

WM- /
PDR
 (Return to WM, 623-SS
 DEC 03 1982)

Distribution:
 ✓ WM file
 WMHL r/f
 NMSS r/f
 JBMartin
 REBrowning
 MJBell
 MRKnapp
 MFWeber & r/f
 HJMiller
 JOBunting
 PDR

WMHL: 3109.9

MEMORANDUM FOR: Performance Assessment Section
 High-Level Waste Licensing
 Management Branch
 Division of Waste Management

FROM: Michael F. Weber
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SUBJECT: ERROR MESSAGES IN NWFT/DVM

Attached is a listing of the error messages found in NWFT/DVM. Although they are scattered throughout the User's Manual for NWFT/DVM, a concise lexicon of these errors did not previously exist. Your use of this list when executing models with NWFT/DVM should expedite initial debugging procedures.

ORIGINAL SIGNED BY

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Enclosure:
 As stated

8212230225 821203
 PDR WASTE PDR
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DATE	12/3/82	12/...../82					

The following is a listing of the error or stop statements executed in the NWFT/DVM code used by the Performance Assessment Section of NMSS/WMHL of the U.S. Nuclear Regulatory Commission:

<u>Stop Number</u>	<u>Problem Description</u>
1	End of file encountered on reading NOVEC,TUB,...
2	End of file encountered on reading conductivity array, COND.
3	End of file encountered on reading cross-sectional area array, AREA.
4	End of file encountered on reading leg length array, PATH.
5	End of file encountered on reading porosity array, PHI.
6	End of file encountered on reading pressure array, P.
7	End of file encountered on reading junction elevation (depth to) array, D.
10	For analytic solution (IOPT(13) =1), it is required that $1 \leq \text{NOISO} \leq 3$ and that NOISO isotopes be equally retarded.
11	End of file encountered on reading number of isotopes, NOISO.
12	End of file encountered on reading isotope data arrays, AM, ISONAME, etc.
13	End of file encountered on reading leach time and dispersivity, LEACH, ALPHA.
14	The appropriate branching fraction cannot be located.
15	The appropriate branching fraction cannot be located, see page 89 of User's Manual.

<u>Stop Number</u>	<u>Problem Description</u>
16	Decay chain must be read sequentially with regard to isotope component numbers.
23	End of file encountered on reading distribution coefficient array, KD.
24	End of file encountered on reading rock density array, RDENS.
25	End of file encountered on reading input vector file (NOFILE = 10).
26	End of file encountered on reading the option array, IOPT.
27	End of file encountered on reading input vector file (NOFILE = 10).
31	Maximum allowable number of input vectors is exceeded.
32	Taylor expansion failed to converge (see page 84).
33	End of file encountered on reading brine concentration array, C.
34	End of file encountered on reading migration path data, NPATH, MPATH.
35	End of file encountered on reading well location data, LEGNO, SLEG, etc.
36	First leg of input migration is not the repository (leg 13), or the calculated flow directions do not correspond to the input path.
37	End of file encountered on reading DVM control card, LLOONLY, etc.
40	End of file encountered on reading solubility limit array, CS.

<u>Stop Number</u>	<u>Problem Description</u>
41	End of file encountered on reading mass fraction data, NST, TFRC, etc.
42	Dimensioning for the total number of decay and daughter-product factors is exceeded.
43	Dimensioning for discharge factor array, F, is exceeded.
45	The number of velocity intervals(N_v) must be less than or equal to seven (7).
46	NWFT/DVM does not allow for transport of source materials to beyond the discharge point in a single time step nor for a positive distance travelled from the source blocks to overlap negative distance travelled from the discharge point in a single time step.
47	Well leg number is not in the specified flow path.

This list has been compiled from the error statements referenced throughout the User's Manual for NWFT/DVM. These error messages are listed as "stops" following the call from the CPU executing the program to the Fortran Library. By familiarizing oneself with these error messages, the user will gain insight into the limitations of this performance assessment code.

REFERENCE

Campbell, J.E., Longsine, D.E., and Cranwell, R.M., Risk Methodology for Disposal of Radioactive Waste: The NWFT/DVM Computer Code Users Manual, NUREG/CR-2081, 1981.

MFW/11/16/82.