Arkansas Nuclear One - Administrative Services Document Control

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Procedure/Work Plan/Form Update Notification

Thursday, December 07, 1995

COPYHOLDER NO:	103
TO:	NRC - WASHINGTON
ADDRESS:	NRC
DOCUMENT NO:	OP-1904.002
TITLE:	OFFSITE DOSE PROJECTION RDACS COMPUTER METHOD
REVISION NO:	27
CHANGE NO:	PC-02
SUBJECT:	PERMANENT CHANGE (PC)



		METHOD	CHANGE:	PC-2
U STRUCTURE (
в.	Enter	Plume Update - this option is ent or forecasted data into the	used to e model.	enter
	1.	Update Parameters & Meteorolog used in backup and forecast mo current or forecasted meteorol	y - this des to en ogical da	option is ter ta.
	2.	Releases from Monitored Points used in backup and forecast mo current or forecasted radiolog monitored release points.	- this op des to en ical data	ption is ter from
	3.	Releases from Unmonitored Poin used in auto, backup and forec current or forecasted radiolog unmonitored release points.	ts - this ast modes fical data	option to ente from
	4.	Dose Scale Factors - this opti backup and forecast modes to e correction factors for matchin projected data to the actual d field.	on is use enter the ig the mod lata measu	d in aut current els red in t
	5.	Isotopic Distributions - this auto, backup and forecast mode current isotopic distribution sampling an active release poi	option is to ente determine int.	used in r the d by
	6.	Revise Model Constants - Item	not activ	е.
	7.	Execute Model - this option is forecast modes to process manu	used in ally ente	backup a red data
c.	Displ the	lay Plume Data - this option is screen data processed for each	used to plume segn	view on ment.
	1.	Emergency Class - this option current emergency class calcul after processing is complete.	is used t lated by t	o view t he model
	2.	Plume Segment Data - this opti the current plume characterist for drawing the plume on a ter	ion is use tics and p n mile EPZ	d to vie arameter map.
	3.	Plume Centerline Data - this of view the centerline dose value distances down the centerline	option is es for a v of the pl	used to ariety o ume.
	4.	Dose Evaluation Points - this view data calculated at the do points for Total Effective Dos dose rate, TEDE cumulative dos dose rate and Child Thyroid cu	option is ose evalua se Equival se, Child umulative	used to tion ent (TED Thyroid dose.
	B.	B. Enter curre 1. 2. 3. 4. 5. 5. 6. 7. C. Disp the 1 1. 2. 3. 4.	 B. Enter Plume Update - this option is current or forecasted data into the 1. Update Parameters 4 Meteorolog used in backup and forecast mo current or forecasted meteorol 2. Releases from Monitored Points used in backup and forecast mo current or forecasted radiolog monitored release points. 3. Releases from Unmonitored Point fused in auto, backup and forecast mode current or forecasted radiolog unmonitored release points. 4. Dose Scale Factors - this optibackup and forecast modes to e correction factors for matching projected data to the actual of field. 5. Isotopic Distributions - this auto, backup and forecast mode current isotopic distribution sampling an active release points. 6. Revise Model Constants - Item 7. Execute Model - this option is forecast modes to process mant. C. Display Plume Dats - this option is the screen data processed for each 1. Emergency Class - this option is the screen data processing is complete. 2. Plume Segment Data - this option distribution for drawing the plume on a term of drawing the plume on a term of drawing the plume on a term of the current process and the current incomplete. 4. Dose Evaluation Points - this option for drawing the plume on a term of distances down the centerline dose value distances down the centerline do	 B. Enter Plume Update - this option is used to e current or forecasted data into the model. 1. Update Parameters 4 Meteorology - this o used in backup and forecast modes to encurrent or forecasted meteorological data monitored release from Monitored Points - this option is used in auto, backup and forecast modes current or forecasted radiological data unmonitored release points. 3. Releases from Unmonitored Points - this used in auto, backup and forecast modes current or forecasted radiological data unmonitored release points. 4. Dose Scale Factors - this option is use backup and forecast modes to enter the correction factors for matching the mode projected data to the actual data messu field. 5. Isotopic Distributions - this option is auto, backup and forecast modes to enter the current isotopic distribution determine sampling an active release point. 6. Revise Model Constants - Item not activ 7. Execute Model - this option is used in forecast modes to or the screen data process for each plume seg 1. Emergency Class - this option is used to the screen data process for each plume seg 1. Emergency Class - this option is used to the screen data processing is complete. 2. Plume Segment Data - this option is used to the screen the current plume characteristics and p for drawing the plume on a ten mile EPZ 3. Plume Centerline Data - this option is used to the screen to current plume characteristics and p for drawing the plume on a ten mile EPZ 3. Plume Segment Data - this option is used to the current plume characteristics and p for drawing the plume on a ten mile EPZ 3. Plume Centerline Data - this option is used to the current plume characteristics and p for drawing the plume on a ten mile EPZ 3. Plume Centerline Data - this option is view data calculated at the dose evalue points for Total Effective Dose Equival dose rate, TEDE cumulative dose, Child dose rate and Child Thyroid cumulative

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PROCEDURE/WORK PLAN TITLE: OFFSITE DOSE PROJECTIONS RDACS COMPUTER METHOD

8.0	RDACS	MENU	STRUCTURE	(Continued)

- Plume Update Input this Option is used to view meteorological, radiological, scale factor and isotopic distribution data for the current plume segment.
- D. Print Plume Data select this option to print data processed for each plume segment.
 - Routine Reports (prints 2-7) this option is used to print the entire report for a projected or forecasted plume update.
 - Emergency Class this option is used to print the current emergency class calculated by the model after processing is complete.
 - Plume Segment this option is used to print the current plume characteristics and parameters for drawing the plume on a ten-mile EPZ map.
 - 4. <u>Plume Centerline</u> this option is used to print the centerline dose values for a variety of distances down the centerline of the plume.
 - Dose Evaluation Points this option is used to print data calculated at the dose evaluation points for TEDE dose rate, TEDE cumulative dose, Child Thyroid dose rate and Child Thyroid cumulative dose.
 - Plume Parameters and Meteorology this option is used to print meteorological data used for a particular plume segment.
 - Release Rates this option is used to print radiological data used for a particular plume segment.
 - Bose Scale Factors and Isotopic Distributions this option is used to print the current dose scale factor information as well as isotopic distribution information for each release point.



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- 8.0 RDACS MENU STRUCTURE (Continued)
 - E. Protective Action Recommendation This option allows the RDACS user to calculate a protective action based on dose rate and meteorological information.
 - F. Accept New Update This option allows the user to accept calculated plume data from the file server in response to a "New Update Available" message.
 - G. Draw Plume Map This option allows the user to view a displayed 1, 10 or 50-mile EPZ map showing the projected position of a radioactive plume along with dose data and the derived emergency class.
 - H. Switch Operating Modes This option allows the user to switch from one operating mode to another and transfers a user specified number of updates from the current mode of operation to the specified mode of operation.
 - I. Terminate an Event This option is used by the Emergency Planning/Computer Support groups to terminate an event once a release has stopped and conditions are favorable to do so (i.e., possible duplication to a backup data source).
 - J. <u>RDACS/Field Data Comparison Sheet</u> This option prints the most recent RDACS update centerline dose rates to allow the user to log and compare with field team dose rate information. This report also provides a ratio of the RDACS TEDE dose rates to Whole Body Gamma dose rates.

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Renteerstation		9.3.6	Calc	ulate	Prot	ective Action Recommendatio	n (PAR)	
	Movement or entered in proceed to	h the PAR to the ap the next	scree propri step	en req Late h	uire: ighl:	NOTE s the use of the <tab></tab> key. ighted areas before RDACS wi	Data mu 11 allow	st be you to
31	The Average estimated.	e Release	Rate	Facto	r and	d Expected Release Duration	will have	e to be
			Α.	Requi	est ' ase I	"Average Release Rate Factor Duration" from one of the fo	" and "Es	spected
*				1.	*Sh	ift Superintendent		
É				2.	TSC	Director		
				3.	TSC	Operations Manager		
1				*Ini	tial	Dose Assessor only.		
			в.	Once Repo "Pro Subs	you rt" a tecti ystem	have obtained an RDACS "Eme and a "Plume Map", select Op ive Action Recommendation" f a Main Menu and perform the	rgency Cl tion 5, from the H following	lass RDACS g steps:
				1.	Ave	rage Release Rate Factor -		
					a.	If the release has stopped Then depress <tab></tab> .	d, then e	nter *1*
K-2					b.	If the release is continu- estimate obtained in step the release is expected to a factor of "2". Then dep	ing, quan A above, o double press <ta< b=""></ta<>	tify the e.g. if then enta b>.
					c.	If unknown, enter a facto depress <tab>.</tab>	r of "1".	Then
				2.	Exp	ected Release Duration - Ent rs (20 minutes should be ent	ter durat. tered as	ion in 0.3 hr.)
					a.	If the release has stopped release duration in hours <tab>.</tab>	d, use th . Then d	e actual epress
2					b.	If the release is continue estimate in hours obtained and then depress <tab></tab> .	ing, ente d in step	r the A above
d					c.	If unknown, enter 4 hours <tab>.</tab>	. Then d	epress
				3.	Cur	rent Sky Condition - If unkr sor to the "Clear Skies" bra	nown, mov acket usi	e the ng the

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	9.3.6	Calcu (Cont	ion (PAR)		
			4. <u>Wind Direction</u> - Automaticall overwrite these values as req	y entered. uired.	You may
			5. <u>Centerline Dose Rates</u> - Autom You may overwrite these value	s as require	ntered. red.
			 Depress the <f2> key to calcu Action Recommendation (PAR).</f2> 	ilate a Prof	tective
			 Print the calculated PAR by c key. 	depressing	the < F9>
N. I		c.	Initial Dose Assessor - Remove the RDACS Routine Report, which is the Comparison Sheet", and throw away initial PAR and subsequent PARs th the "Emergency Class Report" and E Superintendent and have the Shift the PAR and approval sheet at the	a last sheet "RDACS/Fie this sheet at change, "AR with the Superintend end of the	t of the eld Data For the review Shift dent sign reports.
N.		D.	Dose Assessment Team - Remove the RDACS Routine Report, which is the Comparison Sheet", and route this Maker. Then review the RDACS repo PAR printed with the DAS and have and the approval sheet at the end	last sheet "RDACS/Fid sheet to the orts, plume the DAS sid of the repo	of the eld Data he DAT May map and gn the PA orts.
1		E.	Following the initial generation of data, continue to monitor for rele- time allows or as the unmonitored return to Section 9.3 and repeat s 9.3.5, and 9.3.6.	of plume se eases. As release ch steps 9.3.1	gment either anges, , 9.3.4,