

February 15, 2000

MEMORANDUM TO: Wayne D. Lanning, Director RI\DRS  
Victor M. McCree, Director RII\DRS  
John A. Grobe, Director RIII\DRS  
Arthur T. Howell III, Director RIV\DRS

FROM: Peter Koltay */RA/*  
Inspection Programs Branch  
Division of Inspection Program Management

SUBJECT: PLANT-SPECIFIC SDP WORKSHEET DEVELOPMENT PLANS

The plant-specific SDP Phase 2 worksheet development is ongoing by our contractor, Brookhaven National Laboratories (BNL). The basic worksheet notebooks for the nine pilot plants and approximately 30 other sites have been completed and mailed to the licensees. These notebooks are being forwarded to the licensees by the Project Managers. A listing of plants and their SDP notebook status is provided in Attachment 1. Completion of the development of these basic plant-specific SDP notebooks is expected by the end of February 2000. A projected schedule for completing the remaining basic SDP notebooks is given in Attachment 2. These basic notebooks only include generic initiating events and are comparable to the reactor safety SDPs used by the pilot plants. They do not address the "special initiator" worksheets which are principally the loss of support system events that have been found to be necessary through recent benchmarking of SDP worksheets against licensee PRA models.

All plant-specific SDP notebooks must be updated to include the "special initiators" so that the SDP remains a generally conservative risk estimator. The development of special initiator worksheets requires additional information that, for some plants, is not obtainable from available documentation (e.g. IPEs, SPAR rev 3 models). For these plants a site visit will be necessary to gather the necessary information to develop the special initiator worksheets. BNL has identified those plants they believe will need site visits to construct the special initiator worksheets. It is intended that a BNL representative accompany an NRC risk analyst on these site visits to gather the necessary information. These plants are those that used SAIC to help develop their IPEs and are listed in Attachment 3. Other plants may also be identified as needing a site visit to obtain special initiator information at the conclusion of an ongoing BNL review.

All plants will require a site visit by an NRC risk analyst to obtain any feedback and recommendations for modifying the SDP Phase 2 worksheets to account for plant equipment modifications or new risk analysis insights gained by the licensee since the IPE was submitted. It is therefore preferable to conduct these site visits first at the plants noted above for which we cannot develop the special initiator worksheets without the site visit. **Therefore, we request that each region propose a schedule, based on the attached information, to begin site visits starting as soon as possible.** Site visits should only be scheduled if the licensee has had sufficient time to review the SDP worksheets (including the special initiator worksheets if

these can be developed prior to the site visit). Site visits with BNL participation should be coordinated with the RES project manager, Jose Ibarra, to ensure BNL availability. If Regional resources do not permit timely site visits by a region-based SRA, then site visit support should be requested from the Probabilistic Safety Assessment Branch (SPSB) of NRR, point-of-contact Pete Wilson, 301-415-1114 (PRW1).

Additionally, all plant-specific worksheets are currently expected to be “benchmarked” (i.e., comparison of various hypothetical issues) with each licensee’s most current PRA. This may require obtaining specific licensee PRA analyses and other information during the site visit and should be accomplished by regional SRAs or by risk analysts from SPSB. Detailed objectives and guidance for the site visits are being finalized and will be sent to SRAs shortly. However, all site visits will have the following major objectives:

1. receive any licensee comments or recommendations regarding the accuracy of the plant-specific SDP worksheets,
2. obtain any needed information to construct special initiator worksheets, if necessary,
3. obtain any licensee analyses that will be needed to benchmark the SDP worksheets (as revised following consideration of licensee comments) against a series of hypothetical test cases run on the licensee’s current PRA model.

The regions will have the opportunity to select which site visits they will support by sending one SRA. SPSB/NRR will support any site visits that regions are unable to support. **Regional SRAs are requested to notify Mr. Peter Koltay, IIPB/NRR, as soon as any site visit is scheduled.** In certain cases, RES may send representatives to the site visit to obtain information beneficial to the SPAR revision 3 development effort, on a not-to-interfere basis with the completion of the above SDP objectives.

The following is the target timetable for completion of all SDP worksheets:

15 Feb	BNL identifies plants that will require site visits to obtain special initiator information. IIPB/NRR will forward this information to associated regional SRAs for commencement of site visit planning. Site visits should be planned to allow the licensee sufficient time to review the SDP worksheets.
22 Feb (approx)	Commence site visits with BNL participation at plants for which special initiator information cannot be obtained from other than a site visit
1 Mar	BNL will complete the development of the basic SDP worksheets for all sites (without special initiators). These will continue to be mailed via Project Managers as they are received.
1 Mar -30 Apr	BNL to develop special initiator worksheets. BNL continues to revise all SDP worksheets based on comments from site visits and benchmarking.
30 May	All site visits complete

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- 30 May All site visits complete

Distribution:

All SRAs; IIPB r/f LRaghaven WDean MJohnson CHolden AMadison SStein  
 DCoe TFry JIbarra RBarrett MReinhart PWilson KEBrockman, RIV  
 GEGrant, RIII LRPlisco, RII ARBlough, RI **G:IPB\sdp.memo.doug** See previous concurrence.  
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<b>OFC:</b>	NRR/IIPB					
<b>NAME:</b>	PSKoltay *					
<b>DATE:</b>	2/15/00					

Region I	SDP draft posted on Intranet	SDP mailed to licensee	Special Initiator Worksheets sent to licensee	Site visit date and NRC reps	Site visit comments sent to BNL	Site visit resolutions reviewed & entered	SDP rev 0 posted on Intranet
Beavr Vlly 1	X	1/5/00					
Beavr Vlly 2	X	1/5/00					
Calvrt Cliffs							
Fitzpatrick (PILOT)	X	?					
Ginna							
Hope Crk (PILOT)	X	12/7/99					
Salem (PILOT)	X	?					
Indian Pt 2	X	1/3/00					
Indian Pt 3	X	2/00					
Limerick	X	12/8/99					
Millstone 2							
Millstone 3	X	2/00					
Nine MI Pt							
Oyster Crk							
Peach Btm	X	2/00					
Pilgrim							
Seabrook							
Susquhna							
TMI-1							
Vermnt Yk	X	12/3/99					
Region II	SDP draft posted on Intranet	SDP mailed to licensee	Special Initiator Worksheets sent to licensee	Site visit date and NRC reps	Site visit comments sent to BNL	Site visit resolutions reviewed & entered	SDP rev 0 posted on Intranet
Browns Fy							

Brunswick	X	12/8/99					
Catawba							
Crystal Rvr							
Farley	X	12/17/99					
Harris (PILOT)	X	12/13/99					
Hatch	X	12/15/99					
McGuire							
North Ana	X	2/00					
Oconee							
Robinson	X	12/3/99					
St. Lucie							
Sequoyah (PILOT)	X	12/16/99					
Surry	X	2/00					
Turkey Pt							
V.C.Sumer	X	12/15/99					
Vogle							
Watts Bar							
Region III	SDP draft posted on Intranet	SDP mailed to licensee	Special Initiator Worksheets sent to licensee	Site visit date and NRC reps	Site visit comments sent to BNL	Site visit resolutions reviewed & entered	SDP rev 0 posted on Intranet
Braidwood							
Byron							
Clinton							
D.C. Cook							
DavisBese							

Dresden							
DuanArnld							
Fermi							
Kewanee							
La Salle							
Monticello	X	2/00					
Palisades	X						
Perry	X	12/10/99					
Pt. Beach							
Prairie Is. (PILOT)	X	12/9/00					
QuadCities (PILOT)	X	12/22/99					
Region IV	SDP draft posted on Intranet	SDP mailed to licensee	Special Initiator Worksheets sent to licensee	Site visit date and NRC reps	Site visit comments sent to BNL	Site visit resolutions reviewed & entered	SDP rev 0 posted on Intranet
ANO1	X	1/24/00					
ANO2	X	1/24/00					
Callaway	X	1/6/00					
Comanche	X	12/29/99					
Cooper (PILOT)	X	?					
Diablo Cny	X	1/7/00					
Ft.Calhoun (PILOT)	X	12/13/99					

Grand Gulf	X						
PaloVerde	X	2/00					
River Bend	X	12/15/99					
SONGs	X	1/3/00					
South Tex	X	12/22/99					
Waterford	X						
WNP 2	X	1/10/00					
Wolf Creek	X						

## ATTACHMENT 2

The schedule of notebooks as of Thursday February 3

1. Plants completed and being finalized. To be received by IIPB/NRR by Friday February 11:

Kewaunee  
ST. Lucie1  
St lucie2  
Nine Mile Point 2  
Duane Arnold  
TMI  
Clinton

2. Plants that are partially completed and will be received by IIPB/NRR by 2/20:

Calvert Cliffs  
Nine Mile Point 1  
Byron  
Braidwoof  
Ginna  
Mcguire  
Lasalle  
Susquehanna

3. Plants that will be started by 2/15 and it is planned to be completed and received by IIPB/NRR by 2/29 or first week of March:

Seabrook  
WattsBar  
Catawba  
D.C. Cook  
Millstone2  
Davis Besse  
Crystal River 3  
Browns Ferry 2  
Dresden 2&3  
Oyster Creek



ATTACHMENT 3

Plant	Outside Help
Arkansas Nuclear One 1	SAIC
Arkansas Nuclear One 2	SAIC
Beaver Valley 1	PLG
Beaver Valley 2	PLG
Big Rock Point	Gabor, Kenton & Associates; Tenera
Braidwood 1,2 (3V) + Modified Braidwood and Byron IPEs	NUS
Browns Ferry 2	PLG
Brunswick 1,2	NUS; CP&L; RMA
Byron 1,2 (3V) + Modified Braidwood and Byron IPEs	Commonwealth Edison; IPEP
Callaway 1	NUS
Calvert Cliffs 1,2	PLG
Catawba 1,2	SAIC Approach
Clinton	IPEP
Comanche Peak 1,2	TU Electric in-house for everything
Cook 1,2	IPEP
Cooper	SAIC
Crystal River 3	SAIC
Davis-Besse	Toledo Edison - most of the work
Diablo Canyon 1,2	PLG
Dresden 2,3	IPEP
Duane Arnold	ERIN Eng. & Research
Farley 1,2	West; Fauske
Fermi 2	PLG
Fitzpatrick	SAIC
Fort Calhoun 1	SAIC; CE
Ginna	SAIC
Grand Gulf 1	SAIC; Entergy
Hope Creek 1	Contractor not specified

Plant	Outside Help
Indian Point 2	NUS
Indian Point 3	SAIC; NUS
Kewaunee	West.
La Salle 1,2 + NUREG/CR-4832, NUREG/CR-5305	NRC, SNL
Limerick 1,2	Utility; NUS; ERIN
McGuire 1,2	SAIC
Millstone 2	NUSCO; Gabor, Kenton (limited)
Millstone 3	NUS
Monticello	Tenera; Fauske; Northern States Power Co.
Nine Mile Point 1	PLG Methodology; numerous consultants
Nine Mile Point 2	PLG Methodology; numerous consultants
North Anna 1,2	NUS
Oconee 1,2,3	SAIC Approach (CAFTA; MAAP)
Oyster Creek	PLG
Palisades	Tenera; Gabor; Impell
Palo Verde 1,2,3	NUS; Bechtel
Peach Bottom 2,3	PECo; NUS; ERIN
Perry 1	NUS
Pilgrim 1	Tenera; Fauske; Gabor, Kenton & Assoc.
Point Beach 1,2	West; NUS
Prairie Island 1,2	IPEP
Quad Cities 1,2	IPEP; Commonwealth Edison
River Bend 1	NUS; SAIC
Robinson 2	SAIC
Saint Lucie 1,2	themselves
Salem 1 (Salem 1&2 done together)	PLG: Impell; Gabor
Salem 2	
San Onofre 2,3	ERIN; NUS; EQE; IPEP
Seabrook 1	PLG
Sequoyah 1,2	PLG
Shearon Harris 1	SAIC
South Texas 1,2	PLG
Summer	West; Fauske

Plant	Outside Help
Surry 1,2	NUS
Susquehanna	Utility
Three Mile Island 1	PLG
Turkey Point 3,4	SAIC
Vermont Yankee	YAEC; ERIN; Gabor, Kenton & Assoc.
Vogtle 1,2	West; Fauske
Washington Nuclear 2 (WNP-2)	IPEP (Tenera, West, Fauske)
Waterford 3	Entergy; SAIC
Watts Bar 1,2	PLG
Wolf Creek 1	Wolf Creek Nuclear Operating Corp.