


## DISTRIBUTION CONTROL LIST

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CC_NAME	NAME	DEPT	LOCATION
2	EP/TRAINING ADMINISTRATOR	TRAINING (ALL EP'S)	#48
3	RES DEPARTMENT MANAGER	RES (UNIT 3/IPEC ONLY)	45-4-A
4	REFERENCE LIBRARY	REC/TRN(UNT 3/IPEC ONLY)	BLDG/17
9	JOINT NEWS CENTER	EMER PLN (ALL EP'S)	EOF
10	SHIFT MGR. (LUB-001-GEN)	OPS (UNIT 3/IPEC ONLY)	IP3
11	CONTROL ROOM & MASTER	OPS(3PT-D001/6(U3/IPEC)	IP3 (ONLY)
14	EOF	E-PLAN (ALL EP'S)	EOF
16	AEOF/A.GROSJEAN(ALL EP'S)	E-PLAN (EOP'S ONLY)	WPO-12D
19	NUC ENGINEERING LIBRARY	DOC (UNIT 3/IPEC ONLY)	WPO/7A
21	TSC	RECORDS	45-3-F
22	RESIDENT INSPECTOR	US NRC(UNIT 3/IPEC ONLY)	45-2-B
23	SILK DAVID	NRC (ALL EP'S)	OFFSITE
24	SILK DAVID	NRC (ALL EP'S)	OFFSITE
25	DOCUMENT CONTROL DESK	NRC (ALL EP'S)	OFFSITE
28	AVRAKOTOS N	J A(UNIT 3/IPEC ONLY)	OFFSITE
29	E-PLAN STAFF	E-PLAN (ALL EP'S)	EOF
30	E-PLAN STAFF	E-PLAN (ALL EP'S)	EOF
31	BARANSKI J(VOLUME I ONLY)	ST. EMERG. MGMT. OFFICE	OFFSITE
32	SUTTON A -(VOLUME I ONLY)	DISASTER & EMERGENCY	WESTCHESTR
33	LONGO N (VOLUME I ONLY)	EMERGENCY SERVICES	ROCKLAND
34	GREENE D (VOLUME I ONLY)	DISASTER & CIVIL DEFENSE	ORANGE
35	RAMPOLLA M(VOLUME I ONLY)	OFFICE OF EMERG MANAGE	PUTNAM
41	SIMULATOR	TRAIN(UNIT 3/IPEC ONLY)	48-2-A
107	QA MANAGER	QA (UNIT 3/IPEC)	TRL #2A
319	C.STELLATO(NRQ-OPS TRN)	NRQ (UNIT 3/IPEC ONLY)	#48
354	L.GRANT(LRQ-OPS/TRAIN)	LRQ (UNIT 3/IPEC ONLY)	#48
376	E-PLAN STAFF	E-PLAN (ALL EP'S)	EOF
424	J.CHIUSANO(OPS INSTR)	(UNIT 3/IPEC ONLY)	#48
510	L.GRANT(LRQ-OPS/TRAIN)	LRQ (UNIT 3/IPEC ONLY)	#48
511	L.GRANT(LRQ-OPS/TRAIN)	LRQ (UNIT 3/IPEC ONLY)	#48
512	C.STELLATO(NRQ-OPS TRN)	NRQ (UNIT 3/IPEC ONLY)	#48
513	C.STELLATO(NRQ-OPS TRN)	NRQ (UNIT 3/IPEC ONLY)	#48
517	PLANT MANAGER'S OFFICE	ADMIN/(UNIT 2/IPEC ONLY)	IP2
518	DOCUMENT CONTROL	UNIT 2(UNIT 2/IPEC ONLY)	IP2
520	CONTROL ROOM (UNIT 2)	OPS (UNIT 2 & IPEC ONLY)	IP2
521	SIMULATOR	TRAIN (UNIT 2/IPEC ONLY)	IP2
522	NRC RESIDENT	US NRC(UNIT 2/IPEC ONLY)	IP2
523	ROBERT VOGLE (UNIT 2)	TRAIN/LIB (ALL EP'S)	TODDVILLE
524	JOHN MCCANN (UNIT 2)	NUC SAFETY/LIC(ALL EP'S)	IP2

A045



 <b>IPEC SITE MANAGEMENT MANUAL</b>	<b>QUALITY RELATED ADMINISTRATIVE PROCEDURE</b>	<b>IP-SMM-AD-103</b> <b>Revision 0</b>
	<b>INFORMATIONAL USE</b>	<b>Page 13 of 21</b>

**ATTACHMENT 10.1**

**SMM CONTROLLED DOCUMENT TRANSMITTAL FORM**

**SITE MANAGEMENT MANUAL CONTROLLED DOCUMENT TRANSMITTAL FORM - PROCEDURES**

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		<b>CONTROLLED DOCUMENT TRANSMITTAL FORM - PROCEDURES</b>	
<b>TO: DISTRIBUTION</b>		<b>DATE: 7/2/2003</b>	<b>TRANSMITTAL NO: 28305</b>
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<b>AFFECTED DOCUMENT:</b>		<b>EMERGENCY PLANNING PROCEDURE:</b>	
		<b>IPEC</b>	
<b>DOC #</b>	<b>REV #</b>	<b>TITLE</b>	<b>INSTRUCTIONS</b>
<p><b>NOTE: REPLACE CURRENT INDEX WITH ATTACHED REVISED INDEX.</b></p> <p><b>THE FOLLOWING PROCEDURE HAS BEEN REVISED. REPLACE CURRENT COPY WITH ATTACHED REVISED COPY:</b></p> <p><b>IP-EP-410 REV.2</b></p> <p align="center"><b>*****PLEASE NOTE EFFECTIVE DATE*****</b></p> <p>RECEIPT OF THE ABOVE LISTED DOCUMENT(S) IS HEREBY ACKNOWLEDGED. I CERTIFY THAT ALL SUPERSEDED, VOID, OR INACTIVE COPIES OF THE ABOVE LISTED DOCUMENT(S) IN MY POSSESSION HAVE BEEN REMOVED FROM USE AND ALL UPDATES HAVE BEEN PERFORMED IN ACCORDANCE WITH EFFECTIVE DATE(S) (IF APPLICABLE) AS SHOWN ON THE DOCUMENT(S).</p>			
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TRANS # 28305


**TO:** Nuclear Regulatory Commission #  
**FROM:** IPEC Emergency Planning CC25  
**SUBJECT:** Emergency Planning Document Update

**Date:** 06/06/03

Please update your controlled copy of the documents listed below as specified with the copy(s) attached.

Document #	Document Name	New Rev. #/ Date	Old Rev. #/ Date	Instructions
Unit 2	Emergency Plan Implementing Procedures			
TOC	Emergency Plan Implementing Procedures	6/06/03	5/05/03	Remove and Replace
IP-EP-410	Protective Action Recommendations	Rev2 6/06/03	Rev1 3/06/03	Remove and Replace

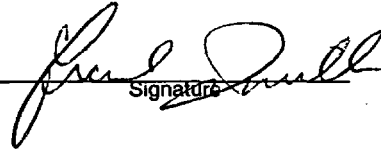


 <b>IPEC EMERGENCY PLAN IMPLEMENTING PROCEDURES</b>	<b>NON-QUALITY RELATED PROCEDURE</b>	<b>IP-EP-410</b>	<b>Revision 2</b>
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**CONTROLLED**  
**COPY # 25**

### Protective Action Recommendations

Prepared by: Steve Hook  6/4/03  
Print Name Signature Date


Approval: Frank Inzirillo  6/4/03  
Print Name Signature Date

Effective Date: 6/6/03

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## PROTECTIVE ACTION RECOMMENDATIONS

### 1.0 PURPOSE

To prescribe the responsibilities and methods for determining recommended protective actions for New York state and County authorities.

### 2.0 REFERENCES

EPA Protective Action Guidelines

### 3.0 DEFINITIONS

Protective Action Recommendations (PARs) – Specific recommendations made by the Emergency Director to the local authorities in accordance with Emergency Plan procedures based on Protection Action Guidelines.

### 4.0 RESPONSIBILITIES

4.1 The Shift Manager is responsible for evaluating accident conditions, classifying the accident, and recommending protective actions to offsite authorities during the initial phases of the accident. The Emergency Director assumes these responsibilities when he takes control of the emergency response from the Shift Manager. The Offsite Radiological Manager will assist the Emergency Director with protective action recommendations.

4.2 The decision to initiate any protective actions is solely the responsibility of the local authorities.

### 5.0 DETAILS

#### 5.1 NUE, Alert, Site Area Emergency

Recommend no protective actions be taken.

#### 5.2 General Emergency


5.2.1 The initial protective action recommendation should be made within 15 minutes of the GENERAL EMERGENCY declaration.

5.2.2 Protective Action Recommendations (PARs) shall be made in accordance with Attachment 9.1. Sectors / ERPA's are identified on Attachment 9.2.

5.2.3 The initial PAR shall be made in the first GENERAL EMERGENCY notification to the State/Counties. All subsequent, Part I notifications shall include the latest PAR.

5.2.4 Re-evaluate the PARs based on the following:

5.2.4.1 Changes in Wind Direction

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5.2.4.2 Dose Assessment - (When release duration is NOT able to be estimated, use four hours as a default value),

5.2.4.3 Field data,

5.2.4.4 EPA PAGs – Attachment 9.3,

5.2.5 As protective action recommendations change, ensure appropriate steps are taken to protect the onsite population.

5.2.6 IF dose projections indicate a EPA PAG will be exceeded beyond 10 miles THEN send field teams to confirm projections and discuss possible protective actions with offsite officials if projections prove possible.

## **6.0 INTERFACES**

6.1 Evacuation Travel Time Estimates

6.2 IP-EP-310, Dose Assessment

6.3 State of New York KI Policy Paper

## **7.0 RECORDS**

NONE

## **8.0 REQUIREMENTS AND COMMITMENT CROSS-REFERENCE**

NONE

## **9.0 ATTACHMENTS**

9.1 Flowchart for General Emergency Protective Action Decisions

9.2 Conversion of Sector/Zones to ERPAs

9.3 EPA Protective Action Guidelines

9.4 Overlay Selection Flow Chart

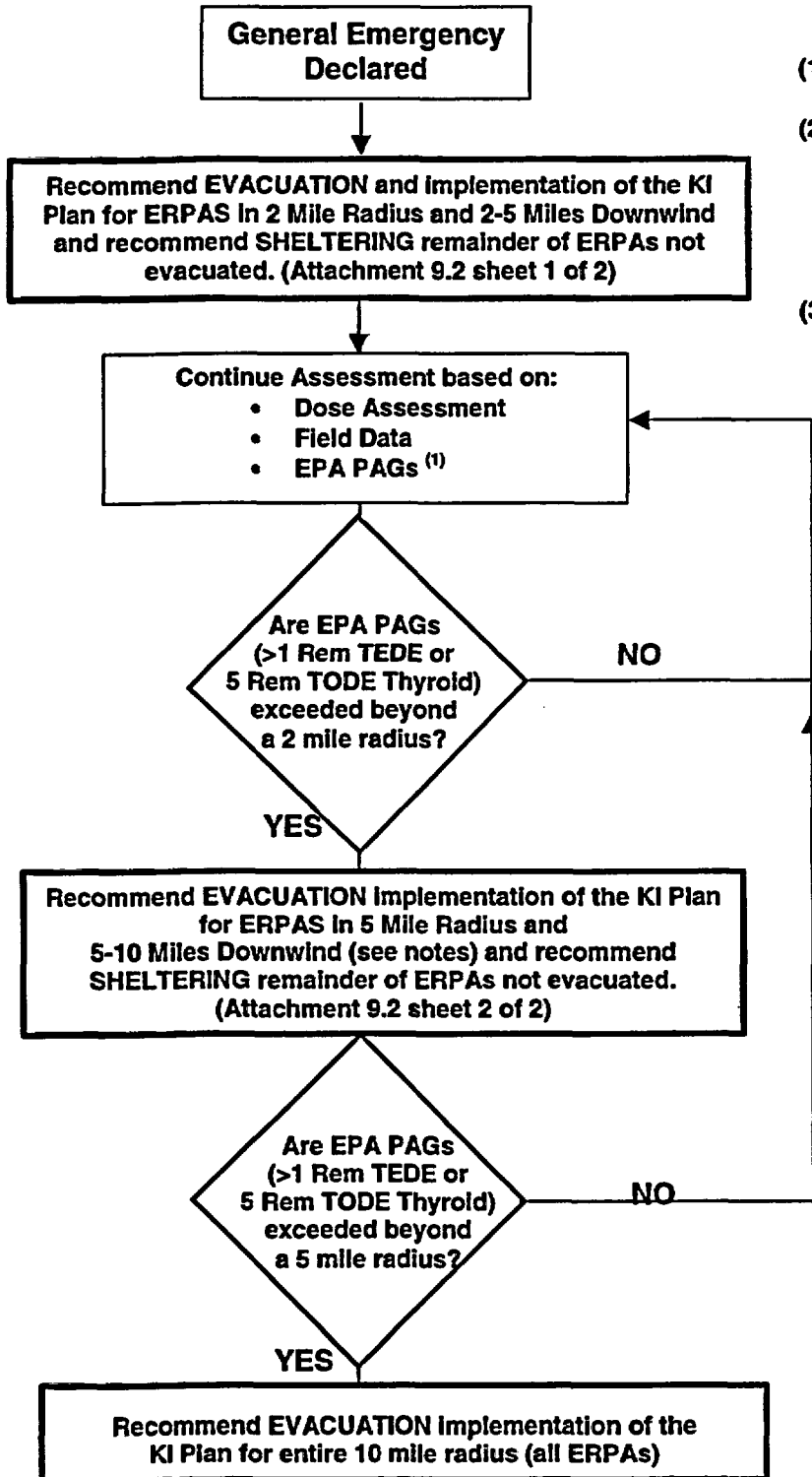
9.5 Basis for ERPA Selection in PAR Determination



Attachment 9.1

**FLOWCHART FOR GENERAL EMERGENCY PROTECTIVE ACTION DECISIONS**

Sheet 1 of 1



**Notes:**

- (1) Refer to Attachment 9.3 for details on EPA PAGs.
- (2) IF an EPA PAG is exceeded or expected to be exceeded beyond 10 miles THEN consider the need for PARs beyond 10 miles and discuss possible actions with State.
- (3) IF recommended ERPAS change THEN add new ERPAS to new PAR DO NOT subtract any ERPA in which actions have previously been recommended.

Attachment 9.2

**CONVERSION OF SECTOR/ZONES TO ERPAS – 2-5 Miles Downwind**

Sheet 1 of 2

**TABLE I - 0-2 MILE RADIUS - Evacuate all listed ERPAs including the river ERPAs.**

1, 2, 3, 4, 7, 29, 30, 38, 39, 42, 43, 44, 45, 46
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**TABLE IIA - 2-5 MILES DOWNWIND for Up-Valley Plumes**

<b>Up-Valley Plumes (wind speed &lt; 4 m/sec and wind direction from 102°-209°)</b>	
<b>Pasquil Stability Categories</b>	<b>ERPAs affected</b>
A, B	8, 9, 16, 18, 26, 49
C, D, E, F, G	8, 9, 16, 18, 26,

**TABLE IIB - 2-5 MILES DOWNWIND for Down-Valley Plumes**

<b>Down-Valley Plumes (wind speed &lt; 4 m/sec and wind direction from 340°-101°)</b>	
<b>Pasquill Stability Categories</b>	<b>ERPAs affected</b>
A, B	5, 6, 31, 47, 48, 49
C, D, E, F, G	5, 6, 31, 47, 48, 49

**TABLE IIC - 2-5 MILES DOWNWIND for Cross-Valley Plumes**

<b>Cross-Valley (wind speed ≥ 4 m/sec OR wind direction from 210°-339°)</b>			
<b>Wind Direct From (deg)</b>	<b>Center Sector No</b>	<b>Pasquil Stability Categories A &amp; B ERPAs affected</b>	<b>Pasquil Stability Categories C-G ERPAs affected</b>
169 - 190	1 N	8, 9, 16, 18, 24,26, 40	8, 16, 18, 26
191 - 213	2 NNE	8, 9, 16, 18, 26, 49	8, 9, 16, 18
214 - 235	3 NE	8, 9, 16, 18, 49	8, 9, 16, 18, 49
236 - 258	4 ENE	5, 8, 9, 16, 18, 48, 49	8, 9, 49
259 - 280	5 E	5, 6, 8, 9, 47, 48, 49	5, 8, 9, 47, 48, 49
281 - 303	6 ESE	5, 6, 8, 9, 47, 48, 49	5, 6, 9, 47, 48, 49
304 - 325	7 SE	5, 6, 9, 31, 47, 48, 49	5, 6, 47, 48, 49
326 - 348	8 SSE	5, 6, 31, 47, 48, 49	5, 6, 31, 47, 48, 49
349 - 010	9 S	5, 6, 31, 47, 48, 49	6, 31, 47, 48
011 - 033	10 SSW	6, 31, 40, 47, 48	31
034 - 055	11 SW	31, 40	31, 40
056 - 078	12 WSW	31, 40	31, 40
079 - 100	13 W	24, 26, 31, 40	40
101 - 123	14 WNW	16, 24, 26, 40	24, 26, 40
124 - 145	15 NW	8, 16, 24, 26, 40	16, 24, 26, 40
146 - 168	16 NNW	8, 16, 18, 24, 26, 40	8, 16, 24, 26, 40

Attachment 9.2

**CONVERSION OF SECTOR/ZONES TO ERPAS – 5-10 Miles Downwind**

Sheet 2 of 2

**TABLE I - 0-5 MILE RADIUS - Evacuate all listed ERPAs including the river ERPAs**

1, 2, 3, 4, 5, 6, 7, 8, 9, 16, 18, 24, 26, 29, 30, 31, 38, 39, 40, 42, 43, 44, 45, 46, 47, 48, 49
---

**TABLE IIA – 5-10 MILES DOWNWIND for Up-Valley Plumes**


<b>Up-Valley Plumes (wind speed &lt; 4 m/sec and wind direction from 102°-209°)</b>	
<b>Pasquill Stability Categories</b>	<b>ERPAs</b>
A, B	10, 11, 12, 13, 14, 17, 19, 20, 23, 25
C, D, E, F, G	10, 11, 12, 17, 19, 20, 23, 25

**TABLE IIB - 5-10 MILES DOWNWIND for Down-Valley Plumes**

<b>Down-Valley Plumes (wind speed &lt; 4 m/sec and wind direction from 340°-101°)</b>	
<b>Pasquill Stability Categories</b>	<b>ERPAs affected</b>
A, B	12, 21, 22, 32, 33, 34, 35, 36, 37, 41, 50, 51
C, D, E, F, G	12, 21, 22, 32, 33, 34, 35, 36, 37, 50, 51

**TABLE IIC – 5-10 MILES DOWNWIND for Cross-Valley Plumes**

<b>Cross-Valley (wind speed ≥ 4 m/sec OR wind direction from 210°-339°)</b>			
<b>Wind Direct From (deg)</b>	<b>Center Sector No</b>	<b>Pasquill Stability Categories A &amp; B ERPAs affected</b>	<b>Pasquill Stability Categories C-G ERPAs affected</b>
169 - 190	1 N	10, 11, 17, 19, 20, 23, 25, 27	17, 19, 23, 25
191 - 213	2 NNE	10, 11, 12, 13, 14, 17, 19, 20, 23, 25	10, 11, 17, 19, 20, 23
214 - 235	3 NE	10,11,12,13,14,15,17,19,20,23	10,11,12,13,14,17,19, 20
236 - 258	4 ENE	10,11,12,13,14,15,17,19,20,21,50	10,11,12,13,14,15,19,20
259 - 280	5 E	10,11,12,13,14,15,19,20,21,22,50,51	10,11,12,13,14,15, 20,21,50
281 - 303	6 ESE	10,11,12,13,14,15,20,21,22,32,50,51	11,12,13,14,15,21,22,50,51
304 - 325	7 SE	11,12,13,14,15,21,22,32,33,34,35,50,51	12,13,21,22,32,50,51
326 - 348	8 SSE	12,13,21,22,32,33,34,35,36,37,50,51	12,21,22,32,33,34,35,50,51
349 - 010	9 S	12,21,22,32,33,34,35,36,37,41,50,51	22,32,33,34,35,36, 37,51
011 - 033	10 SSW	22,32,33,34,35,36,37,41,51	32,33,34,35,36,37,41
034 - 055	11 SW	28,32,33,34,35,36,37,41	34,35,36,37,41
056 - 078	12 WSW	27,28,34,35,36,37,41	28,34,36,37,41
079 - 100	13 W	25,27,28,34,36,37,41	27,28,41
101 - 123	14 WNW	25,27,28,41	25,27,28
124 - 145	15 NW	17,23,25,27,28	25,27,28
146 - 168	16 NNW	17,19,23,25,27,28	17,23,25,27

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Attachment 9.3

**EPA PROTECTIVE ACTION GUIDELINES**

Sheet 1 of 1

Recommended protective actions to reduce whole body and thyroid dose from exposure to a gaseous plume.

<b>PROJECTED DOSE (REM) TO THE POPULATION</b>		<b>RECOMMENDED ACTIONS (a)</b>	<b>COMMENTS</b>
Whole Body (TEDE)	< 1	No planned actions. (b) State may issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels	Previously recommended protective actions may be reconsidered or terminated.
Thyroid (TODE)	<5		
Whole Body (TEDE)	≥ 1	Evacuate unless constraints make it impractical; then shelter. Monitor environmental radiation levels. Control access.	If constraints exist, special consideration should be given for evacuation of children and pregnant women.
Thyroid (TODE)	≥ 5		

**GUIDANCE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES (REM)**

Whole Body (TEDE):			
10	Protecting valuable property		Lower dose not practicable.
25	Lifesaving or protection of large populations		Lower dose not practicable.
> 25	Lifesaving or protection of large population		Only on a voluntary basis to persons fully aware of the risks involved.

**TEDE-** Total Effective Dose Equivalent: Sum of external effective dose equivalent and committed effective dose equivalent to nonpregnant adults from exposure and intake during an emergency situation. Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed value and doses to any organ (including skin and body extremities) to ten times the listed value.

**TODE-** Total Organ Dose Equivalent: Sum of external effective dose equivalent and committed dose equivalent (to the Thyroid).

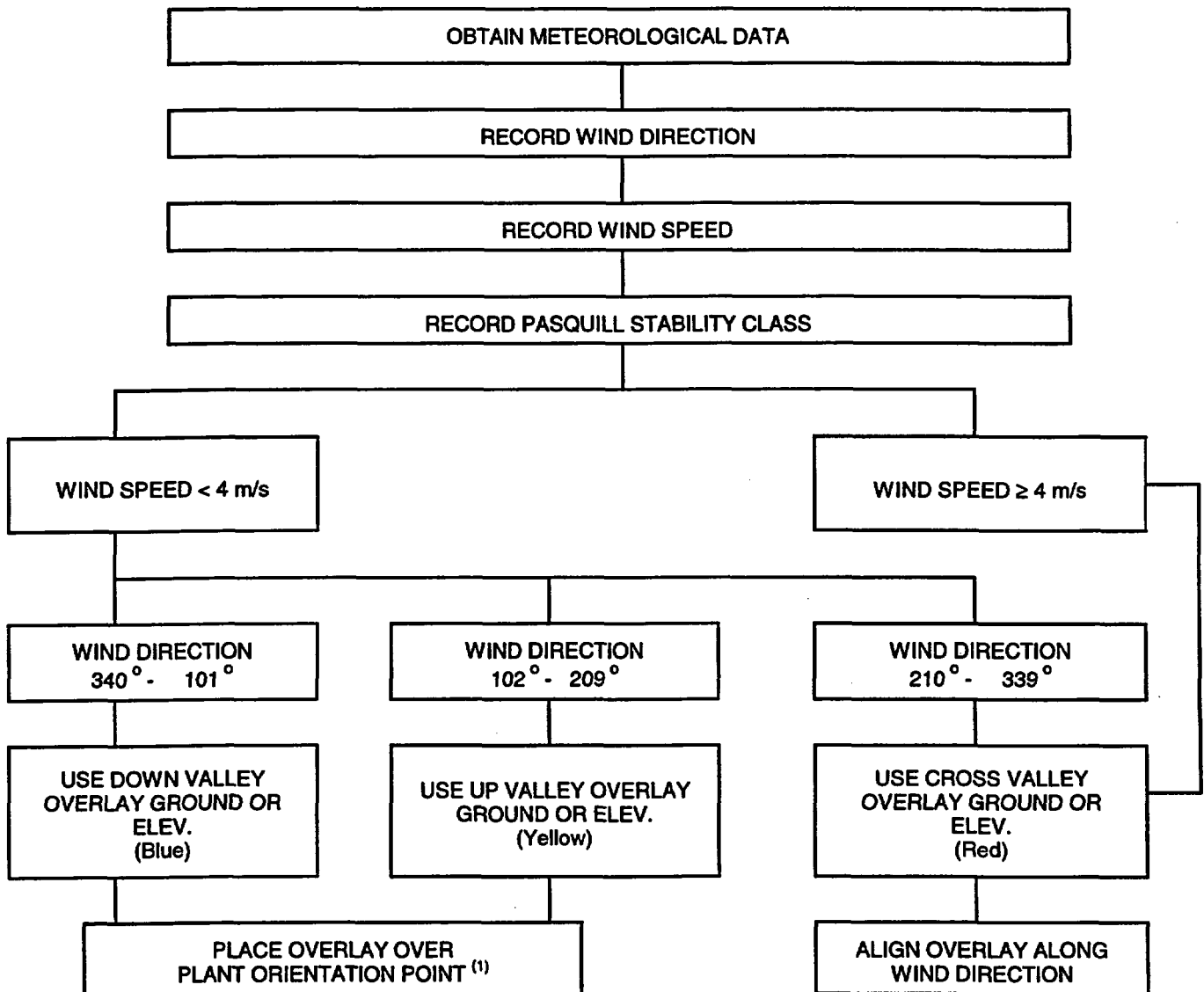
- (a) These actions are recommended for planning purposes. Protective action decisions at the time of the incident must take existing conditions into consideration.
- (b) At the time of the incident, officials may implement low-impact protective actions in keeping with the principle of maintaining radiation exposures as low as reasonably achievable (ALARA)




Attachment 9.4

**OVERLAY SELECTION FLOW CHART**

Sheet 1 of 1



- Plant Orientation Point
  - a. Using down valley overlay (Blue) align horizontal axis on 90° - 270° line with plume extending south.
  - b. Using up valley overlay (Yellow) align horizontal axis on 90° - 270° line with plume extending north.

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Attachment 9.5

**Basis for ERPA Selection in PAR Determination**

Sheet 1 of 2

The Emergency Response Planning Areas (ERPAs) provided in the Protective Action Recommendations (PARs) in this procedure are based on the following determinations:


The River ERPAs will always be included in each and every PAR issued by IPEC. The river is treated as one ERPA by the offsite authorities and is considered for closure early in a declared emergency at IPEC. These ERPAs are 42, 43, 44, 45, and 46.

When the conditions support **Up-Valley Plumes** (wind speed < 4 m/sec and wind direction from 102°-209°) and either **Pasquill Category A or B** is in effect, the appropriate overlay was placed on the map and the affected Sectors were determined. (Affected Sectors are any Sector that the Isopleth Lines touch beyond 2 miles). Affected ERPAs were determined to be those that have any portion within the affected Sector. This was determined to be Sectors 16, 1, 2, 3 and 4.

When the conditions support **Up-Valley Plumes** (wind speed < 4 m/sec and wind direction from 102°-209°) and either **Pasquill Category C, D, E, F or G** is in effect, the appropriate overlay was placed on the map and the affected Sectors were determined. (Affected Sectors are any Sector that the Isopleth Lines touch beyond 2 miles). Affected ERPAs were determined to be those that have any portion within the affected Sector. This was determined to be Sectors 16, 1, 2 and 3.

When the conditions support **Down-Valley Plumes** (wind speed < 4 m/sec and wind direction from 340°-101°) and either **Pasquill Category A or B** is in effect, the appropriate overlay was placed on the map and the affected Sectors were determined. (Affected Sectors are any Sector that the Isopleth Lines touch beyond 2 miles). Affected ERPAs were determined to be those that have any portion within the affected Sector. This was determined to be Sectors 7, 8, 9, 10 and 11.

When the conditions support **Down-Valley Plumes** (wind speed < 4 m/sec and wind direction from 340°-101°) and either **Pasquill Category C, D, E, F or G** is in effect, the appropriate overlay was placed on the map and the affected Sectors were determined. (Affected Sectors are any Sector that the Isopleth Lines touch beyond 2 miles). Affected ERPAs were determined to be those that have any portion within the affected Sector. This was determined to be Sectors 7, 8, 9 and 10.

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Attachment 9.5

**Basis for ERPA Selection in PAR Determination**

Sheet 2 of 2

When the conditions support **Cross-Valley Plumes** (wind speed  $\geq 4$  m/sec OR wind direction from 210°-339°) and either **Pasquil Category A or B** is in effect, the appropriate overlay was placed on the map and the affected Sectors were determined. (Affected Sectors are any Sector that the Isopleth Lines touch beyond 2 miles). Affected ERPAs were determined to be those that have any portion within the affected Sector, but not less than three Sectors. This was determined to be the Sector in which the Plume Centerline lays and 2 Sectors on either side of the centerline Sector.

When the conditions support **Cross-Valley Plumes** (wind speed  $\geq 4$  m/sec OR wind direction from 210°-339°) and either **Pasquil Category C, D, E, F and G** is in effect, the appropriate overlay was placed on the map and the affected Sectors were determined. (Affected Sectors are any Sector that the Isopleth Lines touch beyond 2 miles). Affected ERPAs were determined to be those that have any portion within the affected Sector, but not less than three Sectors. This was determined to be the Sector in which the Plume Centerline lays and 1 Sector on either side of the centerline Sector.