

April 13, 2000
GO2-00-0073

Docket No. 50-397

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21;
REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATIONS
FOR EXTENSION FROM 18 TO 24-MONTHS FOR FREQUENCY OF
SURVEILLANCE REQUIREMENTS 3.3.1.1.10 FUNCTION 8 AND
3.3.4.1.2.a**

Reference: Generic Letter 91-04, dated April 2, 1991, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle"

Pursuant to the Code of Federal Regulations, Title 10, Parts 2.101, 50.59, and 50.90, Energy Northwest hereby requests an amendment to the WNP-2 Operating License. Specifically, Energy Northwest is requesting a revision to Technical Specifications Surveillance Requirements (SRs) 3.3.1.1.10 for Function 8 of Table 3.3.1.1-1 and 3.3.4.1.2.a. for Reactor Protection System and End of Cycle Recirculation Pump Trip instrumentation. This request for amendment to the WNP-2 Technical Specifications proposes an extension of the Frequency of these SRs from 18 to 24 months.

It is Energy Northwest's intention to implement a 24 month refueling cycle at WNP-2. This Technical Specification amendment request is submitted to support the extended refueling cycle.

In the referenced letter, the staff provided guidance for evaluating surveillance interval extensions to accommodate a 24 month refueling cycle. After evaluating the subject SRs in accordance with the guidance outlined in Reference 1, it has been determined that the impact on safe operation of WNP-2 posed by the requested interval extensions is minimal.

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**REQUEST FOR AMENDMENT
TECHNICAL SPECIFICATION SURVEILLANCE
REQUIREMENTS 3.3.1.1.10 FUNCTION 8 AND 3.3.4.1.2.a**

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Additional information has been attached to this letter to complete Energy Northwest's submittal of the Technical Specification amendment request. Attachment 1 to this letter provides a description and basis for acceptability of the proposed revision to the WNP-2 Technical Specifications. Attachment 2 provides an evaluation of the proposed changes pursuant to 10 CFR 50.92(c) and concludes the proposed changes do not result in a significant hazards consideration. Attachment 3 provides an Environmental Assessment Applicability review and concludes the proposed changes meet the eligibility criteria for a categorical exclusion as set forth in 10 CFR 51.22(c)(9). Therefore, in accordance with 10 CFR 51.22(b), an environmental assessment of the proposed changes is not required. Attachment 4 provides marked up affected pages from the Technical Specifications. Included for your information are the proposed Technical Specification Bases changes. Attachment 5 contains the typed Technical Specification pages as proposed by this amendment request. Issuance of this amendment to the Energy Northwest's Technical Specifications is requested prior to January 2001, at which time the current surveillance interval for these SRs will expire.

This request has been approved by the WNP-2 Plant Operations Committee and reviewed by the Energy Northwest Corporate Nuclear Safety Review Board. Pursuant to 10 CFR 50.91, the State of Washington has been provided a copy of this letter.

Should you have any questions or desire additional information regarding this matter, please call Mr. PJ Inerra or me at (509) 377-4147.

Respectfully,



RL Webring
Vice President, Operations Support/PIO
Mail Drop PE08

Attachments

cc: EW Merschoff - NRC-RIV
JS Cushing - NRC-NRR
DJ Ross - EFSEC

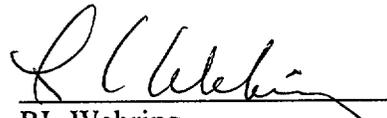
NRC Sr. Resident Inspector - 927N
DL Williams - BPA/1399
TC Poindexter - Winston & Strawn

STATE OF WASHINGTON)
)
COUNTY OF BENTON)

Subject: Request for Amendment
Technical Specification
Surveillance Interval Extension

I, RL Webring, being duly sworn, subscribe to and say that I am the Vice President, Operations Support/PIO, for ENERGY NORTHWEST, the applicant herein; that I have the full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information, and belief that the statements made in it are true.

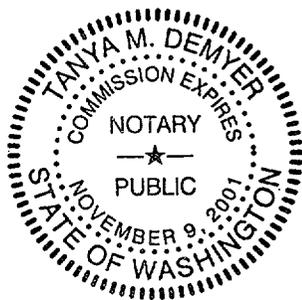
DATE 4/13/ 2000

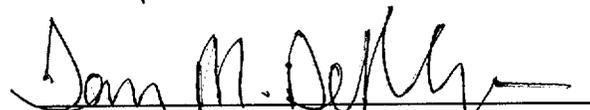


RL Webring
Vice President, Operations Support/PIO

On this date personally appeared before me RL Webring, to me known to be the individual who executed the foregoing instrument, and acknowledged that he signed the same as his free act and deed for the uses and purposes herein mentioned.

GIVEN under my hand and seal this 13 day of April 2000





Notary Public in and for the
STATE OF WASHINGTON

Residing at Benton County

My Commission expires 11/9/01

**REQUEST FOR AMENDMENT
TECHNICAL SPECIFICATION SURVEILLANCE
REQUIREMENTS 3.3.1.1.10 FUNCTION 8 AND 3.3.4.1.2.a**

Attachment 1

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Description of the Proposed Changes

Summary of the Proposed Changes

This license amendment request is made to revise the WNP-2 Technical Specifications to extend the Frequency of Surveillance Requirement (SR) 3.3.1.1.10 for Function 8 of Table 3.3.1.1-1 and SR 3.3.4.1.2.a from 18 to 24 months.

The proposed changes to the subject Technical Specifications SRs were evaluated in accordance with the guidance provided in NRC Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

Basis for the Acceptability of the Proposed Changes

Technical Specifications SR 3.3.1.1.10 Function 8 and SR 3.3.4.1.2.a require Channel Calibration of the Turbine Throttle Valve (TTV) position sensing switches that actuate the Reactor Protection System (RPS), and the End of Cycle Recirculation Pump Trip (EOC RPT) logic. The TTVs act as turbine stop valves when the main turbine is at rated speed. Closure of the TTVs results in the loss of the main turbine as a heat sink producing reactor pressure, neutron flux, and heat transients. The RPS is actuated and the EOC RPT is initiated upon TTV closure to mitigate these transients and terminate forced jet pump flow.

The subject SRs currently require performance of a Channel Calibration every 18 months to verify the required actuations will occur within the necessary range and accuracy when a TTV is less than or equal to 7% closed. The devices that sense TTV closure are NAMCO model EA74050100 limit switches. These switches are directly actuated by TTV stem movement and are common to the logic circuits of both the RPS and EOC RPT functions. The logic scheme for these actuations is illustrated in figures 7.2-5 and 7.2-15 of the WNP-2 Final Safety Analysis Report. These limit switches are passive bi-state devices whose physical position relative to the TTV is fixed. Instrument errors caused by drift were not considered when determining the setpoint for the TTV closure function for RPS and EOC RPT because these devices are not subject to setpoint drift. Furthermore, reliability of the position switches is demonstrated by performance of a quarterly functional test when the plant is operating at greater than 30% power.

Generic letter 91-04 contains three criteria for evaluating SR interval extensions for equipment that is not susceptible to instrument drift. The following is a description of the GL 91-04 criteria applicable to extension of SR 3.3.1.1.10 Function 8 and SR 3.3.4.1.2.a followed by the WNP-2 specific evaluation against the criteria.

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GL 91-04 criterion 1

The evaluation for surveillance interval extension to accommodate a 24 month fuel cycle should support a conclusion that the effect on safety is small.

WNP-2 evaluation

The RPS and EOC RPT on TTV closure functions employ redundant electrical and mechanical components so that no single component failure can prevent the function from occurring. Each of the four TTVs has two limit switches that sense closure. The logic is designed so that closure of three out of four TTVs is required before any actuation occurs. Additionally, performance of a quarterly functional test that fulfills the requirements of SRs 3.3.1.1.8 and 3.3.4.1.1 will detect component failure and ensure the functions are operable. Changing the 18 month SR interval to 24 months will not impact the high degree of reliability ensured by redundant components and quarterly functional test. Therefore, the impact on plant safety of SR interval extension is small.

GL 91-04 criterion 2

Historical plant maintenance and surveillance data should support the conclusion that the impact on plant safety of SR interval extension is small.

WNP-2 Evaluation

Historical maintenance records and 18 month Channel Calibration surveillance test results were examined for the TTV position switches. The surveillance data for the last 8 years indicates that no setpoint adjustments have been required during the performance of the 18 month Channel Calibrations. Maintenance records show there has been only one switch failure during the period that was not related to the surveillance interval. To ensure reliability, WNP-2 periodically replaces the TTV position switches according to the manufacturers' recommendation. The historical maintenance and surveillance data validate the conclusion that the impact on plant safety of extending the SR interval to the bounding 30 month period is small.

**REQUEST FOR AMENDMENT
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GL 91-04 criterion 3

Assumptions in the plant licensing basis will not be invalidated on the basis of performing any surveillance at the bounding interval limit provided to accommodate a 24 month fuel cycle.

WNP-2 Evaluation

The WNP-2 licensing basis has been reviewed for each proposed surveillance interval extension. This review considered the bounding surveillance interval of 30 months with application of SR 3.0.2. No assumptions were found pertaining to the surveillance interval of TTV closure function for RPS and EOC RPT logic. Performance of this review has ensured that no licensing basis changes other than those requested, are necessary to implement the requested SR interval changes and the WNP-2 licensing basis is not invalidated by the proposed changes.

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Attachment 2

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Evaluation of Significant Hazards Considerations

Summary of Proposed Change

This license amendment request is made to revise the Energy Northwest Technical Specifications to extend the Frequency of Surveillance Requirement (SR) 3.3.1.1.10 for Function 8 of Table 3.3.1.1-1 and SR 3.3.4.1.2.a from 18 to 24 months.

The proposed changes to the subject Technical Specification SRs were evaluated in accordance with the guidance provided in NRC Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

No Significant Hazards Consideration Determination

Energy Northwest has evaluated the proposed change to the Technical Specifications using the criteria established in 10 CFR 50.92(c) and has determined that it does not represent a significant hazards consideration as described below:

- **The operation of WNP-2 in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.**

Actuation of the TTV position switches is considered in the Turbine Trip accident analysis in chapter 15 of the WNP-2 Final Safety Analysis Report. The valve position switches are assumed to function normally at greater than 30% reactor power level to initiate a reactor scram to mitigate pressure increase and an RPT to terminate jet pump flow in the accident analysis. The extension of the Channel Calibration surveillance interval to 24 months does not impact the normal function of the switches that is assumed in the accident analysis. There is no increase in probability or consequences represented by the proposed amendment.

Therefore, the extension of the surveillance intervals does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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- **The operation of WNP-2 in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.**

Historical maintenance and surveillance data indicate there is no effect on the performance of the TTV position switches resulting from an extension of the SR interval from 18 to 24 months. To ensure reliability, WNP-2 periodically replaces the TTV position switches according to the manufacturers' recommendation. The surveillance interval extension does not involve a change in design or a change of switch function. There is no increase in the probability of failure expected from the interval extension that could result in a different kind of accident from any previously evaluated.

Therefore, the operation of WNP-2 in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

- **The operation of WNP-2 in accordance with the proposed amendment will not involve a significant reduction in the margin of safety.**

Closure of the TTVs isolates the main turbine as a heat sink producing reactor pressure and neutron flux transients. Eight TTV limit switches (two per valve) function to actuate RPS and an EOC RPT to mitigate these transients and terminate jet pump flow. High pressure and flux transients also actuate RPS resulting in negative reactivity insertion should there be a failure of the TTV position switches. Additionally, historical maintenance and surveillance records indicate that the TTV position switches will operate within the necessary range and accuracy with the extension of the SR interval because no position adjustment has been necessary during past TTV position switch surveillance activities.

Therefore, operation of WNP-2 in accordance with the proposed amendment will not involve a significant reduction in the margin of safety.

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Attachment 3

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Environmental Assessment Applicability Review

Energy Northwest has evaluated the proposed amendment against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21.

The proposed change meets the criteria for categorical exclusion as provided for in 10 CFR 51.22(c)(9). The change request does not pose a significant hazards consideration nor does it involve an increase in the amounts, or a change in the types, of any effluent that may be released off-site.

Furthermore, this proposed request does not involve an increase in individual or cumulative occupational exposure.

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REQUIREMENTS 3.3.1.1.10 FUNCTION 8 AND 3.3.4.1.2.a**

Attachment 4

**Marked-Up Version of Technical Specifications
Surveillance Requirements 3.3.1.1.10 for Function 8 and 3.3.4.2.1.a**

SURVEILLANCE REQUIREMENTS

-----NOTE-----
 When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Function maintains EOC-RPT trip capability.

PERFORM CHANNEL CALIBRATION.
 THE ALLOWABLE VALUE SHALL BE:

SURVEILLANCE	FREQUENCY
SR 3.3.4.1.1 Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.4.1.2.a Perform CHANNEL CALIBRATION. The Allowable Value shall be: TTV-Closure: $\leq 7\%$ closed <i>(hand)</i>	18 months 24 MONTHS
SR 3.3.4.1.2.b TGV Fast Closure, Trip Oil Pressure-Low: ≥ 1000 psig.	18 MONTHS
SR 3.3.4.1.3 Verify TTV-Closure and TGV Fast Closure, Trip Oil Pressure-Low Functions are not bypassed when THERMAL POWER is $\geq 30\%$ RTP.	18 months
SR 3.3.4.1.4 Perform LOGIC SYSTEM FUNCTIONAL TEST, including breaker actuation.	24 months
SR 3.3.4.1.5 -----NOTE----- Breaker arc suppression time may be assumed from the most recent performance of SR 3.3.4.1.6. ----- Verify the EOC-RPT SYSTEM RESPONSE TIME is within limits.	24 months on a STAGGERED TEST BASIS

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SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.1.10 -----NOTES----- 1. Neutron detectors are excluded. 2. For Function 1, not required to be performed when entering MODE 2 from MODE 1 until 12 hours after entering MODE 2. ----- Perform CHANNEL CALIBRATION.</p>	<p>24 MONTHS FOR FUNCTION 8 18 months FOR FUNCTIONS 1 THROUGH 7 AND 9 THROUGH 11.</p>
<p>SR 3.3.1.1.11 Verify the APRM Flow Biased Simulated Thermal Power—High Function time constant is ≤ 7 seconds.</p>	<p>18 months</p>
<p>SR 3.3.1.1.12 Verify Turbine Throttle Valve—Closure, and Turbine Governor Valve Fast Closure Trip Oil Pressure—Low Functions are not bypassed when THERMAL POWER is $\geq 30\%$ RTP.</p>	<p>18 months</p>
<p>SR 3.3.1.1.13 Perform CHANNEL FUNCTIONAL TEST.</p>	<p>24 months</p>
<p>SR 3.3.1.1.14 Perform LOGIC SYSTEM FUNCTIONAL TEST.</p>	<p>24 months</p>

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.1.1.9 and SR 3.3.1.1.10 (continued)

calorimetric calibration (SR 3.3.1.1.2) and the 1130 MWD/T LPRM calibration against the TIPs (SR 3.3.1.1.7). A second Note is provided that requires the APRM and IRM SRs to be performed within 12 hours of entering MODE 2 from MODE 1. Testing of the MODE 2 APRM and IRM Functions cannot be performed in MODE 1 without utilizing jumpers, lifted leads, or moveable links. This Note allows entry into MODE 2 from MODE 1 if the associated Frequency is not met per SR 3.0.2. Twelve hours is based on operating experience and in consideration of providing a reasonable time in which to complete the SR. The Frequency of SR 3.3.1.1.9 is based upon the assumption of a 184 day calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis. The Frequency of SR 3.3.1.1.10 is based on the assumption of a 18 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

A FREQUENCY OF 24 MONTHS IS ASSUMED FOR FUNCTION 8 BECAUSE THE TTV POSITION SWITCHES ARE NOT SUSCEPTABLE TO INSTRUMENT DRIFT

SR 3.3.1.1.11

FOR FUNCTIONS 1 THROUGH 7 AND FUNCTIONS 9 THROUGH 11

The Average Power Range Monitor Flow Biased Simulated Thermal Power-High Function uses an electronic filter circuit to generate a signal proportional to the core THERMAL POWER from the APRM neutron flux signal. This filter circuit is representative of the fuel heat transfer dynamics that produce the relationship between the neutron flux and the core THERMAL POWER. The filter time constant must be verified to ensure that the channel is accurately reflecting the desired parameter.

The Frequency of 18 months is based on engineering judgment and reliability of the components.

SR 3.3.1.1.12

This SR ensures that scrams initiated from the Turbine Throttle Valve-Closure and Turbine Governor Valve Fast Closure, Trip Oil Pressure-Low Functions will not be inadvertently bypassed when THERMAL POWER is $\geq 30\%$ RTP. This involves calibration of the bypass channels. Adequate margins for the instrument setpoint methodology are incorporated into the Allowable Value and the actual

(continued)

BASES

SURVEILLANCE
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(continued)

SR 3.3.4.1.1

A CHANNEL FUNCTIONAL TEST is performed on each required channel to ensure that the channel will perform the intended function. Any setpoint adjustment shall be consistent with the assumptions of the current plant specific setpoint methodology.

The Frequency of 92 days is based on reliability analysis (Ref. 7).

SR 3.3.4.1.2

CHANNEL CALIBRATION is a complete check of the instrument loop and the sensor. This test verifies the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

FOR SR 3.3.4.1.2.b

The Frequency is based upon the assumption of an 18 month calibration interval, in the determination of the magnitude of equipment drift in the setpoint analysis.

SR 3.3.4.1.3

This SR ensures that an EOC-RPT initiated from the TTV-Closure and TGV Fast Closure, Trip Oil Pressure-Low Functions will not be inadvertently bypassed when THERMAL POWER is $\geq 30\%$ RTP. This involves calibration of the bypass channels. Adequate margins for the instrument setpoint methodologies are incorporated into the actual setpoint. Because main turbine bypass flow can affect this setpoint nonconservatively (THERMAL POWER is derived from first stage pressure), the main turbine bypass valves must remain closed during an in-service calibration at THERMAL POWER $\geq 30\%$ RTP to ensure that the calibration is valid. If any bypass channel's setpoint is nonconservative (i.e., the Functions are bypassed at $\geq 30\%$ RTP either due to open main turbine bypass valves or other reasons), the affected TTV-Closure and TGV Fast Closure, Trip Oil Pressure-Low Functions are considered inoperable. Alternatively, the bypass channel

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A FREQUENCY OF 24 MONTHS IS ASSUMED
FOR SR 3.3.4.1.2.a BECAUSE THE TTV
POSITION SWITCHES ARE NOT SUSCEPTABLE TO
INSTRUMENT DRIFT

**REQUEST FOR AMENDMENT
TECHNICAL SPECIFICATION SURVEILLANCE
REQUIREMENTS 3.3.1.1.10 FUNCTION 8 AND 3.3.4.1.2.a**

Attachment 5

Replacement Pages for Technical Specifications

SURVEILLANCE REQUIREMENTS

-----NOTE-----
 When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Function maintains EOC-RPT trip capability.

SURVEILLANCE	FREQUENCY
SR 3.3.4.1.1 Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.4.1.2.a Perform CHANNEL CALIBRATION. The Allowable Value shall be: TTV-Closure: $\leq 7\%$ closed.	24 months
SR 3.3.4.1.2.b Perform CHANNEL CALIBRATION. The Allowable Value shall be: TGV Fast Closure, Trip Oil Pressure-Low: ≥ 1000 psig.	18 months
SR 3.3.4.1.3 Verify TTV-Closure and TGV Fast Closure, Trip Oil Pressure-Low Functions are not bypassed when THERMAL POWER is $\geq 30\%$ RTP.	18 months
SR 3.3.4.1.4 Perform LOGIC SYSTEM FUNCTIONAL TEST, including breaker actuation.	24 months

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.3.4.1.5 -----NOTE----- Breaker arc suppression time may be assumed from the most recent performance of SR 3.3.4.1.6. ----- Verify the EOC-RPT SYSTEM RESPONSE TIME is within limits.</p>	<p>24 months on a STAGGERED TEST BASIS</p>
<p>SR 3.3.4.1.6 Determine RPT breaker arc suppression time.</p>	<p>60 months</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.1.10 -----NOTES----- 1. Neutron detectors are excluded. 2. For Function 1, not required to be performed when entering MODE 2 from MODE 1 until 12 hours after entering MODE 2. ----- Perform CHANNEL CALIBRATION.</p>	<p>18 months for Functions 1 through 7 and 9 through 11 <u>AND</u> 24 months for Function 8</p>
<p>SR 3.3.1.1.11 Verify the APRM Flow Biased Simulated Thermal Power-High Function time constant is ≤ 7 seconds.</p>	<p>18 months</p>
<p>SR 3.3.1.1.12 Verify Turbine Throttle Valve-Closure, and Turbine Governor Valve Fast Closure Trip Oil Pressure-Low Functions are not bypassed when THERMAL POWER is $\geq 30\%$ RTP.</p>	<p>18 months</p>
<p>SR 3.3.1.1.13 Perform CHANNEL FUNCTIONAL TEST.</p>	<p>24 months</p>
<p>SR 3.3.1.1.14 Perform LOGIC SYSTEM FUNCTIONAL TEST.</p>	<p>24 months</p>

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