



Public Service Company of Colorado

16805 ROAD 19½
PLATTEVILLE, COLORADO 80651

April 15, 1981
Fort St. Vrain
P-81127



Mr. Darrel Eisenhut, Director
Division of Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: TMI Action Plans Requirements
NUREG 0737
Ref: P-81070

Dear Mr. Eisenhut:

In the above referenced letter we indicated that we were installing a ten (10) meter meteorological tower which we planned to have completed by April 1, 1981 and were procuring replacement instrumentation for existing instrumentation mounted on the reactor building which we planned to have installed by May 1, 1981.

We have installed the ten (10) meter tower; however, we have experienced instrumentation delivery problems and we were not able to meet the originally planned schedule. Based on newly established equipment delivery dates our schedule will be as follows:

PHASE I TEN (10) METER TOWER

The wind speed and direction instrumentation has been delayed from an original shipping date of March 18, 1981 to April 24, 1981. The ten (10) meter tower will be in service complete with necessary instrumentation by May 15, 1981. To the best of our knowledge the instrumentation will meet the criteria of Reg. Guide 1.23. The back-up power supply for this tower will be completed by June 15, 1981, although the tower will be operable from the primary power service by May 15, 1981.

PHASE II - UPGRADE EXISTING METEOROLOGICAL INSTRUMENTATION MOUNTED ON THE REACTOR BUILDING

The wind speed and direction instrumentation and a new rain gage have been delayed in shipment from 2-18-81 and 3-18-81 respectively to April 24, 1981. New recording equipment for the control room has been delayed from a shipping date of April 20, 1981 to a shipping date of May 1, 1981.

A046
S
1/1

8104230

168

P

Based on the new shipping schedules we would anticipate having the upgraded meteorological instrumentation in service by June 1, 1981.

PHASE III - NEW SIXTY (60) METER TOWER

We are presently receiving bids for a new sixty (60) meter tower to serve as the primary tower. Based on the preliminary information we now have we would anticipate having the new sixty (60) meter tower in service in December 1981.

In summary and with references to our original commitment in P-81070 Attachment 1:

Items 1 & 2 will be delayed from April 1, 1981 to May 15, 1981. The ten (10) meter tower will be in service by May 15, 1981 with the exception of the back-up power supply which should be in service by June 15, 1981.

Item 3 will be delayed from May 1, 1981 to June 1, 1981 at which time the upgraded meteorological instrumentation on the reactor building will be in service.

Item 4, did not have a definitive in service date for the new sixty (60) meter tower. We now anticipate having this tower in service in December 1981.

Item 5, remains unchanged and we still intend to address the four (4) element program of NUREG 0654, Appendix 2, by July 1, 1981.

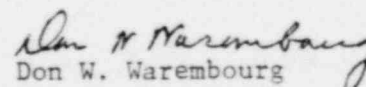
Item 6, remains unchanged as far as having a DCM for Class A model requirements. The delay in Items 1, 2 & 3; however, means that we must continue to use the meteorological data from our existing instrumentation mounted on the reactor building until the ten (10) meter tower and the instrumentation upgrade is completed.

Item 7, remains unchanged. The DCM has been programmed on the plant data logger and is available for use in the control room. A sample of that DCM is included herein as Attachment 1.

Item 8, remains unchanged except that calibration checks and evaluation of meteorological data availability cannot be instituted until Items 1, 2 and 3 are completed.

We trust that you will recognize that these delays are beyond our control. We are attempting to expedite deliveries and will continue to do so.

Very Truly Yours,


Don W. Warembourg

ATTACHMENT I
SAMPLE DCM DATA LOGGER
CALCULATION

15:15:34 03/29/81 RADIOLOGICAL EMERG RESPONSE PLAN 0941

#	D	D	POST TRIP REVIEW	D. F. OVERVIEW
			LEFT THUMBWHEEL	RIGHT THUMBWHEEL
		[+ 0]	[+000000+0]	[+000000+0]
		DF# ->41	->0	->0

OFF SITE DOSE CALCULATIONS - DEMAND FUNCTION 41

DESCRIPTION:

THIS DEMAND FUNCTION CALCULATES AND PRINTS THE LOCATION OF THE HAZARD, STABILITY CATEGORY, RELEASE RATES, INCIDENT DOSES, AND CATEGORY OF THE RELEASE.

STEPS REQUIRED FOR CALCULATIONS:

- MANUALLY ENTER CURRENT DATA FOR:
 - D MONITORED RELEASE (PAGE 942)
 - OR -
 - D UNMONITORED RELEASE (PAGE 943)
- D VERIFY AND/OR MANUALLY CHANGE THE STANDARD DATA (PAGE 944)
- ENTER DF# 41 - 0 - 0

NOTES:

ALL DATA MUST BE MANUALLY INPUT (NO AUTOMATIC COLLECTION)

THE FOLLOWING LOGS AND DEMAND FUNCTIONS MAY BE HELPFUL:

D POST TRIP REVIEW D METEOROLOGICAL MONITORING

REF: DATA ENTRY METEOROLOGICAL MONITORING STATUS

3 BLUE
4 RED

1 TAN
2 GREEN

5:22:56 03/23/81 RADIOLGICAL EMERG RESPONSE PLAN 0942

D RERP DEMAND FUNCTION

MONITORED RELEASE : ENTER 1 (1) TYPE

DATE AND TIMES: (MM/ DD/ YY) (HH: MM)

BEGINNING OF RELEASE ... DATE (4/ 1/ 81) TIME (0: 15)

ENDING OF RELEASE ... DATE (4/ 1/ 81) TIME (6: 15)

CURRENT DATE AND TIME ... DATE (4/ 1/ 81) TIME (1: 15)

MONITORED RADIATION LEVELS:

RIS-7324-1 (RR-93256 PT # 1) (1.5) E (+5) MAXIMUM CPM

RIS-7324-2 (RR-93256 PT # 4) (4.3) E (+3) MAXIMUM CPM

RIS-73437-1 (RR-73437 BLUE PEN) (9.4) E (+3) MAXIMUM CPM

PROBE READING BY HEALTH PHYSICS (0.0) E (+0) MR/HR

PROBE TYPE: (0) TYPE

ENTER 0 IF NOT USED

ENTER 1 FOR GM PROBE WITH E-500

ENTER 2 FOR 2520 PROBE WITH CUTIE PIE

S
T
A
N
D
A
R
D
D
A
T
A

PLANT CONDITIONS:

EXHAUST STACK FLOW (31.0) KCFM

METEOROLOGICAL DATA:

BUILDING DIFFERENTIAL TEMPERATURE (- 0.20) DEG F

WIND DIRECTION FROM (90.0) DEG

AVERAGE WIND SPEED AT 220.0 FEET ELEVATION (7.0) MPH

UNMONITORED RELEASE

2 BLUE REC

1 TAN
2 GREEN

15:30:17 03/29/81 RADIOLIOGICAL EMERG RESPONSE PLAN 0943

D MONITORED RELEASE RERP DEMAND FUNCTION

UNMONITORED RELEASE : ENTER 2 (2) TYPE

DATE AND TIMES: (MM/ DD/ YY) (HH: MM)

BEGINNING OF RELEASE DATE (4/ 1/ 81) TIME (0: 15)

ENDING OF RELEASE DATE (4/ 1/ 81) TIME (6: 15)

CURRENT DATE AND TIME ... DATE (4/ 1/ 81) TIME (1: 15)

MONITORED RADIATION LEVELS:

RIS-9301 (RR-93256 PT # 10) (5.0) E (+5) MAXIMUM CPM

PLANT CONDITIONS:

CIRCULATING I-133 INVENTORY (FROM HP) (1.31) E (-1) CURIES

PLATEOUT I-133 INVENTORY (FROM HP) ... (3.56) E (+1) CURIES

AVERAGE REACTOR TEMPERATURE (CIRC INLET) . (650) DEG F

REACTOR PRESSURE BEFORE RELEASE (700.0) PSIA

REACTOR PRESSURE AFTER RELEASE (450.0) PSIA

LOCATION OF UNMONITORED RELEASE (3) LOCATION

ENTER 1 IF RELEASE IS THRU REACTOR BUILDING LOUVERS

ENTER 2 IF RELEASE IS THRU PCRV SAFETY VALVES

ENTER 3 IF RELEASE IS THRU LOUVERS AND SAFETYS

METEOROLOGICAL DATA:

BUILDING DIFFERENTIAL TEMPERATURE (- 0.20) DEG F

WIND DIRECTION FROM (90.0) DEG

AVERAGE WIND SPEED AT 220.0 FEET ELEVATION (7.0) MPH

3 BLUE
4 RED

1 TAN
2 GREEN

RERP DEMAND FUNCTION

STANDARD DATA -- VERIFY AND/OR MANUALLY ENTER THE FOLLOWING:

RADIATION MONITORS SENSITIVITY:

RIS-7324-1 (2.00) E (-8) UCI/CC/CPM
 RIS-7324-2 (7.40) E (-7) UCI/CC/CPM
 RIS-73437-1 (7.58) E(-11) UCI/CC/CPM
 RIS-9301 (2.40) E (-8) UCI/CC/CPM

LIMITS:

SITE EMERGENCY NOBLE GAS (3.2) E (-3) UCI/CC
 SITE EMERGENCY I-133 (2.2) E (-6) UCI/CC
 10 TIMES TECH SPEC NOBLE GAS (1.3) E (-3) UCI/CC
 10 TIMES TECH SPEC I-133 (3.0) E (-9) UCI/CC

DOSE CONVERSION FACTORS

WEIGHTED NOBLE GAS (7.5) E (+2) REM/HR/CI/M3
 WEIGHTED IODINE (5.3) E (+4) REM/HR/CI/M3

DISTANCES SELECTED FOR DOSE CALCULATIONS:

ENTER ANY NUMBER FROM 0.1 TO 62.0 MILES

1 (0.1) 2 (0.2) 3 (0.3) 4 (0.4) 5 (1.0)
 6 (2.0) 7 (3.0) 8 (4.0) 9 (5.0) 10 (6.0)
 11 (8.0) 12 (10.0) 13 (15.0) 14 (20.0) 15 (25.0)

OTHER: ELEVATION OF WIND SPEED TOWER (220.0) FEET

ENTER 220.0 FEET (TOP OF RX BLDG) OR 32.8 FEET (10 METER TOWER)

#3-BLUE
#4-RED

#1-TAN
#2-GREEN
MONITOR
RELEASE

U
N
M
O
N
I
T
O
R
E
D

R
E
L
E
A
S
E

RADIOLOGICAL EMERGENCY RESPONSE PLAN MONITORED RELEASE (ATTACHMENT 5)

DATE AND TIME: BEGINNING OF RELEASE: 4/1/81 0:15 ENDING OF RELEASE: 4/1/81 6:15 CURRENT TIME: 4/1/81 1:15
 LENGTH OF RELEASE = 6 HOURS 0 MINUTES TOTAL TIME FROM START = 1 HOURS 0 MINUTES

MONITORED RADIATION LEVELS: MAXIMUM READING SENSITIVITY CONCENTRATION
 RIS-7324-1 1.5E+5 CPM 2.00E-8 UCI/CC/CPM 3.000E-02 UCI/CC
 RIS-7324-2 4.5E+3 CPM 7.40E-7 UCI/CC/CPM 3.192E-02 UCI/CC
 RIS-73437-1 9.4E+3 CPM 7.58E-11 UCI/CC/CPM 7.125E-06 UCI/CC

LIMITS: SITE EMERGENCY NOBLE GAS = 3.2E-3 UCI/CC SITE EMERGENCY I-131 = 2.2E-6 UCI/CC
 10 X TECH SPEC NOBLE GAS = 1.3E-3 UCI/CC 10 X TECH SPEC I-131 = 3.0E-9 UCI/CC

PLANT CONDITIONS: EXHAUST STACK FLOW FI-7320 = 31.0 KCFM

METEOROLOGICAL DATA: BUILDING DIFFERENTIAL TEMPERATURE = -0.20 DEG F WIND DIRECTION FROM 90.0 DEG
 AVERAGE WIND SPEED AT 220.0 FEET ELEVATION = 7.0 MPH ESTIMATED WIND SPEED AT 32.8 FEET ELEVATION = 2.7 MPH

STABILITY CATEGORY (ATTACHMENT 7) = E

LOCATION OF HAZARD (ATTACHMENT 6): FROM 265 DEGREES TO 275 DEGREES FOR 16.2 MILES
 AFFECTING THE FOLLOWING AREAS: D E P Q FF 00 UU VV

RELEASE RATES: NOBLE GAS = 4.655E-01 CI/SEC I-131 = 1.094E-02 CI/SEC

TOTAL RELEASE: NOBLE GAS = 1.005E+04 CURIES I-131 = 2.364E+02 CURIES

DOSE CONVERSION FACTORS (ATTACHMENT 8): WEIGHTED NOBLE GAS = 7.5E+2 REM/HR/CI/M3 WEIGHTED IODINE = 5.3E+4 REM/HR/CI/M3

INCIDENT DOSE: MILES	DILUTION FACTOR (SEC/M3)	WHOLE BODY DOSE RATE (REM/HR)	THYROID DOSE RATE (REM/HR)	EXPOSURE TIME (HOURS)	ACCUM WHOLE BODY (REM)	ACCUM THYROID (REM)
0.1	1727E-02	6032E-01	1002E-00	5963E+01	3596E-00	5976E-00
0.2	5066E-03	1769E-01	2935E-01	5926E+01	1048E-00	1741E-00
0.3	2513E-03	8775E-02	1458E-01	5889E+01	5168E-01	8587E-01
EAB	1793E-03	6261E-02	1048E-01	5864E+01	3671E-01	6100E-01
0.4	1550E-03	5414E-02	8993E-02	5852E+01	3168E-01	5264E-01
1.0	5162E-04	1802E-02	2993E-02	5630E+01	1014E-01	1686E-01
2.0	2421E-04	8457E-03	1403E-02	5260E+01	4448E-02	7391E-02
3.0	1512E-04	5282E-03	8777E-03	4890E+01	2593E-02	4292E-02
4.0	1082E-04	3779E-03	6277E-03	4520E+01	1707E-02	2837E-02
5.0	893E-05	2896E-03	4511E-03	4150E+01	1202E-02	1991E-02
6.0	6645E-05	2320E-03	3655E-03	3780E+01	8772E-03	1457E-02
8.0	4791E-05	1673E-03	2780E-03	3040E+01	5087E-03	8453E-03
10.0	3712E-05	1295E-03	2153E-03	2300E+01	2982E-03	4955E-03
15.0	2369E-05	8274E-04	1374E-03	4511E-00	3733E-04	6203E-04

CATEGORY: RADIOLOGICAL ALERT WHOLE BODY DOSE AT EAB = 3671E-01 REM THYROID DOSE AT EAB = 6100E-01 REM

RADIOLOGICAL EMERGENCY RESPONSE PLAN UNMONITORED RELEASE (ATTACHMENT 6)

DATE AND TIME: BEGINNING OF RELEASE: 4/1/81 0:15 ENDING OF RELEASE: 4/1/81 6:15 CURRENT TIME: 4/1/81 1:15
 LENGTH OF RELEASE = 6 HOURS 0 MINUTES TOTAL TIME FROM START = 1 HOURS 0 MINUTES

MONITORED RADIATION LEVELS: MAXIMUM READING SENSITIVITY CONCENTRATION
 RIS-9301 5.0E+5 CPM 2.40E-8 UCI/CC/CPM 1200E-01 UCI/CC

LIMITS: SITE EMERGENCY NOBLE GAS = 3.2E-3 UCI/CC SITE EMERGENCY I-131 = 2.2E-6 UCI/CC
 10 X TECH SPEC NOBLE GAS = 1.3E-3 UCI/CC 10 X TECH SPEC I-131 = 3.0E-9 UCI/CC

PLANT CONDITIONS: CIRCULATING I-133 INVENTORY = 1.31E-1 CURIES PLATEOUT I-133 INVENTORY = 6.56E+1 CURIES
 AVE REACTOR TEMP = 650.0 DEG F PRESSURE BEFORE = 700.0 PSIA PRESSURE AFTER = 450.0 PSIA
 VOLUME RELEASED = 8097E+10 SCC EQUIVALENT CONCENTRATION I-133 = 6.235E-10 CI/CC

METEOROLOGICAL DATA: BUILDING DIFFERENTIAL TEMPERATURE = -0.20 DEG F WIND DIRECTION FROM 90.0 DEG
 AVERAGE WIND SPEED AT 220.0 FEET ELEVATION = 7.0 MPH ESTIMATED WIND SPEED AT 32.8 FEET ELEVATION = 2.7 MPH

STABILITY CATEGORY (ATTACHMENT 7) = E

LOCATION OF HAZARD (ATTACHMENT 8): FROM 265 DEGREES TO 275 DEGREES FOR 1&2 MILES
 AFFECTING THE FOLLOWING AREAS: D E P Q FF GG UU VV

RELEASE RATES: RX BLDG LOUVERS (CI/SEC) PCRV SAFETY VALVES (CI/SEC) TOTAL (CI/SEC)
 NOBLE GAS = 6960E+06 2280E+06 9240E+06
 I-133 = 3616E-02 1184E-02 4801E-02

TOTAL RELEASE: RX BLDG LOUVERS (CURIES) PCRV SAFETY VALVES (CURIES) TOTAL (CURIES)
 NOBLE GAS = 1503E+11 4924E+10 1995E+11
 I-133 = 7812E+02 2559E+02 1037E+03

DOSE CONVERSION FACTORS (ATTACHMENT 8): WEIGHTED NOBLE GAS = 7.5E+2 REM/HR/CI/M3 WEIGHTED IODINE = 5.3E+4 REM/HR/CI/M3

INCIDENT DOSES:	DILUTION FACTOR (SEC/M3)	WHOLE BODY DOSE RATE (REM/HR)	THYROID DOSE RATE (REM/HR)	EXPOSURE TIME (HOURS)	ACQUM WHOLE BODY (REM)	ACQUM THYROID (REM)
0.1	1727E-02	1197E+07	4396E-00	5963E+01	7138E+07	2621E+01
0.2	5066E-03	3511E+06	1289E-00	5926E+01	2080E+07	7640E-00
0.3	2513E-03	1741E+06	6396E-01	5889E+01	1025E+07	3766E-00
EAB	1793E-03	1242E+06	4563E-01	5864E+01	7287E+06	2676E-00
0.4	1550E-03	1074E+06	3945E-01	5852E+01	6288E+06	2309E-00
1.0	5162E-04	3577E+05	1313E-01	5630E+01	2014E+06	7396E-01
2.0	2421E-04	1673E+05	6163E-02	5260E+01	8828E+05	3242E-01
3.0	1512E-04	1048E+05	3850E-02	4890E+01	5127E+05	1882E-01
4.0	1082E-04	7493E+04	2753E-02	4520E+01	3389E+05	1244E-01
5.0	8293E-05	5747E+04	2110E-02	4150E+01	2385E+05	8759E-02
6.0	6645E-05	4605E+04	1691E-02	3780E+01	1740E+05	6393E-02
8.0	4791E-05	3320E+04	1219E-02	3040E+01	1009E+05	3707E-02
10.0	3712E-05	2572E+04	9447E-03	2300E+01	5919E+04	2173E-02
15.0	2369E-05	1642E+04	6030E-03	4511E-00	7409E+03	2720E-03

CATEGORY: GENERAL EMERGENCY WHOLE BODY DOSE AT EAB = 7.287E+06 REM THYROID DOSE AT FAR = 2.676E-00 REM

3 BLUE
4 RED

1 TAN
2 GREEN