

## **DPO Case File for DPO-2014-002**

The following pdf represents a collection of documents associated with the submittal and disposition of a differing professional opinion (DPO) from an NRC employee involving use of Conditional Core Damage Probability (CCDP) to evaluate performance deficiencies that cause initiating events.

Management Directive (MD) 10.159, "The NRC Differing Professional Opinions Program," dated May 16, 2004, describes the DPO Program.

<http://pbadupws.nrc.gov/docs/ML0417/ML041770431.pdf>

The DPO Program is a formal process that allows employees and NRC contractors to have their differing views on established, mission-related issues considered by the highest level managers in their organizations, i.e., Office Directors and Regional Administrators. The process also provides managers with an independent, three-person review of the issue (one person chosen by the employee). After a decision is issued to an employee, he or she may appeal the decision to the Executive Director for Operations (EDO).

Because the disposition of a DPO represents a multi-step process, readers should view the records as a collection. In other words, reading a document in isolation will not provide the correct context for how this issue was considered by the NRC.

The records in this case file are public and have been reviewed for redactions prior to discretionary release.

Document 1: DPO Submittal

Document 2: Memo Forwarding DPO From DPOPM to Office Manager

Document 3: Memo from Office Manager Establishing DPO Panel

Document 4: DPO Panel Report

Document 5: DPO Decision

## **Document 1: DPO Submittal**

NRC FORM 680 (11-2002) NRCMD 10.159		U.S. NUCLEAR REGULATORY COMMISSION		FOR PROCESSING USE ONLY	
<b>DIFFERING PROFESSIONAL OPINION</b>				1. DPO CASE NUMBER <i>DPO-2014-002</i>	
<b>INSTRUCTIONS:</b> Prepare this form legibly and submit three copies to the address provided in Block 14 below.				2. DATE RECEIVED <i>5/12/2014</i>	
3. NAME OF SUBMITTER George D. Replogle		4. POSITION TITLE Senior Reactor Analyst		5. GRADE GG-15	
6. OFFICE/DIVISION/BRANCH/SECTION Region IV/DRS		7. BUILDING Region IV	8. MAIL STOP Region IV	9. SUPERVISOR T. Farnholtz	
10. DESCRIBE THE PRESENT SITUATION, CONDITION, METHOD, ETC., WHICH YOU BELIEVE SHOULD BE CHANGED OR IMPROVED. (Continue on Page 2 or 3 as necessary.)  This DPO addresses RASP Manual Section 8.2 (ML13039A229). The RASP manual was issued in January 2013. The RASP manual instructs SRAs to use the conditional core damage probability as the performance metric for evaluating SDP findings. While the CCDP is multiplied by 1/yr to make it look like a Delta-CDF, it is not a delta-CDF. It is equivalent to the CCDP (a significantly higher value). see link <a href="http://www.internal.nrc.gov/RES/projects/RAS">http://www.internal.nrc.gov/RES/projects/RAS</a>					
11. DESCRIBE YOUR DIFFERING OPINION IN ACCORDANCE WITH THE GUIDANCE PRESENTED IN NRC MANAGEMENT DIRECTIVE 10.159. (Continue on Page 2 or 3 as necessary.)  1. The RASP manual change is in violation of IMC 0308 and IMC 0040, in that these documents specify that all ROP documents will be consistent with IMC 0308. IMC 0308 specifies that the NRC will use delta-CDF as the metric to evaluate performance deficiencies. Please see attached DPO and supporting information.					
12. Check (a) or (b) as appropriate:  <input checked="" type="checkbox"/> a. Thorough discussions of the issue(s) raised in item 11 have taken place within my management chain; or <input type="checkbox"/> b. The reasons why I cannot approach my immediate chain of command are:					
SIGNATURE OF SUBMITTER <i>George D. Replogle</i>		DATE <i>5/12/2014</i>	SIGNATURE OF CO-SUBMITTER (if any) <i>N/A</i>		DATE <i>N/A</i>
13. PROPOSED PANEL MEMBERS ARE (in priority order): 1. Troy Pruett 2. Rani Franovich 3.			14. Submit this form to: Differing Professional Opinions Program Manager Office of: _____ Mail Stop: _____		
<b>15. ACKNOWLEDGMENT</b>					
THANK YOU FOR YOUR DIFFERING PROFESSIONAL OPINION. It will be carefully considered by a panel of experts in accordance with the provisions of NRCMD 10.159, and you will be advised of any action taken. Your interest in improving NRC operations is appreciated.			SIGNATURE OF DIFFERING PROFESSIONAL OPINIONS PROGRAM MANAGER (DPOPM) <i>Renée Pedersen</i>		
			PRE-CONDITIONS MET <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		DATE OF ACKNOWLEDGMENT <i>5/20/2014</i>

**DIFFERING PROFESSIONAL OPINION  
(Continued)**

CONTINUE ITEM 10, ITEM 11, AND/OR ITEM 12 FROM PAGE 1. (Indicate the block number to which this information applies.)

Block 12.a - This DPO concerns activities that are not within my direct chain of command. My chain of command is aware of my concerns and has thus far supported my views and the potential to resolve these matters through the DPO process.

The DPO addresses changes to the RASP manual that were implemented by NRR/DRA/APOB. I have had many communications with the Chief of APOB in an attempt to address my concerns. While some points were acknowledged, we are at impasse concerning how the issues will be addressed and corrected.

**DIFFERING PROFESSIONAL OPINION**  
**(Continued)**

CONTINUE ITEM 10, ITEM 11, AND/OR ITEM 12 FROM PAGE 1. *(Indicate the block number to which this information applies.)*

**Document 2: Memo Forwarding DPO From  
DPOPM to Office Manager**

May 29, 2014

MEMORANDUM TO: Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

FROM: Renée M. Pedersen */RA/ by MSewell for/*  
Sr. Differing Views Program Manager  
Office of Enforcement

SUBJECT: DIFFERING PROFESSIONAL OPINION INVOLVING  
USE OF CONDITIONAL CORE DAMAGE PROBABILITY (CCDP) TO  
EVALUATE PERFORMANCE DEFICIENCIES THAT CAUSE  
INITIATING EVENTS - (DPO-2014-002)

The purpose of this memorandum is to advise you of a Differing Professional Opinion (DPO) that was submitted to me while serving as the DPO Program Manager (DPOPM). We received the DPO on May 12, 2014, and screened it in accordance with the guidance included in Management Directive (MD) 10.159, "The NRC Differing Professional Opinions Program." On May 20, 2014, we notified senior management and the submitter that the preconditions for acceptance were met and that the submittal was accepted for review within the DPO Program as DPO-2014-002.

The DPO (Enclosure 1) raises concerns that the staff is directed to use the equivalent of the conditional core damage probability (CCDP) to evaluate Significance Determination Process findings which conflicts with NRC Inspection Manual Chapter criteria. NRC Inspection Manual Chapters specify that delta-CDF will be used to evaluate the significance of performance deficiencies.

Because the DPO takes issue with positions established by your organization, in accordance with section (D)(3)(c) of the MD Handbook, I am forwarding this DPO to you for appropriate action.

MD 10.159-036 specifically addresses your responsibilities as Office Director. In brief:

- Establish an independent ad hoc panel (DPO Panel) to review the issue, draw conclusions, and make recommendations to you regarding the disposition of the issues presented in the DPO.
- Provide appropriate oversight of and support to the DPO Panel to ensure a thorough and timely review of the DPO (while maintaining process independence).

CONTACT: Renée M. Pedersen, DPOPM  
[Renee.Pedersen@nrc.gov](mailto:Renee.Pedersen@nrc.gov)  
(301) 415-2742

Marge Sewell, DPOPM/Backup  
[Margaret.Sewell@nrc.gov](mailto:Margaret.Sewell@nrc.gov)  
(301) 415-8045

- Review the DPO Panel's report to ensure that it clearly, accurately, and completely addresses the tasks outlined in your memorandum establishing the panel. Issue a DPO Decision to the submitter within the current 120-day timeliness goal (September 17, 2014).
- Request EDO approval for DPO extensions beyond the 120-day timeliness goal. (Requests should be forwarded thru the DPOPM with the reason for the delay and a new completion date.)
- Forward status updates during the disposition of the DPO and until the time that all follow-up actions are complete.
- Identify and assign appropriate follow-up actions and establish completion dates within 2 weeks of issuing the DPO Decision. (The DPOPM and submitter should be copied on any follow-up action memoranda or correspondence.)
- Notify the DPOPM of follow-up action schedule delays, including the reason for the delay and a revised completion schedule. (The DPOPM will subsequently notify the submitter and report it to the applicable DEDO.)
- Forward a summary of the DPO to the DPOPM for inclusion in the Weekly Information Report. (In the event the DPO is appealed, the summary will be postponed until the DPO Appeal Decision is issued.)
- Take action to positively recognize the DPO submitter if the submitter's actions result in significant contributions to the mission of the agency.
- Review the DPO Case File for public release when the case is closed if the submitter requests public release.

As you know, dispositioning DPOs is considered an important and time sensitive activity. The DPO timeliness goal is calculated beginning on the day the DPO is accepted for review (May 20, 2014) until the day the DPO Decision is issued (currently targeted for September 17, 2014).

Process Milestones and Timeliness Goals for this DPO are included as Enclosure 2. The timeframes for completing process milestones are identified strictly as goals—a way of working towards reaching the DPO timeliness goal of 120 calendar days.

Although timeliness is an important DPO Program objective, the DPO Program also sets out to ensure that issues receive a thorough and independent review. Therefore, if you or the DPO Panel determines that an extension beyond 120 calendar days is necessary at any time during the process, please send us an email with the reason for the extension request and a new completion date. We will subsequently forward this request to the EDO for approval.

In an effort to provide necessary oversight and tracking, you should open an action item to address the three key deliverables:

- (1) DPO Decision (September 17, 2014);
- (2) Follow-up action memorandum (2 weeks after DPO Decision); and
- (3) Weekly Information Report Summary (2 weeks after DPO Decision).

Please ensure that all DPO-related activities are charged to Activity Code ZG0007.

Because this process is not routine, we will be meeting and communicating with all parties during the process to ensure that everyone understands the process, goals, and responsibilities. We will be subsequently sending you information intended to aid you, the DPO Panel, and support staff in implementing the DPO process.

We understand that you appreciate that an important aspect of our internal safety culture includes maintaining an environment that encourages, supports, and respects differing views. As such, all employees involved in the process should be instructed to exercise discretion and treat this as a sensitive matter. In an effort to preserve privacy, minimize the effect on the work unit, and keep the focus on the issues, employees should be instructed to simply refer to the employee as the DPO submitter. Managers and staff should be reminded to not engage in "hallway talk" on the issue and to refrain from behaviors that could be perceived as retaliatory and or are chilling the DPO submitter or creating a chilled environment for others. It is appropriate for employees to discuss the details of the DPO with their co-workers as part of the evaluation; however, as with other predecisional processes, employees should not discuss details of the DPO outside the agency.

On an administrative note, please ensure that all correspondence associated with this case include the DPO number in the subject line, be profiled in accordance with the Agencywide Document Access Management System (ADAMS) template OE-011, be identified as non-public with limited viewer rights to those included on distribution of the correspondence, and declared an official agency record *when the correspondence is issued*. Please email the ADAMS accession number for the record to [DPOPM.Resource@nrc.gov](mailto:DPOPM.Resource@nrc.gov) and the record will be filed in the applicable DPO case file folder (DPO-2014-002) in the ADAMS Main Library. Following this process will ensure that a complete agency record is generated for the disposition of this DPO. If the submitter requests that the documents included in the DPO Case File be made public when the process is complete, you will be provided specific guidance to support a releasability review.

Finally, it would be helpful if you identify a point of contact (POC) who we can work with to support effective implementation of the DPO process.

*We're here to help!!*

Enclosures:

1. DPO submittal
2. Milestones and Timeliness Goals

cc: (w/o enclosures)

M. Johnson, DEDRP

Melanie Galloway, AO

Finally, it would be helpful if you identify a point of contact (POC) who we can work with to support effective implementation of the DPO process.

*We're here to help!!*

Enclosures:

- 1. DPO submittal
- 2. Milestones and Timeliness Goals

cc: (w/o enclosures)  
 M. Johnson, DEDRP  
 Melanie Galloway, AO

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DATE	5/ 28 /2014	5/ 28 /2014	5/ 28 /2014	5/ 29 /2014

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**Document 3: Memo From Office Manager  
Establishing DPO**

June 25, 2014

MEMORANDUM TO: Christopher G. Miller - Chair  
Christopher G. Cahill - Member  
Rani L. Franovich - Member

FROM: Eric J. Leeds, Director */RA/*  
Office of Nuclear Reactor Regulation

SUBJECT: AD HOC REVIEW PANEL - DIFFERING PROFESSIONAL  
OPINION INVOLVING USE OF CONDITIONAL CORE DAMAGE  
PROBABILITY TO EVALUATE PERFORMANCE DEFICIENCIES  
THAT CAUSE INITIATING EVENTS - (DPO-2014-002)

In accordance with Management Directive (MD) 10.159, The U.S. Nuclear Regulatory Commission (NRC) Differing Professional Opinions Program, I am appointing you as members of a Differing Professional Opinion (DPO) Ad Hoc Review Panel (DPO Panel) to review a DPO that was forwarded to me to disposition.

The DPO (Enclosure 1) raises concerns that the staff is directed to use the equivalent of the conditional core damage probability (CCDP) to evaluate Significance Determination Process findings which conflicts with NRC Inspection Manual Chapter criteria. NRC Inspection Manual Chapters specify that delta-CDF will be used to evaluate the significance of performance deficiencies.

I have designated Christopher G. Miller chairman of this DPO Panel and Christopher G. Cahill as a DPO Panel member. Rani L. Franovich was proposed by the DPO submitter and serves as the third member of the DPO Panel. In accordance with the guidance included in MD 10.159 and consistent with the DPO Program objectives, I task the DPO Panel to do the following:

- Review the DPO submittal to determine if sufficient information has been provided to undertake a detailed review of the issue.
- Meet with the submitter, as soon as practicable, to ensure that the DPO Panel understands the submitter's concerns and scope of the issues. (Normally within 7 days.)
- Promptly after the meeting, document the DPO Panel's understanding of the submitter's concerns, provide the Statement of Concerns (SOC) to the submitter, and request that the submitter review and provide comments, if necessary. (Normally within 7 days.)
- Maintain the scope of the review to not exceed those issues as defined in the original written DPO and confirmed in the SOC.
- Consult with me as necessary to discuss schedule-related issues, the need for technical support (if necessary), or the need for administrative support for the DPO Panel's activities.

- Perform a detailed review of the issues and conduct any record reviews, interviews, and discussions you deem necessary for a complete, objective, independent, and impartial review. The DPO Panel should re-interview individuals as necessary to clarify information during the review. In particular, the DPO Panel should have periodic discussions with the submitter to provide the submitter the opportunity to further clarify the submitter's views and to facilitate the exchange of information.
- Provide monthly status updates on your activities via email to Renée Pedersen, Differing Views Program Manager (DVPM) about the last day of the month. This information will be reflected in the Milestones and Timeliness Goals for this DPO. Please provide a copy of email status updates to the submitter and to me.
- Issue a DPO Panel report, including conclusions and recommendations to me regarding the disposition of the issues presented in the DPO. The report should be a collaborative product and include all DPO Panel members' concurrence. Follow the specific processing instructions for DPO documents.
- Consult me as soon as you believe that a schedule extension is necessary to disposition the DPO.
- Recommend whether the DPO submitter should be recognized if the submitter's actions result in significant contributions to the mission of the agency.

Disposition of this DPO should be considered an important and time sensitive activity. The timeliness goal included in the MD for issuing a DPO Decision is 120 calendar days from the day the DPO is accepted for review. The timeliness goal for issuing this DPO Decision is September 17, 2014.

Process Milestones and Timeliness Goals for this DPO are included as Enclosure 2. The timeframes for completing process milestones are identified strictly as goals—a way of working towards reaching the DPO timeliness goal of 120 calendar days. The timeliness goal identified for your DPO task is 70 calendar days.

Although timeliness is an important DPO Program objective, the DPO Program also sets out to ensure that issues receive a thorough and independent review. The overall timeliness goal should be based on the significance and complexity of the issues and the priority of other agency work. Therefore, if you determine that your activity will result in the need for an extension beyond the overall 120-day timeliness goal, please send me an email with the reason for the extension request and a new completion date. I will subsequently forward this request to the DVPM who will forward it to the EDO for approval.

Please ensure that all DPO-related activities are charged to Activity Code ZG0007.

Because this process is not routine, the DVPM will be meeting and communicating with all parties during the process to ensure that everyone understands the process, goals, and responsibilities. The DVPM will be subsequently sending you information intended to aid you in implementing the DPO process.

An important aspect of our internal safety culture includes respect for differing views. As such,

you should exercise discretion and treat this matter sensitively. Documents should be distributed on an as-needed basis. In an effort to preserve privacy, minimize the effect on the work unit, and keep the focus on the issues, you should simply refer to the employee as the DPO submitter. Avoid conversations that could be perceived as “hallway talk” on the issue. We need to do everything that we can in order to create an organizational climate that does not chill employees from raising dissenting views.

As a final administrative note, please ensure that all correspondence associated with this case include the DPO number in the subject line, be profiled in accordance with ADAMS template OE-011, be identified as non-public and declared an official agency record *when the correspondence is issued*. Please email the ADAMS accession number for the record to [DPOPM.Resource@nrc.gov](mailto:DPOPM.Resource@nrc.gov) and the record will be filed in the applicable DPO case file folder (DPO-2014-001) in the ADAMS Main Library. Following this process will ensure that a complete agency record is generated for the disposition of this DPO. If the submitter requests that the documents included in the DPO Case File be made public when the process is complete, you will be provided specific guidance to support a releasability review.

I appreciate your willingness to serve and your dedication to completing an independent and objective review of this DPO. Successful resolution of the issues is important for NRC and its stakeholders. If you have any questions, you may contact me, Trent Wertz, NRR OCWE Champion, or Renée Pedersen, DVPM, at (301) 415-2742 or email [Renee.Pedersen@nrc.gov](mailto:Renee.Pedersen@nrc.gov).

I look forward to receiving your independent review results and recommendations.

Enclosures:

1. DPO-2014-002
2. Milestones and Timeliness Goals

cc: Submitter  
DVPM

An important aspect of our internal safety culture includes respect for differing views. As such, you should exercise discretion and treat this matter sensitively. Documents should be distributed on an as-needed basis. In an effort to preserve privacy, minimize the effect on the work unit, and keep the focus on the issues, you should simply refer to the employee as the DPO submitter. Avoid conversations that could be perceived as “hallway talk” on the issue. We need to do everything that we can in order to create an organizational climate that does not chill employees from raising dissenting views.

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I appreciate your willingness to serve and your dedication to completing an independent and objective review of this DPO. Successful resolution of the issues is important for NRC and its stakeholders. If you have any questions, you may contact me, Trent Wertz, NRR OCWE Champion, or Renée Pedersen, DVPM, at (301) 415-2742 or email [Renee.Pedersen@nrc.gov](mailto:Renee.Pedersen@nrc.gov).

I look forward to receiving your independent review results and recommendations.

Enclosures:

1. DPO-2014-002
2. Milestones and Timeliness Goals

cc: Submitter  
DVPM

**ADAMS Accession No. ML14175A384**

OFFICE	NRR
NAME	ELeeds
DATE	06/25/14

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## **Document 4: DPO Panel Report**

**Differing Professional Opinion (DPO)  
Regarding Risk Assessment Standardization  
Project (RASP) Handbook Conflict with Reactor  
Oversight Process (ROP) Inspection Manual  
Chapter (IMC) Guidance  
(DPO-2014-002)**

**DPO Panel Report**

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**Christopher G. Miller, Panel Chair**

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**Christopher Cahill, Panel Member**

*/RA/*

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**Rani Franovich, Panel Member**

Date: October 8, 2014

## Introduction

On May 20, 2014, Ms. Renee Pedersen acknowledged a differing professional opinion (DPO) involving the use of conditional core damage probability (CCDP) to evaluate the significance of inspection findings. On June 25, 2014, the Director, Office of Nuclear Reactor Regulation (NRR), issued a memorandum to appointed members of the Panel to review the DPO. After reviewing the DPO submittal, the Panel determined that it had sufficient information to perform a detailed review of the concern. To ensure it understood the submitter's concerns and the scope of the issues, the Panel discussed, by telephone, the DPO with the submitter on June 26, 2014. On June 27, 2014, the Panel provided a concise Statement of Concerns (SOC) to the submitter and incorporated his comments. The Panel then performed a detailed review of the issues and met numerous times to interview NRC staff identified by the submitter or who would otherwise be knowledgeable of the ROP and the Risk Assessment Standardization Project (RASP) guidance. The Panel also had additional discussions with the submitter.

As requested by the Director, NRR, the Panel performed a complete, objective, independent, and impartial review of the concern and materials provided by the submitter. The results of that review, including conclusions and recommendations, are documented herein.

## Statement of Concern

Based on comments from the submitter (and to focus subsequent interviews), the concern was summarized as follows:

*The NRC's RASP Handbook, Volume 1, "Internal Events," Revision 2, issued January 2013, allows analysts to use the equivalent of Conditional Core Damage Probability (CCDP) to characterize the significance of findings associated with events. This new method may inflate the actual risk significance of findings and is inconsistent with governing ROP policy documents, including but not limited to Inspection Manual Chapter (IMC) 0308 (and attachments). The RASP Handbook is a technical methods document and does not supersede governing policy documents. Because this RASP manual revision conflicts with established ROP policy and potentially inflates the significance of findings, the revision should be withdrawn and its use should be discontinued until changes to governing ROP policy support conforming changes to the technical methods document.*

## Basis for Statement of Concern

In his DPO, the submitter provided a list of reference documents and materials, including the following:

- RASP Handbook, Volume 1, Internal Events
- IMC 0308, "ROP Basis Document"
- IMC 0308, Attachment 3, "Technical Basis for Significance Determination Process"

The submitter challenged the use of CCDP under the Reactor Oversight Process (ROP) and its Significance Determination Process (SDP), citing IMC 0308 and its reference to delta core damage frequency ( $\Delta$ CDF) and changes in larger early release frequencies ( $\Delta$ LERF) for determining the significance of inspection findings that occur during power operations. He asserted that the use of CCDP was contrary to higher-tiered ROP policy documents. He further asserted that this departure from ROP policy could lead to unwarranted and inefficient regulatory responses to performance issues of very low safety significance. In support of his

position, the DPO submitter provided an analysis of calculations involving simple transients at five sites in Region IV. In his analysis, the submitter illustrated that the risk values for the transients could be higher when calculated using CCDP than if they were calculated as “true” departures from baseline risk ( $\Delta$ CDF). The result was that three of five transients would be characterized as White in the ROP Action Matrix using CCDP, whereas they all would be Green if analyzed using  $\Delta$ CDF and would, in fact, screen to green in accordance with governing screening criteria in IMC 0609, Appendix A, “Significance Determination Process for Findings At-Power.” The submitter further asserted that, using CCDP, the significance of a simple transient (uncomplicated SCRAM) was inflated when compared to the performance indicator (PI) for Unplanned SCRAMS with Complications (USwC). Specifically, he questioned the validity of a White significance determination (using CCDP) for an *uncomplicated* SCRAM when the White threshold for *complicated* SCRAMS is *two* under the USwC PI.

## Background

The risk-informed ROP was initially developed in the late 1990s and is described in SECY-99-007 and SECY-99-007A. As discussed in SECY-99-007A, a well-defined performance deficiency (PD) underlies any inspection finding, the significance of which is characterized by the SDP. The significance of an inspection finding informs the agency’s response to performance in a manner that efficiently applies agency and licensee resources to performance issues that are most important to safety. For three ROP Cornerstones, risk-informed SDP tools are used to estimate the actual incremental risk increase above the nominal baseline level of probabilistic risk. The tools available to evaluate the incremental risk increase are usually expressed in terms of  $\Delta$ CDF or  $\Delta$ LERF. Other SDP tools rely on different risk metrics. For example, IMC 0609, Appendix K, “Maintenance Risk Assessment and Risk Management Significance Determination Process,” utilizes incremental core damage probability, and IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process,” applies a calculated CCDP for initiating events during plant shutdown. By contrast, IMC 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria,” uses, as the title implies qualitative defense-in-depth considerations to characterize the significance of the inspection finding. Defining methods and metrics to evaluate complex, at-power initiating event findings has been a challenge within the ROP for many years. This is evidenced by the ongoing discussion of the following passage in SECY-99-007A, Appendix 1: “An actual initiating event will either be captured by a performance indicator (e.g., a reactor trip) or, if it is complicated by equipment malfunction or operator error, will be assessed by NRC risk analysts outside of the process described herein.” There has been a great deal of discussion about what was intended by this sentence. Based on discussions and email correspondence with an original author of the IMC 0308 and a former senior risk analyst and Chief of the PRA Operation Branch in NRR/DRA, these complex events were intended to be addressed using reactive inspections in accordance with Management Directive 8.3.

Originally, the at-power SDP consisted of a three-phase approach depending on the significance and complexity of the issue. Phase 1 applied deterministic screening criteria to eliminate findings of very low safety significance from further review. Phase 2 essentially screened inspection findings by applying an ‘order of magnitude’ risk estimator. For findings that increased the initiating event frequency, the applicable event frequency from SDP Table 1 was increased by an order of magnitude in accordance with the usage rules. The Phase 3 analysis was applied to refine Phase 2 analyses for findings of potentially more than very low risk significance. A Senior Reactor Analyst (SRA) would typically estimate the significance of these findings using detailed computer models. Typically, findings that caused complicated transients were handled in Phase 3, consistent with the framework established in SECY-99-

007A, which states that Phase 3 analysis methods will utilize current PRA techniques and rely on the expertise of knowledgeable risk analysts. This is translated into practice through guidance in IMC 0609, Appendix A, which states that the SRA normally performs the detailed risk evaluation for Greater-than-Green findings using the SPAR model, the RASP handbooks, and other risk information as necessary.

As these risk tools were exercised, PRA practitioners developed more sophisticated methods to evaluate more complex findings. To achieve more consistent results and promote best practices using more advanced risk tools, NRR/DRA issued the RASP Handbook, Revision 0, on April 29, 2005. As PRA techniques and modeling continued to improve, the RASP Handbook was expanded to include modeling of external and shutdown events. Both the ROP and RASP Handbook feature feedback mechanisms to promote continuous improvement. To promote continuous improvement of risk-based technical methods, IMC 0609, Attachment 3, "Senior Reactor Analyst Support Expectations," was augmented to reinforce the expectation that SRAs participate in discussions and training on the RASP Handbook and continuously improve the RASP handbook based on knowledge gained during field use. This is accomplished through the RASP User Group. The most recent at-power SDP was revised on June 19, 2012, to reflect the transition from using pre-solved tables and risk-informed notebooks to using SAPHIRE and the site-specific SPAR models. With this change, SRAs would perform a detailed analysis to evaluate findings that did not screen to Green in Phase 1. Subsequently, the RASP Handbook was revised in January 2013 to include recommended methods for evaluating inspection findings associated with initiating events. This January 2013 revision prompted the Submitter's concern.

## **Evaluation**

The Panel does not possess the collegial body of expertise and diverse positions necessary to evaluate the technical merits of the risk assessment methods and render a decision on how initiating events should be evaluated by risk analysts. As such, the Panel did not focus its review on determining the best solution to a highly technical issue that is being evaluated by internal and external stakeholders. Rather, the Panel focused its review on the concerns and proposed remedies as summarized in the "Statement of Concern."

The Panel reviewed materials included in the DPO submittal as well as those suggested by interviewed members of the NRC staff, identified in Attachment 1. Information was obtained through interviews using the following eight questions:

1. What is your position and role in implementing the ROP's significance determination process?
2. Are you aware of the concern, as summarized?
3. In your view, is the concern valid? Why or why not?
4. Are you aware of any assessments that used the guidance and resulted in a Greater-than-Green finding?
5. Is it better to remove the RASP guidance (proposed remedy) or to leave it (with perhaps some verbal caveats if needed) until we have better guidance in place?
6. Should an alternate remedy be considered?
7. Can you recommend any specific agency guidance that deals with the issue that you believe we should review?
8. Can you recommend another person for the Panel to interview?

While opinions on the issue and proposed remedy varied, many who were interviewed felt that the Submitter's concern is valid and warrants further discussion. Most also acknowledged that the January 2013 changes in the RASP Handbook were not well vetted among internal and external stakeholders. In addition, most agreed that the implications for governing ROP policy were not recognized and effectively managed before guidance using CCDP for at-power SDP applications was added to the RASP Handbook. Some also expressed concern that applying CCDP did not estimate the change in risk above nominal (baseline) CDF that was incurred by the inspection finding; they also believed that converting the resultant CCDP value to an annualized frequency by multiplying it by the inverse of one year was disingenuous and technically flawed. Most interviewees were aware of assessments in which the RASP guidance was applied and resulted in a Greater-than-Green finding. With one exception (involving a reactor trip and temporarily lost but recoverable secondary heat removal), the outcomes of these cases were generally accepted as being appropriate to the circumstances and impacts to reactor safety.

The Panel heard and noted that the RASP Handbook has many uses for a number of programs (Accident Sequence Precursors, Reactive Inspections and SDP) and, therefore, could not be written in a format to cover every specific case. When queried regarding the need to remove the RASP Handbook guidance regarding initiating events until the issue is resolved, a majority of the interviewees indicated that the RASP Handbook provided useful information and that there was enough flexibility in the guidance to allow SRAs and other users of the guidance to properly use appropriate tools necessary to evaluate the risk significance of events and inspection findings. Much progress has been made in advancing the craft and developing valid methods using CCDP to assess the significance of inspection findings in limited applications (i.e., circumstances in which the inspection finding directly caused an initiating event). Most of the staff interviewed believed that removing the RASP Handbook guidance related to initiating events at this time would not be prudent. Significant strides have been made over the last 15 months to refine the use of CCDP to aid in effectively approximating changes in risk that are incurred when performance deficiencies directly cause initiating events. Some arguments were made that the use of CCDP, if appropriately quantified under the right set of circumstances, can be mathematically equivalent to  $\Delta$ CDF.

Most staff interviewed considered the processes in place to assess risk significance to be sufficiently rigorous, with robust review controls in place, to achieve regulatory outcomes that are appropriate and commensurate with their safety significance. For example, the SRAs are expected to maintain open communications with the licensee PRA staff when evaluating the significance of events and inspection findings. This interaction is not to serve as a negotiation, but rather as a technical interface to ensure that the facts and assumptions are understood by both parties. For findings that are Greater-than-Green, a detailed Phase 3 analysis is performed and is typically reviewed by a second Regional SRA. The analysis also is peer reviewed by an analyst in the Division of Risk Assessment in NRR, as detailed in IMC 0609, Attachment 1, "Significance and Enforcement Review Panel Process." If the licensee believes that the NRC has improperly characterized the significance of the finding, it has the opportunity to challenge the SDP outcome as described in IMC 0609, Attachment 2, "Process for Appealing NRC Characterization of Inspection Findings (SDP Appeal Process)."

Although the Panel did not interview external stakeholders, it is aware that the Nuclear Energy Institute and other representatives from the nuclear power industry have expressed concerns similar to those raised in the DPO. In a document titled "Initiating Event SDP White Paper" (ML14125A070), the industry expressed its views on the matter. The following excerpt is taken from the Summary section of the White Paper:

*Using CCDP as the measure for significance for an event analysis would result in a White finding, effectively changing the threshold for uncomplicated scrams. The RASP Handbook methodology of converting CCDP to  $\Delta$ CDF by dividing CCDP by one year is not technically justified. This is equivalent to assuming the event would happen once per year, year after year in the future.*

The Panel was informed by several interviewees that the NRC is conducting public meetings to solicit perspectives and evaluate options for resolving the technical and policy issues and concerns raised by the submitter and other internal and external stakeholders. Several interviewees also indicated that training on the RASP Handbook guidance could ensure it is appropriately followed for the diverse applications it is used for (event assessment vice SDP applications). In addition, the Panel was informed that a memorandum was issued by the Director of DIRS/NRR on February 03, 2014, to clarify the RASP guidance, reinforce the need to follow other applicable sections of the RASP Handbook, and define the circumstances under which use of CCDP would be appropriate for characterizing the significance of inspection findings.

The Panel also reviewed ROP policy documents (SECY-99-007 and inspection manual chapters) and the technical guidance that was added to Section 8 of the RASP Handbook in January 2013. The Panel is aware of public meetings conducted on November 4, 2013, and July 24, 2014, to discuss stakeholder views on the use of CCDP in SDP applications for at-power inspection findings that cause initiating events. One of the Panel members participated in or observed both meetings, and all Panel members reviewed the meeting summaries (ML13326A232 and ML14219A390) to better understand the nature of the exchange on this technical and policy issue as well as progress that has been made to date to develop approaches to assessing the significance of inspection findings with instantaneous impacts to plant (vice exposure times for failures and degraded conditions).

In reviewing SECY 99-007 and IMC 0308, Panel members were unable to definitively interpret some passages in these documents to determine their intent. In May 2013, one of the Panel members (Rani Franovich, then Chief of the Performance Assessment Branch with cognizance over IMC 0308, Attachment 3) participated in a conference call to discuss the use of CCDP for SDP applications with Doug Coe, an author of IMC 0308, Mike Franovich, a former Chief of the PRA Operations Branch, and other NRC staff. This discussion was used to formulate an ROP feedback form so concerns with using CCDP could be documented, reviewed and resolved in the established ROP continuous improvement process. The May 2013 discussion and feedback form were the subject of email exchanges among these three individuals on October 22, 2013. (The entire email exchange is provided in Attachment 2 to this report.) The following is an excerpt from Doug Coe's email:

*I wasn't the sole author of IMC 0308 Att. 3. Gareth and I collaborated to great length on it and it underwent regional and management reviews. From the inception of the SDP I was in agreement with Gareth that an event CCDP analysis result was a conceptually different risk metric from the ICDP (i.e. delta CDF) of the degraded condition that arises from a performance deficiency, given that the former was a 'point-in-time' risk margin to core damage (given actual equipment performance) and the latter was a comprehensive risk increase over all event sequences applicable to the degraded condition (given all plant equipment performance modeled probabilistically). We did not believe that it was appropriate to use an event CCDP or to sum an event CCDP with prior ICDP to get a combined delta CDF result for the SDP. Both Gareth and I jointly wrote the*

*SDP Basis with that in mind, although the text is not perfectly clear on this point, as has been pointed out.*

The following is an excerpt from Mike Franovich's response to Doug Coe's points:

*To supplement Doug's comments, I recall noting specifically (in the call) that during my tenure in NRR:*

*With respect to at-power inspection findings affecting an initiating event frequency, the general intent was to estimate how the performance deficiency (PD) changed the baseline plant risk level. This approach included licensee performance deficiencies that resulted in an actual event. The baseline plant risk level assumes the plant is normally operating with a nominal, average level of risk recognizing that the true risk level fluctuates daily (e.g., equipment out of service, variations in external factors such as weather (affect offsite power reliability), grid conditions, etc..).*

*To have an appropriate comparison of the higher risk associated with the PD, a valid comparison needed to be made between a new average risk levels against the baseline-average plant risk level (i.e., delta CDF, delta LERF). In other words, compare averages to averages, basically the same figure of merit. Use of event CCDP simply does not accomplish this because no new average initiating event frequency is calculated.*

*I had also noted that there was one SDP, for shutdown events, that used event CCDP. Event CCDP was only used in some shutdown cases because there is no valid "baseline CDF" for refueling outages. In terms of equipment availability, refueling outages can vary significantly from outage to outage depending on the scope of outage work. In these SDP cases, event CCDP was selected as a metric and was vetted with industry before being implemented via an update to the NRC Inspection Manual Chapters for the ROP (basically governing policy for the program). It was not a departure from Commission direction as the staff had yet to develop, at that time, a technically sound SDP for shutdown risk.*

*Lastly, I noted that should the staff desire a change to the at-power SDP using a different risk metric than delta CDF, it should vet such changes with the industry at a minimum.*

The Panel also reviewed Feedback Form 0308.3-1878. This feedback form documents the following issue:

*The staff (inspectors, SRAs, and program owners) has different interpretations regarding the technical basis guidance for the SDP. Several examples are:*

- 1) The SDP result is the safety or security significance of a finding or the degraded condition of which the finding was the proximate cause.*
- 2) A programmatic weakness in the non-reactor safety cornerstones is equivalent to a degraded condition in the reactor safety context.*
- 3) The degraded condition is composed of both "actual" and "potential" aspects.*

- 4) *Does the term degraded condition also apply to a finding that causes and initiating event to occur?*
- 5) *The two definitions of CCDP in Section 8 need clarification so it is clear to external and internal stakeholders exactly how the SDP calculates an “increase in risk above a baseline value” in the reactor safety cornerstone.*

The feedback form clearly recommends that the staff will coordinate with internal SDP stakeholders to clarify guidance in IMC 0308, Attachment 3, and Section 8 of the RASP Handbook, so it is clear how the SDP calculates “an increase in risk above a baseline value” in the reactor safety cornerstones. The Panel notes that this recommendation is underway, and dialogue among internal and external stakeholders to resolve the technical and policy issues associated with using CCDP in at-power SDP applications is ongoing. The state of the art in PRA is continuously evolving, and many practitioners recognize the RASP Handbook as the best available guidance.

Based on its review of the noted documents, discussions with internal stakeholders, and review of email correspondence, the Panel notes that ROP policy documents are silent regarding treatment of inspection findings that cause initiating events. The Panel also understands that guidance was added to Section 8 of the RASP Handbook to fill a gap in technical guidance. The addition of this guidance was intended to ensure consistent approaches and reliable regulatory outcomes.

The Panel considered information presented in ROP documents (IMCs and early SECY Papers); guidance provided in Section 8 of the RASP Handbook, Volume 1, Revision 2; and the views of internal and external stakeholders expressed in white papers and/or during interviews, documented in public meeting summaries, and articulated in written email correspondence to formulate its conclusions and recommendations.

## **Conclusions**

Based on its review of submitted and suggested materials, information gathered during interviews of knowledgeable NRC staff, and the knowledge of the issue possessed by Panel members, the Panel arrived at the following conclusions:

**Conclusion 1: The technical validity of the methods used in Section 8 of the RASP Handbook warrants continued work to ensure it represents the best risk methodology for the intended purposes.** The staff is in the process of engaging technical experts within NRC, industry, and the PRA community to evaluate technical methods for characterizing the significance of at-power inspection findings that cause initiating events.

**Conclusion 2: Guidance was added to the RASP Handbook without sufficient consideration of implications for governing ROP policy.** IMC 0308, Attachment 3, does not address how to characterize the significance of findings that cause initiating events. In an effort to provide consistency in approach and reliable regulatory outcomes, the staff revised the RASP Handbook in January 2013 and added guidance in Section 8 to fill a perceived gap. However, the implications for governing policy documents were not recognized, and efforts to work through the policy issues were not pursued concurrent with efforts to resolve the technical challenge of characterizing the significance of inspection findings that cause initiating events.

**Conclusion 3: The January 2013 changes in the RASP Handbook were not sufficiently vetted among internal and external stakeholders before the revision was issued for use.**

The January 2013 revisions to the RASP Guidance were primarily discussed among NRC staff within the PRA community. There was insufficient review of, and concurrence on, the proposed revisions among interested and affected internal stakeholders. In addition, there was no involvement of external stakeholders. Had a rigorous change control process been implemented in a more open, transparent manner with all stakeholders, the oversights might have been recognized and addressed through conforming changes to governing ROP policy documents.

**Conclusion 4: Conformance between methods presented in Section 8 of the RASP Handbook and governing ROP documents is not clear.** Based on insights provided by experts on the history and intent of the SDP, the intent was to evaluate actual initiating events (e.g., a reactor trip) through the performance indicator program. Initiating events complicated by equipment malfunction or operator error were intended to be assessed by NRC risk analysts under the NRC's Incident Investigation Program and responded to through reactive inspections (outside of the SDP). In addition, IMC 0308, Attachment 3, does include a section (Section 8) that is titled "USE OF DELTA CDF (AND DELTA LERF) AS THE SDP RISK METRIC," which implies that the figure of merit for SDP applications is  $\Delta$ CDF and  $\Delta$ LERF. However, the intent of IMC 0308 is not explicitly stated. In addition, changes to the SDP since its inception have involved use of metrics other than  $\Delta$ CDF and  $\Delta$ LERF (e.g., incremental core damage probability is used for maintenance risk assessment and risk management applications, and a calculated CCDP is used for initiating events during plant shutdown). Since IMC 0308, Attachment 3, does not address how inspection findings that cause initiating events are characterized, the Panel found that the RASP Handbook guidance in Section 8 neither conforms to nor contradicts policy.

**Conclusion 5: The RASP Handbook, Volume 1 – Internal Events, Revision 2, Section 8, contains useful information for risk analysts and, with additional clarifying guidance to include a February 3, 2014, memorandum (ML13351A428), should be retained while ongoing efforts to resolve the technical issues continue.** As stated in IMC 0308, Attachment 3, the SDP is intended to support timely responses to identified licensee performance deficiencies generally within a timeframe consistent with quarterly updates of the Action Matrix portion of the performance assessment component of the ROP. Since inspection findings are often unique, and specific tools and guidance cannot be developed to analyze all situations, the inspection guidance recognizes that it is appropriate, in the interest of making timely regulatory decisions based on SDP outcomes, for the staff proceed to a final determination based on best available information and reasonable technical or probabilistic judgments. Much work has been done in the last year to advance the technology with extensive stakeholder involvement, and the January 2013 guidance in Section 8 of the RASP Handbook has been supplemented (by memorandum) with additional clarifications and guidance.

The process for arriving at a final significance determination is robust. It begins with extensive SRA training and experience, which typically results in proper use of PRA tools and methods. Proper use of CCDP in the RASP Handbook should be well understood by analysts and decision makers when applying the methods for ROP issues. Subsequent peer reviews by HQ staff typically reinforce proper application of those tools and methods. The process for proposing a preliminary significance is followed by the Significance and Enforcement Review Panel, with representation from the Regional Office, Office of Enforcement, and multiple Divisions within NRR. In addition, licensees are given an opportunity to provide information before a final significance is determined; similarly, licensees also have an opportunity to appeal should they disagree with the final outcome or its basis.

In the end, the risk information need not be precise for SDP purposes – it simply needs to inform decision makers on appropriate resource allocations in response to licensee performance.

## Recommendations

Based on its review, the DPO Panel recommends the following:

1. Staff should continue its ongoing dialogue with interested stakeholders to define, test, and adopt a technically sound approach to determining the significance of inspection findings that directly cause initiating events.
2. In the interim, the February 03, 2014, memorandum that clarifies the RASP guidance, and defines the circumstances under which use of CCDP would be appropriate, should be incorporated into the RASP guidance.
3. In the interim, the staff should conduct a Planning SERP in accordance with IMC 0609, Attachment 1, when evaluating initiating event performance deficiencies that are potentially greater than green. The purpose of the Planning SERP should be to ensure that the methodologies used to characterize significance adequately model the change in risk incurred by the inspection finding.
4. The staff should ensure that guidance in the RASP Handbook conforms with governing ROP documents. This could involve changes or clarifications to the RASP Handbook, to governing ROP documents, or to both the RASP Handbook and governing ROP documents.
5. A training topic on the use of CCDP for SDP applications involving initiating events should be added to the continued training portfolio for SDP risk practitioners.
6. A rigorous change control process should be adopted for incorporating changes to the RASP Handbook. The change control process should include provisions for
  - a. ensuring proposed changes are sufficiently informed by governing policy;
  - b. implementing conforming changes to governing policy when appropriate; and
  - c. soliciting and duly considering input from internal and external stakeholders.
7. Because they have the potential to impact NRC and licensee resources, Agency decision makers should be familiar with the role of PRA in risk-informed regulatory processes. The Panel recommends P-107 “PRA Basics for Regulatory Applications,” and P-109, “Assessing the Adequacy of Models for Risk-Informed Decisions,” for those who serve on Significance and Enforcement Determination Process (SERP) Panels.

The Panel acknowledges the view that use of CCDP has the potential to yield more conservative decisions about the significance of inspection findings involving initiating events. And the Panel recognizes that this would preclude any potentially significant issue from screening to green and receiving less attention than is warranted. However, the Panel also recognizes that conservative decisions of this nature can lead to inefficient application of NRC and licensee resources to address underlying performance issues. The Submitter exhibited keen sensitivity to Efficiency (one of the Principles of Good Regulation). Therefore, the Panel commends him for raising the concern and for his related contributions to ongoing efforts to advance the appropriate use of risk tools used to inform regulatory decisions.

## Persons Contacted by the DPO Panel

<u>Name</u>	<u>Position Title</u>
Rudy Bernhard	Senior Reactor Analyst, Region II
Kevin Coyne	Chief, Probabilistic Risk Assessment Branch, DRA/RES
Laura Kozak	Senior Reactor Analyst, Region III
Jim Knudsen	Idaho National Labs, N6755, SPAR Model Technical Support
Troy Pruett	Acting Director, Division of Reactor Projects, Region IV
John Schroeder	Idaho National Labs, N6755, SPAR Model Technical Support
Steve Vaughn	Lead for IMC 0609, Performance Assessment Branch, DIRS/NRR
Sunil Weerakkody	Chief, PRA Operations and Human Factors Branch, DRA/NRR
See-Meng Wong	Senior Reactor Analyst, DRA/NRR

## **Document 5: DPO Decision**



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

November 21, 2014

MEMORANDUM TO: George D. Replogle, Senior Reactor Analyst  
Division of Reactor Safety  
Region IV

FROM: William M. Dean, Director  
Office of Nuclear Reactor Regulation 

SUBJECT: DIFFERING PROFESSIONAL OPINION INVOLVING USE OF  
CONDITIONAL CORE DAMAGE PROBABILITY TO EVALUATE  
PERFORMANCE DEFICIENCIES THAT CAUSE INITIATING  
EVENTS - (DPO-2014-002)

On May 12, 2014, in accordance with Management Directive 10.159, "The NRC Differing Professional Opinions Program", you submitted a differing professional opinion (DPO) concerning the use of conditional core damage probability (CCDP) to evaluate performance deficiencies that cause initiating events (DPO-2014-002). Specifically, your DPO states that the Risk Assessment Standardization Project (RASP) manual is in violation of Inspection Manual Chapter (IMC) 0308 and IMC 0040, in that these documents specify that all Reactor Oversight Process (ROP) documents will be consistent with IMC 0308. IMC 0308 specifies that the U.S. Nuclear Regulatory Commission (NRC) will use delta core damage frequency (CDF) as the metric to evaluate performance deficiencies. The purpose of this memorandum is to respond to your DPO.

On June 25, 2014, my predecessor established a DPO Ad Hoc Review Panel (the Panel) and tasked them to meet with you, review your DPO submittal, and issue a DPO report, including conclusions and recommendations to me regarding the disposition of the issues presented in your DPO. The Panel initially met with you by telephone on June 26, 2014 to establish a concise statement of your concerns. On October 8, 2014, after reviewing the applicable documents, completing internal interviews of relevant individuals and completing their deliberations, the Panel issued their report to me.

Following receipt of their report, I provided a copy of the report to you for your review. On November 13, 2014 I talked to you by telephone to discuss the Panel's report and to get your insights and comments. You provided me additional insights into your concerns and your thoughts for resolving the issue.

In order to make a decision with regard to your DPO, I reviewed your DPO submittal, the Panel's report, met with the Panel, talked with you, and then re-considered your comments to me.

CONTACT: Trent L. Wertz, NRR  
301-415-1568

Statement of Concern

The NRC's RASP Handbook, Volume 1, "Internal Events," Revision 2, issued January 2013, allows analysts to use the equivalent of CCDP to characterize the significance of findings associated with events. This new method may inflate the actual risk significance of findings and is inconsistent with governing ROP policy documents, including but not limited to IMC 0308 (and attachments). The RASP Handbook is a technical methods document and does not supersede governing policy documents. Because the RASP manual revision conflicts with established ROP policy and potentially inflates the significance of findings, the revision should be withdrawn and its use should be discontinued until changes to governing ROP policy support conforming changes to the technical methods document.

The Panel concluded the following:

1. The technical validity of the methods used in Section 8 of the RASP Handbook warrants continued work to ensure it represents the best risk methodology for the intended purposes.
2. Guidance was added to the RASP Handbook without sufficient consideration of implications for governing ROP policy.
3. The January 2013 changes in the RASP Handbook were not sufficiently vetted among internal and external stakeholders before the revision was issued for use.
4. Conformance between methods presented in Section 8 of the RASP Handbook and governing ROP documents is not clear.
5. The RASP Handbook, Volume 1 – Internal Events, Revision 2, Section 8, contains useful information for risk analysts and, with additional clarifying guidance to include a February 3, 2014, memorandum (Agencywide Documents Access and Management System Accession No. ML13351A428), should be retained while ongoing efforts to resolve the technical issues continue.

Based on these conclusions, the Panel made the following recommendations:

1. Staff should continue its ongoing dialogue with interested stakeholders to define, test, and adopt a technically sound approach to determining the significance of inspection findings that directly cause initiating events.
2. In the interim, the February 03, 2014, memorandum that clarifies the RASP guidance, and defines the circumstances under which use of CCDP would be appropriate, should be incorporated into the RASP guidance.
3. Attachment 1, when evaluating initiating event performance deficiencies that are potentially greater than green. The purpose of the Planning Significant Determination and Enforcement Review Panel (SERP) should be to ensure that the methodologies used to characterize significance adequately model the change in risk incurred by the inspection finding.
4. The staff should ensure that guidance in the RASP Handbook conforms with governing ROP documents. This could involve changes or clarifications to the RASP Handbook, to governing ROP documents, or to both the RASP Handbook and governing ROP documents.
5. A training topic on the use of CCDP for Significance Determination Process (SDP) applications involving initiating events should be added to the continued training portfolio for SDP risk practitioners.
6. A rigorous change control process should be adopted for incorporating changes to the RASP Handbook. The change control process should include provisions for
  - a. ensuring proposed changes are sufficiently informed by governing policy;

- b. implementing conforming changes to governing policy when appropriate; and
  - c. soliciting and duly considering input from internal and external stakeholders.
7. Because they have the potential to impact NRC and licensee resources, Agency decision makers should be familiar with the role of PRA in risk-informed regulatory processes. The Panel recommends P-107 "PRA Basics for Regulatory Applications," and P-109, "Assessing the Adequacy of Models for Risk-Informed Decisions," for those who serve on SERP Panels.

After considering all the information, I align with the recommendations provided by the DPO panel. They have thoroughly and conscientiously endeavored to address your well-thought out and articulated concerns to lay out an approach that will be appropriately responsive.

In light of the very well-defined role of using delta CDF/large early release frequency (LERF) as the primary basis for determining the significance of inspection findings in the ROP, utilizing a CCDP methodology should be limited to those situations where either a delta CDF/LERF approach is not applicable or the CCDP method provide for a more timely and equivalent outcome. In that regard, until the staff completes actions related to Recommendation 1, a Delta CDF/LERF analysis shall be conducted in those circumstances where CCDP is used to assess a finding in the initiating events (IE) cornerstone and presented at the planning SERP discussed in Recommendation 3.

As the staff pursues reconciling this issue through the actions described in Recommendation 1, a particular focus needs to be on how the potential changes to applicable ROP guidance documents and RASP Handbook relative to the use of CCDP are reconciled with the delta CDF/LERF bases for the Performance indicators in the IE cornerstone.

A key concern raised by you was the lack of a rigorous change control process for making changes to the RASP handbook. Therefore, the changes that will be made to address Recommendation 6 should also be applied retroactively to the issue that was the subject of the DPO.

A summary of the DPO will be included in the Weekly Information Report (when the case is closed) to advise interested employees of the outcome.

G. Replogle

- 4 -

Thank you for raising your DPO and for your active participation in the DPO process. An open and thorough exploration of how we carry out our regulatory processes is essential to keeping these programs effective. Your willingness to raise concerns with your colleagues and managers and ensure that your concerns are heard and understood is admirable and vital to ensuring a healthy safety culture within the Agency.

Enclosure:

DPO Panel report, dated October 8, 2014

cc: J. Uhle, NRR  
B. Holian, NRR  
P. Holahan, OE  
R. Pedersen, OE  
M. Sewell, OE  
C. Miller, NRR  
C. Cahill, RI  
R. Franovich, NSIR  
M. Dapas, RIV  
S. Reynolds, RIV  
M. Johnson, OEDO

G. Replogle

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NAME	WDean
DATE	11/21/14

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