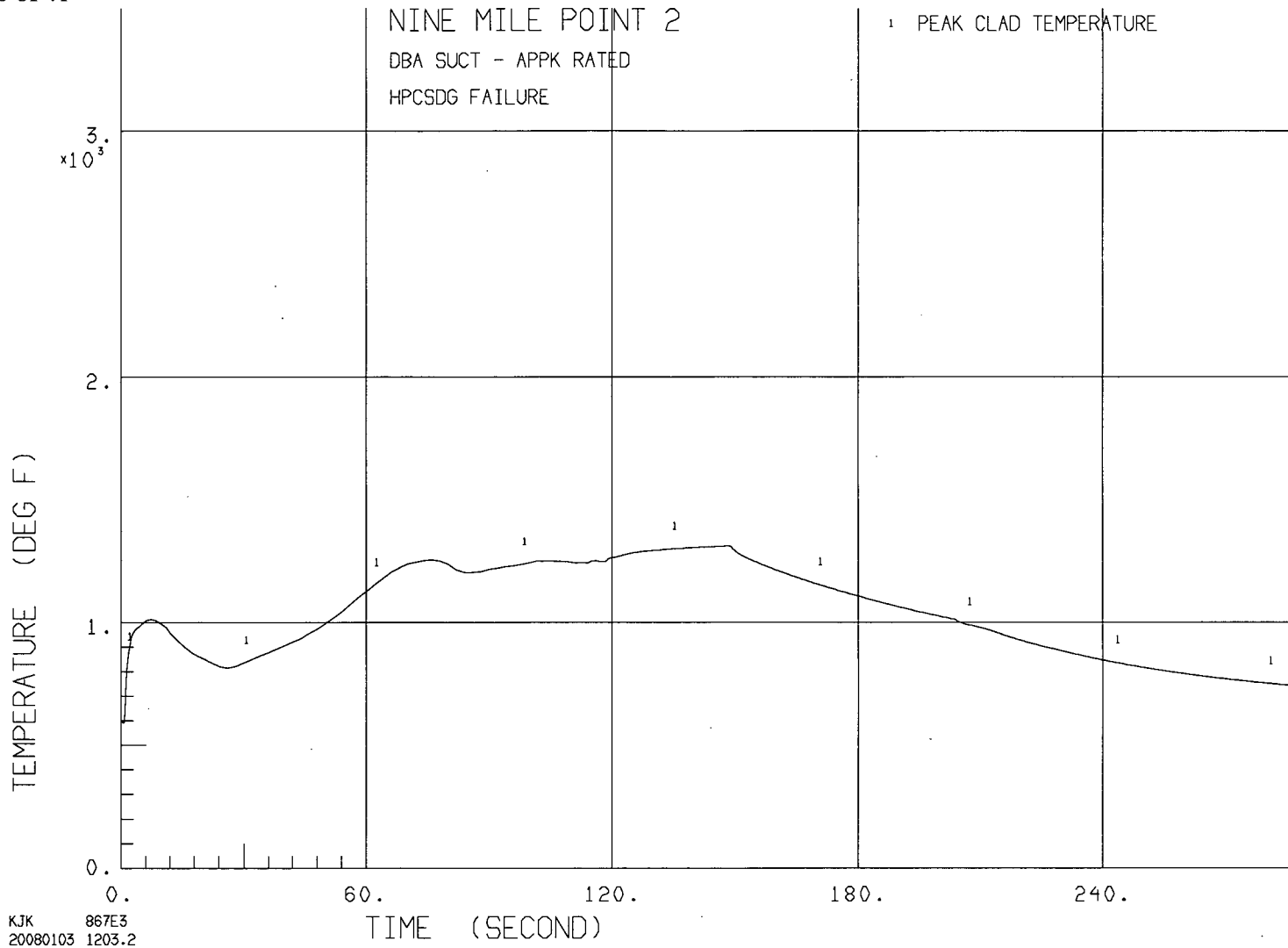
Maximum Recirculation Line Suction Break, Rated Flow, EPU, HPCS-D/G Failure
[Appendix K Assumptions]



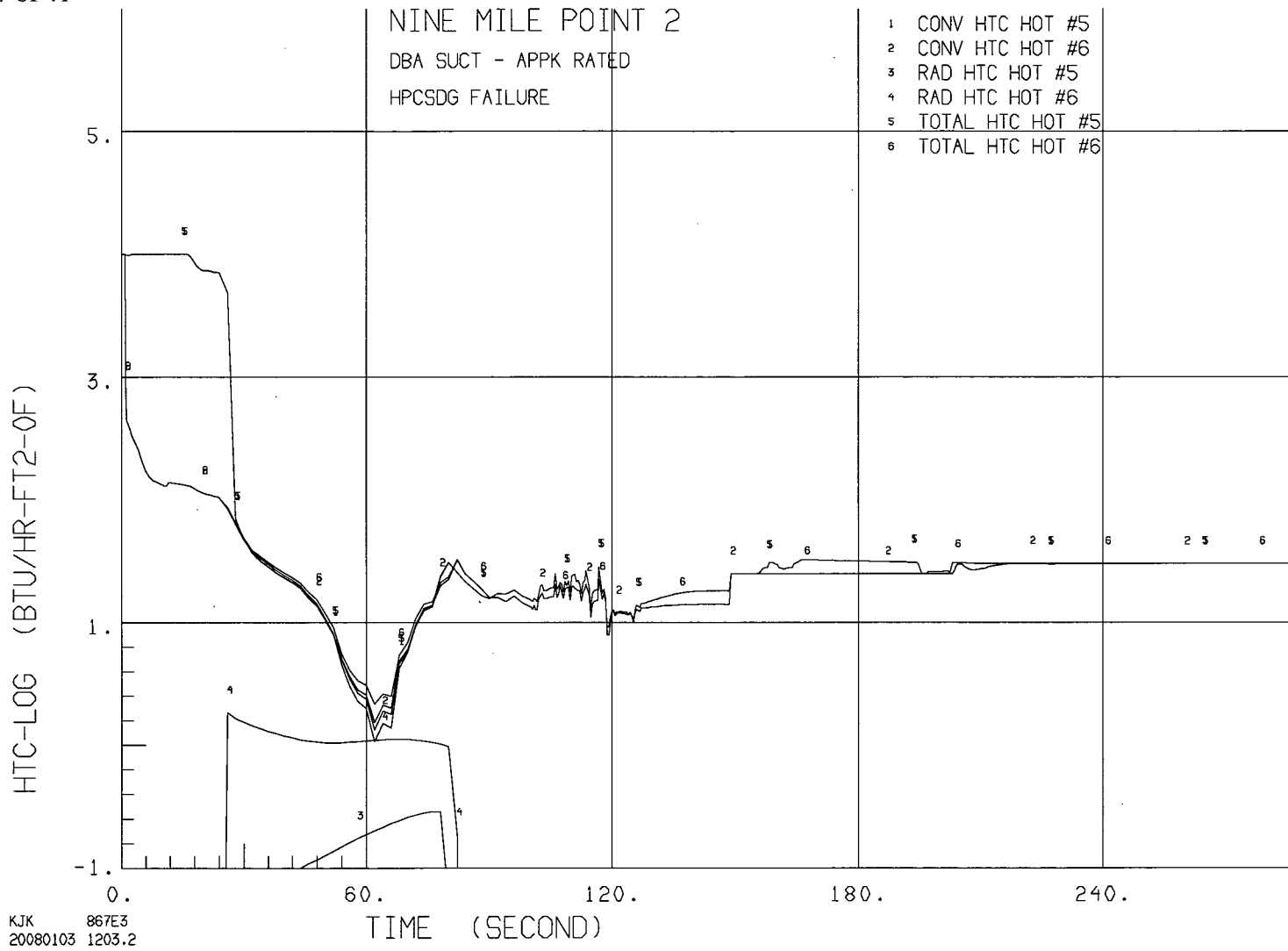
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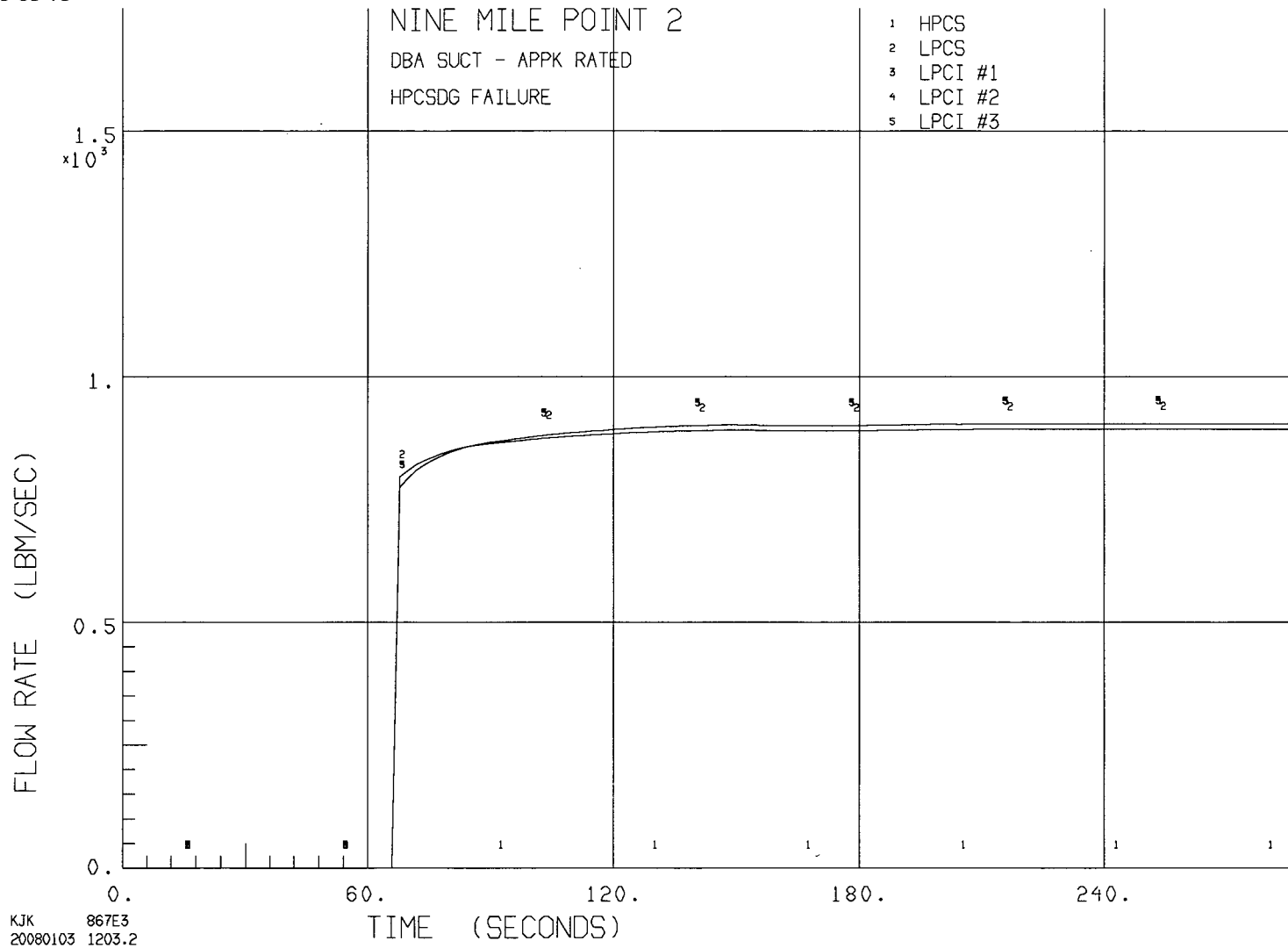
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Maximum Recirculation Line Suction Break, Rated Flow, EPU, HPCS-D/G Failure
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Enthalpy and Pressure in the Hot Node

TIME	ENTHALPY	PRESSURE	TIME	ENTHALPY	PRESSURE
(sec)	(BTU/lbm)	(psia)	(sec)	(BTU/lbm)	(psia)
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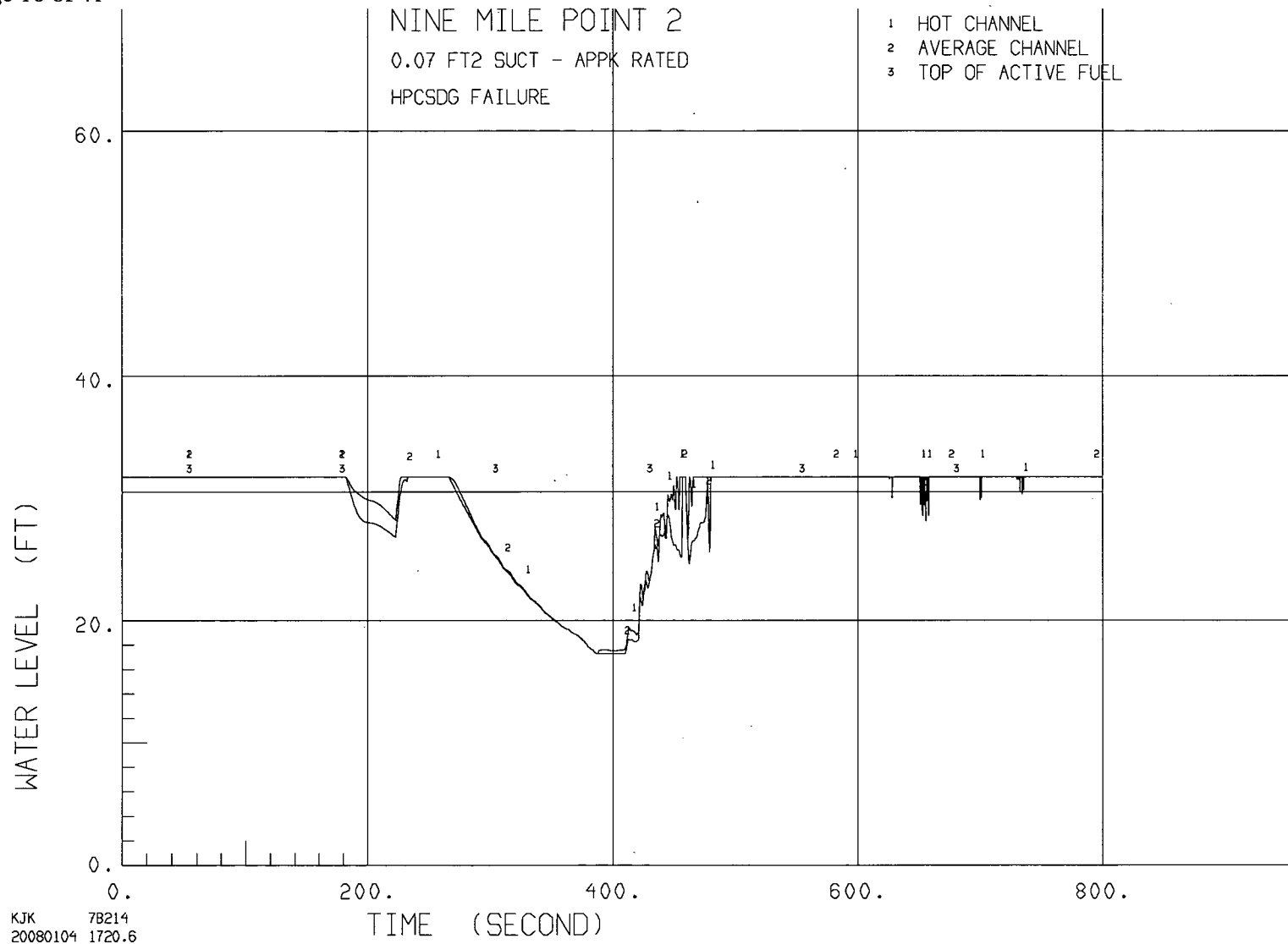
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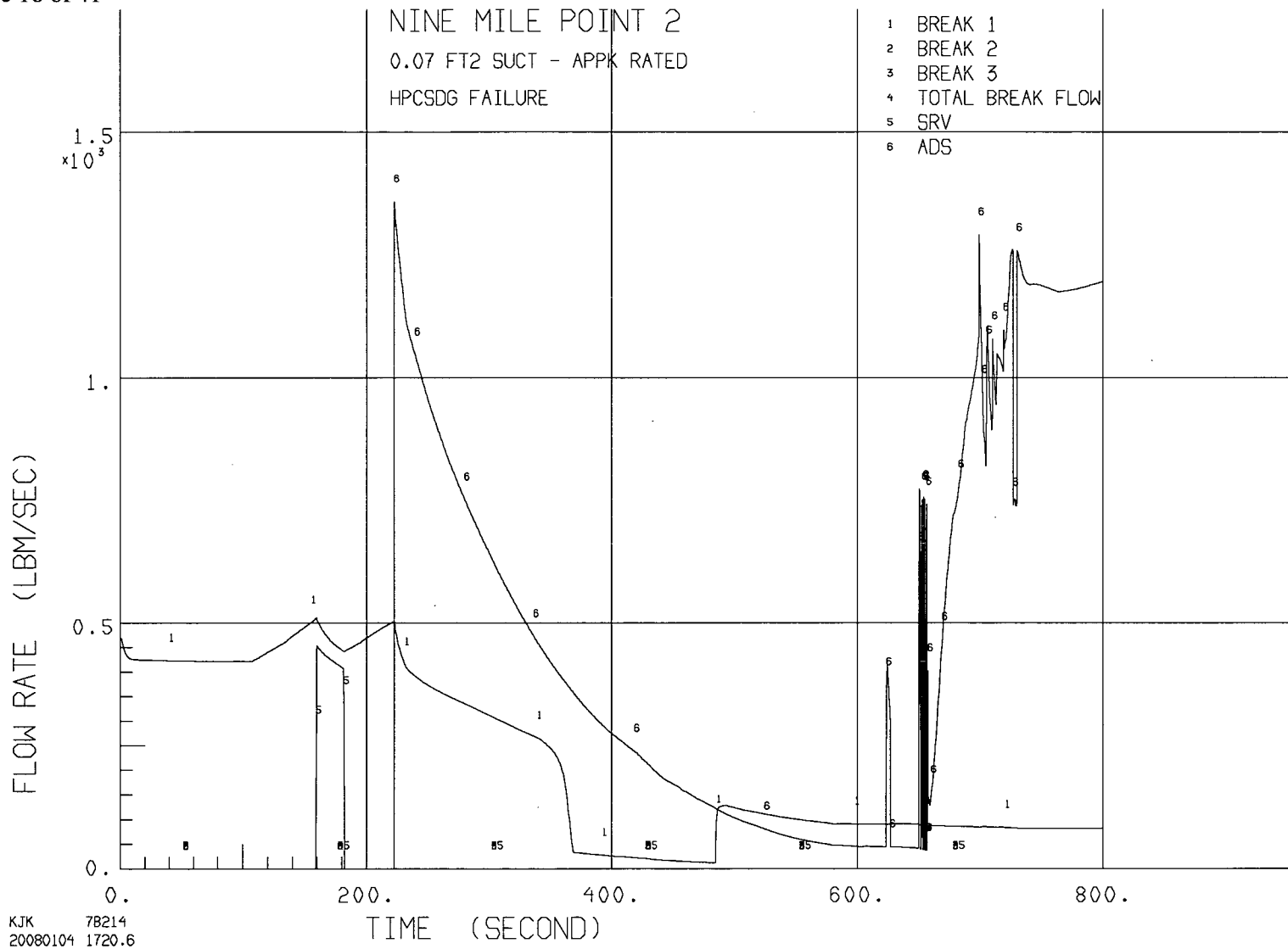
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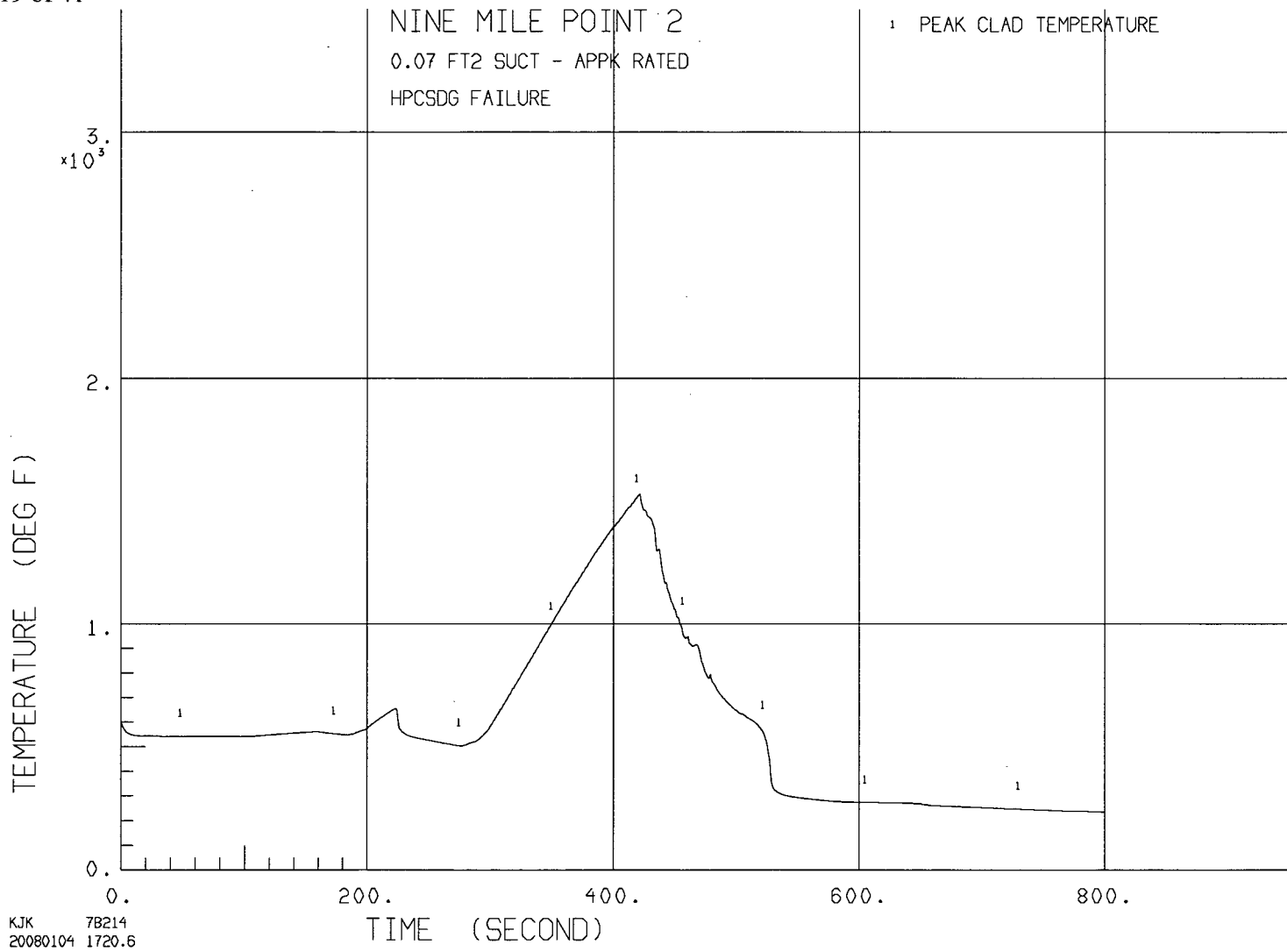
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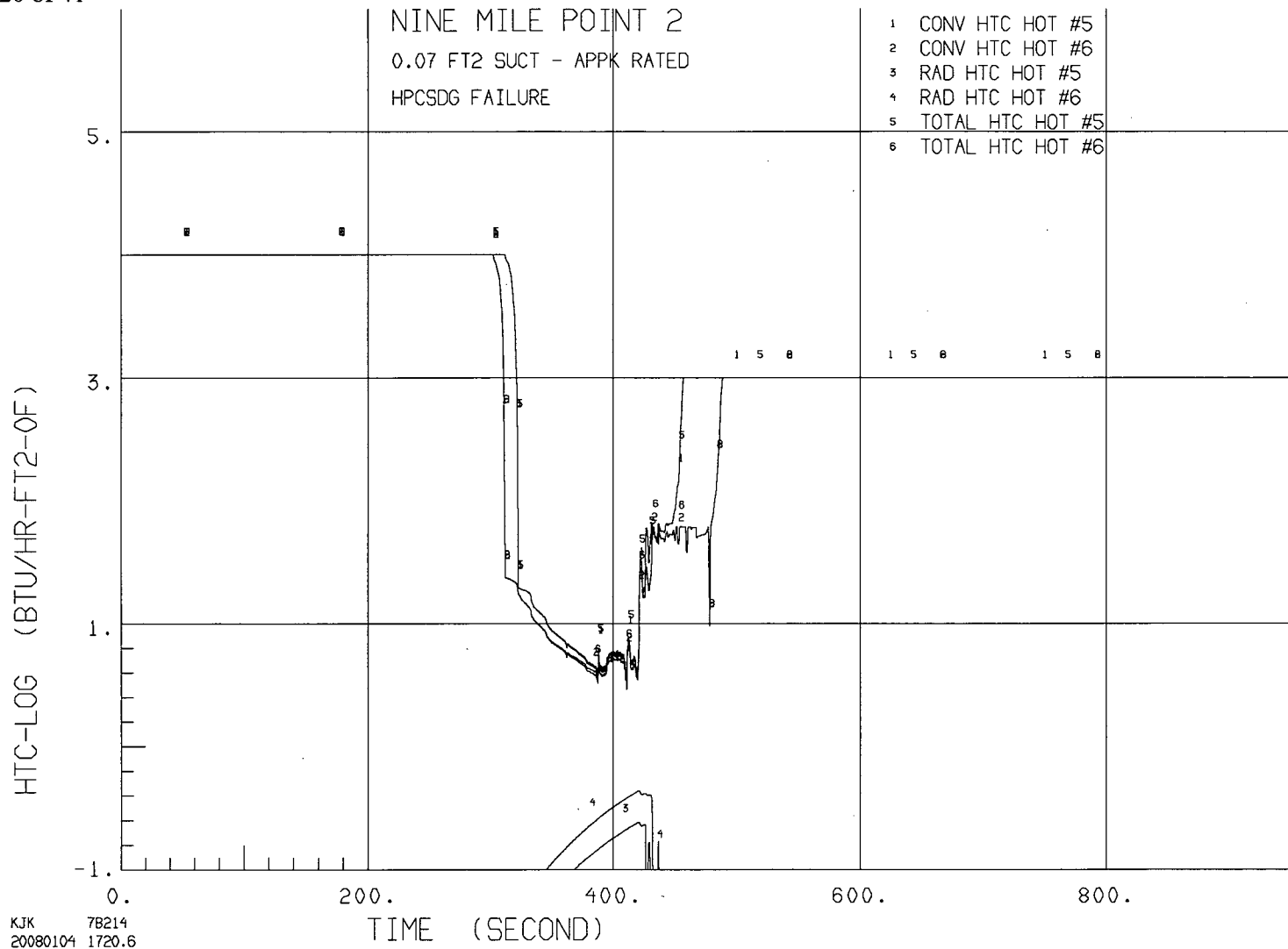
Limiting Small Recirculation Line Suction Break, 0.07 ft2, Rated Flow, EPU, HPCS-D/G Failure Top-Peaked Power Shape
[Appendix K Assumptions]



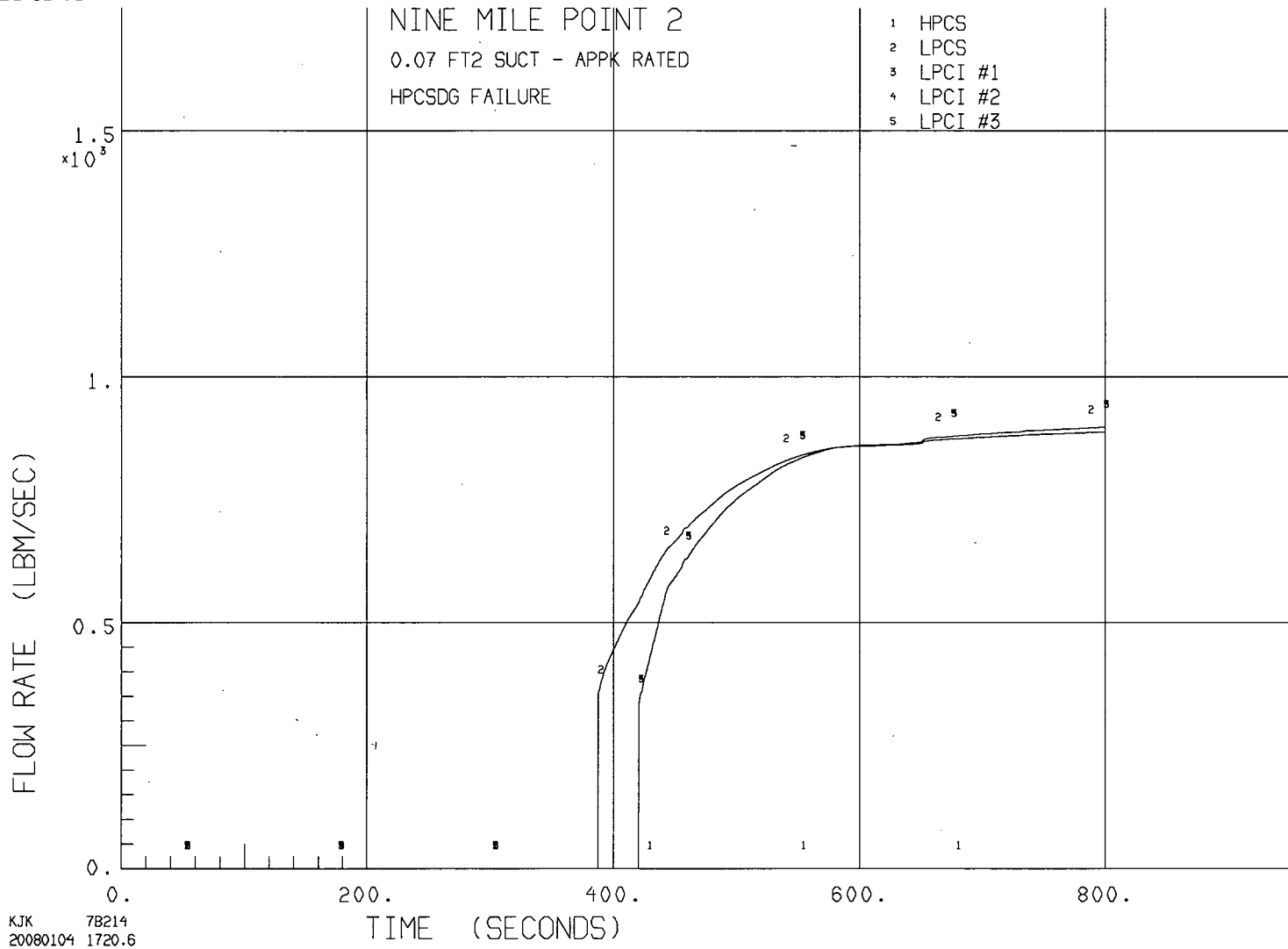
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ATTACHMENT 2

**AFFIDAVIT FROM GE-HITACHI NUCLEAR ENERGY AMERICAS
LLC (GEH) JUSTIFYING WITHHOLDING
PROPRIETARY INFORMATION**

GE-Hitachi Nuclear Energy Americas LLC

AFFIDAVIT

I, **Edward D. Schrull**, state as follows:

- (1) I am the Vice President, Regulatory Affairs, Services Licensing, GE-Hitachi Nuclear Energy Americas LLC (GEH), and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in Enclosure 1 of GEH letter GE-PPO-1GYEF-KG1-575 R1, Garold Carlisle (GEH) to Theresa Darling (Constellation Energy Nuclear Group), entitled *NMP2 EPU LOCA Plots and Data*, dated January 14, 2011. GEH proprietary information in Enclosure 1, which is entitled, "NRC Requested LOCA plots and data (Proprietary)," is identified with a dotted underline placed within double square brackets. [[This sentence is an example.^{3}]] In each case, the superscript notation ^{3} refers to Paragraph (3) of this affidavit that provides the basis for the proprietary determination.
- (3) In making this application for withholding of proprietary information of which it is the owner or licensee, GEH relies upon the exemption from disclosure set forth in the Freedom of Information Act (FOIA), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), and 2.390(a)(4) for trade secrets (Exemption 4). The material for which exemption from disclosure is here sought also qualifies under the narrower definition of trade secret, within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975 F2d 871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704 F2d 1280 (DC Cir. 1983).
- (4) The information sought to be withheld is considered to be proprietary for the reasons set forth in paragraphs (4)a. and (4)b. Some examples of categories of information that fit into the definition of proprietary information are:
 - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by GEH's competitors without license from GEH constitutes a competitive economic advantage over GEH and/or other companies.
 - b. Information that, if used by a competitor, would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.
 - c. Information that reveals aspects of past, present, or future GEH customer-funded development plans and programs, that may include potential products of GEH.
 - d. Information that discloses trade secret and/or potentially patentable subject matter for which it may be desirable to obtain patent protection.

- (5) To address 10 CFR 2.390(b)(4), the information sought to be withheld is being submitted to the NRC in confidence. The information is of a sort customarily held in confidence by GEH, and is in fact so held. The information sought to be withheld has, to the best of my knowledge and belief, consistently been held in confidence by GEH, not been disclosed publicly, and not been made available in public sources. All disclosures to third parties, including any required transmittals to the NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary and/or confidentiality agreements that provide for maintaining the information in confidence. The initial designation of this information as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure are as set forth in the following paragraphs (6) and (7).
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, who is the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge, or who is the person most likely to be subject to the terms under which it was licensed to GEH. Access to such documents within GEH is limited to a "need to know" basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist, or other equivalent authority for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GEH are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary and/or confidentiality agreements.
- (8) The information identified in paragraph (2) above is classified as proprietary because it contains the results of the GEH methodology for analysis performed in support of the Nine Mile Point-2 Extended Power Uprate (EPU) license application. Development of the EPU methodology and supporting analysis techniques and information and their application to the design, modification, and processes were achieved at a significant cost to GEH.

The development of the methodology along with the interpretation and application of the analytical results is derived from the extensive experience database that constitutes a major GEH asset.

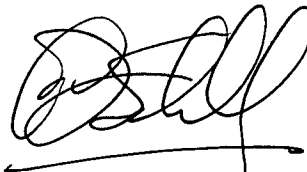
- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GEH's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GEH's comprehensive BWR safety and technology base, and its commercial value extends beyond the original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods.

The research, development, engineering, analytical and NRC review costs comprise a substantial investment of time and money by GEH. The precise value of the expertise to devise an evaluation process and apply the correct analytical methodology is difficult to quantify, but it clearly is substantial. GEH's competitive advantage will be lost if its competitors are able to use the results of the GEH experience to normalize or verify their own process or if they are able to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions.

The value of this information to GEH would be lost if the information were disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources would unfairly provide competitors with a windfall, and deprive GEH of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing and obtaining these very valuable analytical tools.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed on this 14th day of January, 2011.



Edward D. Schrull
Vice President, Regulatory Affairs
Services Licensing
GE-Hitachi Nuclear Energy Americas LLC
3901 Castle Hayne Rd.
Wilmington, NC 28401
edward.schrull@ge.com