70-7001

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April 14, 1997

Dr. Carl J. Paperiello
Director, Office of Nuclear Material
Safety and Safeguards
Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SERIAL: GDP 97-0047

Paducah Gaseous Diffusion Plant (PGDP)
Docket No. 70-7001
Certificate Amendment Request - Cascade Cell Trip Function Requirements

Dear Dr. Paperiello:

In accordance with 10 CFR Part 76.45, the United States Enrichment Corporation (USEC or Corporation) hereby submits a request for amendment to the certificate of compliance for the Paducah, Kentucky Gaseous Diffusion Plant (GDP). This certificate amendment request revises the Technical Safety Requirements (TSR) TSR 2.4.4.12, Cascade Cell Trip Function, Limiting Condition for Operation, Surveillance Requirements and the associated Basis Statement to provide clarification of battery cell parameters, to provide for alternate means of verifying functionality of the cascade cell trip circuit and to provide a definition of planned and unplanned cell shutdown.

TSR 2.4.4.12 Limiting Condition for Operation, Condition E requires revision to clarify its applicability. Condition E is intended to apply only to those battery cells that are electrically connected and are being used to maintain battery voltage which ensures the ability of the battery to perform its intended safety function. Every battery cell in a given "battery bank" is not required to be connected in order to ensure that battery voltage is maintained and that this safety function (cell trip) can be accomplished.

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An exception to TSR 1.6.2.2(d) is also proposed for Required Action E.1. This is similar to other TSR requirements in which mode changes are expected and allowed while under TSR Required Actions. As long as the batteries meet the voltage requirements of the trip circuit, they will be capable of tripping the cascade cells upon demand. Therefore, there is no reduction in safety associated with mode changes while under Required Action E.1.

TSR 2.4.4.12 surveillance requirement (SR) 2.4.4.12-8 requires the use of the Area Control Room motor stop button for planned "00" and "000"cell shutdowns and the motor breaker pistol grip for C-310 cell shutdowns. It is clear from a reading of the TSR and TSR Basis Statement that the TSR does not specifically address the issue of cells that were shutdown at the time of transition to the TSRs. The intent of the surveillance is to demonstrate the reliability of the cell trip function by utilizing the system for planned shutdowns. There are cells that were shutdown prior to transition to the TSRs that were not shutdown using the Area Control Room motor stop button. Since the TSR does not provide an alternate method by which to demonstrate operability, it is not possible to meet the surveillance requirement for those cells while the cell is shutdown. This TSR will provide a way of satisfying SR 2.4.4.12-8 for those cells shutdown at the time of transition to the TSRs.

Enclosure 1 to this letter provides a detailed description and justification for the proposed changes to the Cascade Cell Trip Function TSR. Enclosure 2 is a copy of the revised TSR pages associated with this request. The revised TSR pages reflect revisions required as a result of this certificate amendment request and do not reflect other pending changes to these TSR pages. Enclosure 3 contains the basis for USEC's determination that the proposed changes associated with this certificate amendment request are not significant.

As previously stated, this certificate amendment request is required to provide an alternate means to demonstrate the cascade cell trip function so that the surveillance requirement can be satisfied for those cells that were shutdown prior to the transition to the TSRs without the use of the Area Control Room motor stop button. This change has an immediate plant operational impact in that it will allow USEC to return cells to service that are currently unavailable without this change. Therefore, USEC requests that this certificate amendment request receive the highest priority and that NRC review and approval of this certificate amendment request occur as soon as possible. The amendment should become effective 15 days from issuance.

Any questions related to this subject should be directed to Mr. Mark Smith at (301) 564-3244.

Sincerely,

James H. Miller
Vice President, Production

Enclosures: As Stated

cc: NRC Region III Office
NRC Resident Inspector - PGDP
NRC Resident Inspector - PORTS
DOE Regulatory Oversight Manager

OATH AND AFFIRMATION

I, James H. Miller, swear and affirm that I am Vice President, Production, of the United States Enrichment Corporation (USEC), that I am authorized by USEC to sign and file with the Nuclear Regulatory Commission this Certificate Amendment Request for the Paducah Gaseous Diffusion Plant, that I am familiar with the contents thereof, and that the statements made and matters set forth therein are true and correct to the best of my knowledge, information, and belief.

James H. Miller

Subscribed to before me on this 14 day of April, 1997.

Bernice R. Lawson

Notary Public

BERNICE R. LAWSON
NOTARY PUBLIC STATE OF MARYLAND
Certificate filed in Montgomery County
Commission Expires August 1, 1997

United States Enrichment Corporation (USEC)
Proposed Certificate Amendment Request
Cascade Cell Trip Function Requirements
Detailed Description of Change

The proposed change involves revision of the Cascade Cell Trip Function Technical Safety Requirement (TSR 2.4.4.12). The proposed changes include revision to Limiting Condition for Operation (LCO), Condition E, to provide clarification of the battery cell parameter requirements; revision to SR 2.4.4.12-8 to provide for an alternative trip circuitry test; and Basis Statement revisions to describe this new alternative trip circuitry test and provide a definition for planned and unplanned cell shutdown. These proposed revisions are more fully discussed in the following paragrapghs:

1) TSR 2.4.4.12 Limiting Condition for Operation, Condition E requires revision to clarify its applicability. Condition E is intended to apply only to those battery cells that are electrically connected and are being used to maintain battery voltage which ensures the ability of the battery to perform its intended safety function. Every battery cell in a given "battery bank" is not required to be connected in order to ensure that battery voltage is maintained and that this safety function (cell trip) can be accomplished.

   The important specification which determines whether or not the battery is capable of performing its safety function is the battery voltage specification (Condition A). The batteries contain approximately 120 individual battery cells. If one of the Condition E specifications is not met for one (or many) individual battery cells, that does not necessarily result in a battery that will not perform its intended safety function (as long as condition A is satisfied). Given the type of batteries used and since the load required to trip the air circuit breakers is minimal (less than 0.1% of the battery capability), any combination of connected battery cells that are capable of delivering the required voltages to the trip circuit will trip the cascade cells upon demand.

2) TSR 1.6.2.2(d) prohibits entering an operational mode to which a TSR applies while relying on an LCO action. An exception to TSR 1.6.2.2(d) is also proposed for Required Action E.1. This is similar to other TSR requirements in which mode changes are expected and allowed while under TSR Required Actions.

   For example, if a given battery cell is discovered to be out of specification per Condition E with one or more cells at a specific gravity less than 1.180, then the TSR

requires that the out-of-spec battery cell parameter be restored to within acceptable specifications within 90 days. Without the proposed exemption to 1.6.2.2(d), mode changes of the affected cell(s) would not be allowed (except as actions to an LCO). During the course of the 90 day period, there could be an operational need (totally unrelated to this or any other TSR) to change modes from above atmosphere to below atmosphere (or back) or start a cell. As stated above, the cell trip circuitry would still be able to meet the safety function and so these mode changes should be allowed. This is also why the TSR allows the 90 day required corrective action time specified for Condition E. Consequently, there is no reduction in safety associated with mode changes while under Required Action E.1.

3) TSR SR 2.4.4.12-8 is revised such that cell trip circuit operability is verified functionally through use of the "00" and "000" ACR "motor stop" button or the C-310 motor breaker pistol grip for each planned cell shutdown, or alternatively, "00" and "000" ACR "motor stop" button cell trip circuit operability can be verified through an equivalent trip test prior to restart after a planned cell shutdown. This equivalent "00" and "000" ACR "motor stop" button cell trip test will be described in the Basis Statement. This alternative trip test methodology will not apply to C-310 cells since the only way a planned shutdown can occur is with the use of the local cell panel motor breaker pistol grip. C-310 does not have an ACR "motor stop" button.

The applicability of this SR is also revised to clearly specify that it does not apply for cell restart following an unplanned cell shutdown or for any cell in operation prior to the effective date of this TSR. The "00" and "000" ACR "motor stop" button and C-310 local cell panel motor breaker pistol grip have been used for planned cell shutdowns since the transition to the TSRs.

These changes are needed to provide clear definition of the applicability of Surveillance Requirement SR 2.4.4.12-8 and to provide a means to recover when a planned cell shutdown is performed in conjunction with a failure to trip the cell motor using the "motor stop" button (surveillance test failure or inadvertent use of the "00" and "000" local panel for a planned "00" and "000" cell shutdown).

The option of verifying cell trip circuitry using the alternative trip test methodology for both planned and unplanned cell shutdowns was considered during the development of this Certificate Amendment Request. However, for unplanned cell shutdowns it was concluded that performance of the cell trip circuitry test prior to restart of the shutdown cells could adversely affect the overall safety of cascade operations. If an unplanned shutdown affected a large number of cells (e.g., building power failure), the safest course of action would be to return the cells to service in

an expeditious manner. Returning the cells to service in an expeditious manner, rather than delaying to perform the cell trip circuitry test, avoids concerns with cascade system cooling, UF_6 freeze out and deposition, and potential wet air in leakage. As such, limiting surveillance requirement performance to planned cell shutdowns, which is consistent with the intent of the original surveillance requirement, provides the best level of safety in verification of cell trip circuitry operability.

4) Addition of definition for Planned Cell Shutdown. This definition will be added to the basis statement, and will specify that a planned cell shutdown is the process of manually de-energizing the process motors in accordance with approved procedures.

5) Addition of definition for Unplanned Cell Shutdown. This definition will be added to the basis statement, and will specify that an unplanned cell shutdown is any automatic trip of the process motors.

6) The terminology "planned cell shutdown or prior to restart after each planned cell shutdown" is specified as the surveillance frequency associated with this change. This surveillance frequency is consistent with the intent of the surveillance frequency specified in the current TSR. However, this frequency has been modified to include "or prior to restart after each planned cell shutdown." In developing this proposed TSR change, a surveillance frequency based on an established time interval (e.g., once every 5 years) was considered and determined not to be required. This determination was based upon 1) no specific mention in the accident analysis of a 5 year interval being utilized as an assumption or supporting basis associated with the accident analysis and 2) the conclusion of the SAR accident analysis (Section 4.3.2.1.1) which states that "The diversity of the manual cell shutdown system, the low probability of failure and the fast response time make the manual cell shutdown system an adequate means to mitigate a possible UF_6 release".

Proposed Certificate Amendment Request Paducah Gaseous Diffusion Plant Letter GDP97-0047 Removal/Insertion Instructions	
Remove Pages	**Insert Pages**
VOLUME 2	
Section 4.3 4.3-11/4.3-12	**Section 4.3** 4.3-11/4.3-12
VOLUME 4	
Section 2.4.4 2.4-41, 2.4-42, 2.4-43	**Section 2.4.4** 2.4-41, 2.4-42, 2.4-43

SECTION 2.4 SPECIFIC TSRS FOR ENRICHMENT CASCADE FACILITIES

2.4.4 GENERAL LIMITING CONDITIONS FOR OPERATION

2.4.4.12 CASCADE CELL TRIP FUNCTION

LCO 2.4.4.12 DC control power and air pressure for cell trip of UF_6 stage motors shall be operable.

APPLICABILITY: Modes: Cascade 1 and 2 when stage motors are energized.

ACTIONS:

Condition	Required Action	Completion Time
A. DC voltage < 200 volts	A.1 Notify Cascade Coordinator of potential need to utilize alternate means of cell shutdown. AND A.2 Restore DC voltage to ≥ 200 volts	Immediately 48 hours
B. Required action A. not satisfactorily accomplished.	B.1 Shutdown affected cascade cell(s). AND B.2 Verify cell isolation.	8 hours
C. Air header pressure feeding a group of "000" air circuit breakers is less than the minimum required to actuate those breakers.	C.1 Notify Cascade Coordinator of potential need to utilize alternate means of cell shutdown. AND C.2 Restore air pressure to greater than the minimum required breaker actuation pressure.	Immediately 48 hours
D. Required action C. not satisfactorily accomplished.	D.1 Shutdown affected cascade cell(s). AND D.2 Verify cell isolation.	8 hours
E. Individual battery (cell) parameters (other than voltage) for any connected cell are outside limits established in surveillance requirements.	E.1 Restore the individual battery (cell) parameters to within limits. TSR 1.6.2.2(d) is not applicable.	90 days

SECTION 2.4 SPECIFIC TSRS FOR ENRICHMENT CASCADE FACILITIES

2.4.4 GENERAL LIMITING CONDITIONS FOR OPERATION

2.4.4.12 CASCADE CELL TRIP FUNCTION (continued)

SURVEILLANCE REQUIREMENTS:

Surveillance	Frequency
SR 2.4.4.12-1 Verify DC voltage ≥ 200 volts at the battery DC charger.	Daily
SR 2.4.4.12-2 Verify "000" air circuit breaker air header pressure is greater than the minimum required actuation pressure.	Daily
SR 2.4.4.12-3 Inspect battery terminals and racks for evidence of corrosion and for leakage of electrolyte.	Quarterly
SR 2.4.4.12-4 Check that the specific gravity of the pilot cell is ≥ 1.180.	Quarterly
SR 2.4.4.12-5 Verify the batt. y charger output is > 0 DC amps	Quarterly
SR 2.4.4.12-6 Visually check the cell electrolyte levels to verify that the level is above the low level indication and no more than 0.25 inches above the high indication line.	Quarterly
SR 2.4.4.12-7 Check that the specific gravity of the cells is ≥1.180.	Annually
----------Note---------- Performance of this surveillance is not required for cell restart following an unplanned cell shutdown or for any cell in operation prior to or on the effective date of this TSR until the next planned cell shutdown. ----------	
SR 2.4.4.12-8 Perform functional test of the ACR "motor stop" button for "00" and "000" cells or of the motor breaker pistol grip at the local cell panel for C-310 cells.	Either at each planned cell shutdown or prior to restart after each planned cell shutdown
SR 2.4.4.12-9 Verify expected block valve closure and recycle valve opening for the planned cell isolation and initiate corrective actions for any unexpected valve operation.	Each planned cell isolation.

SECTION 2.4 SPECIFIC TSRS FOR ENRICHMENT CASCADE FACILITIES

2.4.4 GENERAL LIMITING CONDITIONS FOR OPERATION

2.4.4.12 CASCADE CELL TRIP FUNCTION (continued)

BASIS:

The accident analysis presented in SAR chapter 4 discusses numerous cascade cell-related scenarios (e.g., 4.3.2.1.2, 4.3.2.1.5, 4.3.2.1.6, 4.3.2.2.2, 4.3.2.3.2., and 4.3.2.4.1) in which operating personnel respond to certain process conditions and alarms by de-energizing the process motors ("tripping the cell"), thus bringing the cell below atmospheric pressure. In order to initiate a cell shutdown, the DC control and trip power circuit must be functional.

Two methods can be used to perform the functional test to demonstrate the reliability of the cell trip function. The first, for both the "00" and the "000" cell motors, is at the time of planned shutdown. Use of the ACR cell motor stop button at the time of planned cell shutdown demonstrates cell trip reliability. Note that Planned Cell Shutdown is defined as the process of manually de-energizing the process motors in accordance with approved procedures. However, only the use of the ACR motor stop button (for the "00" or the "000" cells) or the motor breaker pistol grip at the local cell panel for C-310 cells or equivalent functional test prior to startup satisfies the surveillance requirement. Unplanned Cell Shutdown is therefore any automatic trip of the process motors

The second method of testing depends upon the type of cell, "00" or "000", being tested.

The reliability of the cell trip function for "00" cell motors can also be demonstrated using the ACR "motor stop" button with the process substation transformer secondary breaker open and the motor breakers closed. Actuating the ACR push button will open the motor breakers thereby verifying the ACR trip circuit functions correctly.

The reliability of the cell trip function for "000" cell motors can also be demonstrated using the ACR "motor stop" button with the 15kV Air Circuit Breaker (ACB) disconnects open, process motor breakers open, and switch house 15kV ACB closed. Actuating the ACR push button will open the 15 kV ACB thereby verifying the cell trip function.

Planned cell shutdowns must be initiated at the local control panel for C-310 cells because an ACR trip button is not provided for C-310 cells.

The minimum air pressure required to trip the "000" breakers varies with the breaker type. The minimum required breaker actuation pressure for the "000" breaker groups and the bases for those values are identified in SAR Section 3.9.1.3.2.

The alternate means of cell shutdown referred to in required action A.1 are discussed in SAR Table 4.3-2 for the "00" cells and includes alternate means of shutdown from the ACR. For the "000" cells, alternate shutdown is manually accomplished from the switch house if DC power is unavailable; or, from either the switch house, relay house, or C-300, depending on the status of individual breaker air tank pressure.

equipment is being moved over cells operating at above atmospheric pressure. If a condition should arise when a cell must be shut down from an equipment drop, the operator on the cell floor notifies the control operator and motor shutdown would occur within 30 seconds. The cell would quickly drop to below atmospheric pressure, limiting the amount of UF_6 released to no more than 4,000 lb. The residual UF_6 release would be negligible during the 2.5 to 3 minutes while the MOVs close, terminating the release. The amount of UF_6 released from a cell operating at subatmospheric pressure would be negligible. A discussion of operator response during a major UF_6 release is included in Section 4.3.2.3.1.

The converter drop scenario is considered to be a low probability event. A converter drop probability was calculated from an estimated 30,000 movements of heavy equipment with only five incidents in which a portion of the load either dropped or for which the potential for dropping existed. The time frame of this study was five years during the CIP/CUP program at PGDP and Oak Ridge Gaseous Diffusion Plant (ORGDP) when crane movements of heavy equipment were extremely high. No cases of actual operating equipment damage were recorded. Approximately 200 moves of major pieces of equipment are required each year to maintain the process facilities and approximately 2% of the move time is over operating equipment. From these numbers, the probability of equipment damage is estimated to be approximately 1×10^{-3} per year. The mitigation for this scenario and others which are of a lesser probability requires that process equipment be deenergized and may involve one cell, multiple cells, or complete units.

The UF_6 detection system, which warns of a release, is designated as a safety system on cells operating above atmospheric pressure.

The probability of the ACR cell "shutdown" button failing to deenergize the process motors can be estimated using the formula:[6]

$$P = E/N$$

where

P = Probability
E = Number of cases where the desired or undesired event occurs
N = Total number of operations or possible cases

There are 210 cells in the PGDP cascade. If one assumes an extremely conservative cell shutdown failure rate of 10 in the last 30 years and that on the average a cell is deenergized once per year, the probability of not being able to shut down a cell is 1.6×10^{-3} per year.[7]

If a cell failed to trip from the ACR, the probability of the failure of the next breaker in series becomes multiplicative. Thus the probability of failure to deenergize the cell motors is reduced to an extremely low value. In addition the probability of the failure occurring at the same time and in the same area where the release occurs is multiplicative. For instance from the converter drop scenario, a probability of 1×10^{-3} per year was estimated. Therefore, the probability of the trip system failing on demand and the converter drop occurring at the same time is 1×10^{-3} per year times the breaker failure probability of 1.6×10^{-3} per year. Thus, if the ACR cell shutdown system failed to "trip" the cell, the probability of the next breaker trip failing at the same time of the converter drop and the ACR cell trip button failing is 1.6×10^{-6} per year times the extremely low probability of the next breaker failing such

as the air-operated circuit breaker (ACB) ("000" equipment) or transformer secondary breaker (TSB) ("00" equipment) failing.

Tables 4.3-2 and 4.3-3 list the control points where cell shutdown can be accomplished, relay action required, type of DC power required and the operator and relay action response time required for cell motor trip. The breaker trips with greater than 5 minute response time were listed to show the diverse means of the trip system. It should be noted that these would only be used as the "last resort" due to operational problems and possible safety considerations in the manual breaker trip situation.

Reliability of the manual cell shutdown system is verified through manual shutdown of each cell within a five-year period. It is estimated that all cells will be shut down at least one time within this time frame. Cell shutdowns are normally accomplished from the ACR.

A shutdown of cell motors is the only requirement to bring a cell below atmosphere. The operation of the motor brakes including the time to shut down is described in Section 3.3.4.3. However, the time for the discharge pressure to be less than atmospheric pressure would be less than the time to complete motor shutdown. When cell motors are stopped, the cell pressure decreases to one-half the operating pressure. Cell block valves can then be closed if necessary to isolate the cell.

The diversity of the manual cell shutdown system, the low probability of failure, and the fast response time make the manual cell shutdown system an adequate means to mitigate a possible UF_6 release.

4.3.2.1.2 Fatigue Failure

Fatigue failure refers to the failure of materials under the action of repeated stress. Most steels have well-defined stress limits and fatigue failures are not experienced at levels below these. Nonferrous metals do not have well-defined stress limits and therefore, are most susceptible to fatigue cracking. Fatigue failures in the cascade would most likely occur on nonferrous instrument lines and expansion joints due to mechanical vibration, thermal cycling, and repeated stress and stress reversals. Weld joints are another point of stress concentration where failure could occur.

Experience has shown that although several years are necessary for a fatigue failure to occur, its occurrence is likely with continued operation of the plant. The exact nature and size of fatigue failures are impossible to predict. Breaks could range from small hairline cracks, instrument line failure, or complete joint failures. The frequency of failure should be greatest in the least significant types of breaks with a very small failure frequency for the larger failures. Most of the equipment that would be operating at above atmospheric pressure was replaced during CUP which should minimize fatigue failures for several years.

Fatigue failures were considered during CIP/CUP design by installing buffered, double-walled expansion joints, buffer flow detectors to detect small leaks, and buffered valve bellows. These features should be effective in detecting and mitigating small leaks.

The worst-case fatigue failure, considered to be a low probability event, is a weld joint failure in a 30 in. diameter pipe which opens to 1/32 in. The area of the break is 2.9 in^2 and the release rate is

United States Enrichment Corporation (USEC)
Proposed Certificate Amendment Request
Cascade Cell Trip Function Requirements
Significance Determination

The United States Enrichment Corporation (USEC) has reviewed the proposed changes associated with this certificate amendment request and provides the following Significance Determination for consideration.

1. No Overall Decrease in the Effectiveness of the Plant's Safety, Safeguards, or Security Programs

   The specific Technical Safety Requirement (TSR) and Basis Statement for the cascade cell trip function are not addressed in plant safety, safeguards, or security programs contained in Volume 3 of the Application for United States Nuclear Regulatory Commission Certification for the Paducah Gaseous Diffusion Plant. Therefore, the effectiveness of these programs is unaffected by these changes.

2. No Significant Change to Any Conditions to the Certificate of Compliance

   None of the Conditions to the Certificate of Compliance for operation of the Paducah Gaseous Diffusion Plant address surveillance requirements for the cascade cell trip function. Thus, the proposed changes have no impact on any of the Conditions to the Certificate of Compliance.

3. No Significant Change to Any Condition of the Approved Compliance Plan

   The proposed changes do not affect any Compliance Plan Issues. These changes do not change or invalidate any of the approved compensatory measures described in the approved Compliance Plan.

4. No Significant Increase in the Probability of Occurrence or Consequences of Previously Evaluated Accidents

   The accident scenarios of concern for this change are potential UF_6 release mechanisms from the cascade. The control for limiting the release involves operator action to shutdown the affected cascade cell motors using the Area Control Room (ACR) motor stop button. TSR 2.4.4.12 currently requires that operability of the motor stop button be verified each planned cell shutdown. However, the current TSR does not provide a means to verify operability for those cells shutdown prior to transition by a means other than the motor stop button, or if shutdown is performed in conjunction with a failure to trip the cell motor using the motor stop button. The proposed change will provide equivalent testing methodology to verify motor stop button

operability. The alternate methodology will fully test the functionality of the motor stop button circuitry while the cell motor is shutdown. This change will satisfy the intent of the current TSR surveillance requirement while providing needed equivalent alternative methods for verifying operability. The proposed change to Condition E and associated actions for cascade cell trip operability do not result in any situation whereby the components are not capable of performing the required safety function.

The terminology "planned cell shutdown or prior to restart after each planned cell shutdown" is specified as the surveillance frequency associated with this change. This surveillance frequency is consistent with the intent of the surveillance frequency specified in the current TSR. However, this frequency has been modified to include "or prior to restart after each planned cell shutdown." In developing this proposed TSR change, a surveillance frequency based on an established time interval (e.g., once every 5 years) was considered and determined not to be required. This determination was based upon 1) no specific mention in the accident analysis of a 5 year interval being utilized as an assumption or supporting basis associated with the accident analysis and 2) the conclusion of the SAR accident analysis (Section 4.3.2.1.1) which states that "The diversity of the manual cell shutdown system, the low probability of failure and the fast response time make the manual cell shutdown system an adequate means to mitigate a possible UF_6 release".

The terms planned and unplanned cell shutdown are added to the basis statement of the TSR. These definitions are added to ensure that the difference between the two is clearly understood and does not increase the probability of an accident occurring due to a lack of periodic testing.

Therefore, this change would not increase the probability of occurrence or consequence of an accident previously evaluated.

5. No New or Different Type of Accident

The proposed change provides for alternative means to test cell trip function. The two tests are equivalent. The proposed change to Condition E and associated actions for cascade cell trip operability do not result in any situation whereby the components are not capable of performing the required safety function. Therefore, no new or different type of accident could result from this change.

6. No Significant Reduction in Margins of Safety

The proposed change provides for alternative means to test cell trip function. The two tests are equivalent. Although the proposed surveillance interval is a slight modification from the current surveillance interval, the intent of the surveillance interval is unchanged, since for all planned shutdowns, the key point is that the trip system operability must be ensured before there exists

a need for the trip function (i.e., before the associated cell is restarted). The proposed change to Condition E and associated actions for cascade cell trip operability do not result in any situation whereby the components are not capable of performing the required safety function. Therefore, there is no reduction in the Margin of Safety as evaluated in the Safety Analysis Report.

7. No Significant Decrease in the Effectiveness of any Program or Plans Contained in the Certificate Application

   None of the proposed changes to the cascade cell trip function TSRs affect any of the programs or plans contained the Application for Certification.

8. The Proposed Changes do not Result in Undue Risk to 1) Public Health and Safety, 2) Common Defense and Security, and 3) the Environment

   The proposed change provides for alternative means to test cell trip function. The two tests are equivalent. Although the proposed surveillance interval is a slight modification from the current surveillance interval, the intent of the surveillance interval is unchanged, since for all planned shutdowns, the key point is that the trip system operability must be ensured before there exists a need for the trip function (i.e., before the associated cell is restarted). As such, these changes do not represent an undue risk to public health and safety. The proposed change to Condition E and associated actions for cascade cell trip operability do not result in any situation whereby the components are not capable of performing the required safety function. In addition, these revisions have no impact on plant effluents or on the programs and plans in place to implement physical security. Consequently, these proposed changes only enhance safety and pose no undue risk to the environment or the common defense and security.

9. No Change in the Types or Significant Increase in the Amounts of Any Effluents that May be Released Offsite

   There are no effluent releases associated with this change. Therefore, there is no change in the types or significant increase in the amounts of any effluents that may be released offsite.

10. No Significant Increase in Individual or Cumulative Occupational Radiation Exposure

    The proposed change provides for the ability to test cell trip function by a means other than the use of the ACR motor stop button. The two tests are equivalent. Although the proposed surveillance interval is a slight modification from the current surveillance interval, the intent of the surveillance interval is unchanged, since for all planned shutdowns, the key point is that the trip system operability must be ensured before there exists a need for the trip function (i.e., before the associated cell is restarted). The proposed change to Condition E and associated

actions for cascade cell trip operability do not result in any situation whereby the components are not capable of performing the required safety function. As such, these changes do not represent an increase in individual or cumulative occupational radiation exposure.

11. No Significant Construction Impact

This TSR change does not involve a plant modification. Therefore, there is no significant construction impact.

12. No Significant Increase in the Potential for Radiological or Chemical Consequences from Previously Analyzed Accidents

The proposed change provides for the ability to test cell trip function by a means other than the use of the ACR motor stop button. The two tests are equivalent. Although the proposed surveillance interval is a slight modification from the current surveillance interval, the intent of the surveillance interval is unchanged, since for all planned shutdowns, the key point is that the trip system operability must be ensured before there exists a need for the trip function (i.e., before the associated cell is restarted). The proposed change to Condition E and associated actions for cascade cell trip operability do not result in any situation whereby the components are not capable of performing the required safety function . As such, these changes do not represent an increase in the potential for, or radiological or chemical consequences from, previously analyzed accidents.