Table 1

EPRI/NCEER EARTHQUAKE CATALOG TERM DESCRIPTION

CATALOG TERM	FORMAT	DESCRIPTION
UNID	15	Unique identification number for each entry
EQUD	15	Earthquake identification number; this number is unique for each earthquake but the same for multiple entries of a single event
YEAR	I4	Year – Origin Time (Greenwich Mean Time)
MO	I2	Month – Origin Time (Greenwich Mean Time)
DY	I2	Day – Origin Time (Greenwich Mean Time)
HR	I2	Hour – Origin Time (Greenwich Mean Time)
MN	I2	Minute – Origin Time (Greenwich Mean Time)
SEC	F5.2	Second – Origin Time (Greenwich Mean Time)
LAT	F5.2	Latitude – Degrees (North)
LONG	F5.2	Longitude – Degrees (West)
Z	I2	Depth in kilometers
MB	F3.1	m_b – Body wave magnitude (Nuttli)
MBLG	F3.1	m_{bLG} – LG wave magnitude (Nuttli)
ML	F3.1	M_L – Local magnitude
MS	F3.1	M_S – 20 second surface wave magnitude
M	F3.1	One entry, type unknown
MC	F3.1	Coda duration magnitude
MN	F3.1	Nuttli magnitude

Table 1

EARTHQUAKE CATALOG (continued)

CATALOG TERM	FORMAT	DESCRIPTION
ITM	I1	Intensity to magnitude conversion codes; see table 2
LNFA	F5.1	Felt area (natural log) – km^2
UI	I1	Intensity uncertainty; see table 3
INT	F5.1	Epicentral intensity; according to the Modified Mercalli Scale
UM	A1	Uncertainty in magnitude and method of estimation; see table 4
UL	A1	Uncertainty in location; see table 3
REG	I1	EPRI TEC region
GD	I1	Global default; see table 5
SRC	A3	Source code corresponding to source of data; see table 6
m_{b*}	F4.2	Uniform magnitude for b-value calculation
m_{b*}	F4.2	Best estimate magnitude
om_b	F4.2	Variance of m_b
DEPENDENCE	15	EQID of Main Shock
ENTR	I1, 1X,A2A3A2	Entry tracking; TEC number (I1), day (A2), month (A3), year (A2) of entry
TYPE	I1	Type of NCER magnitude 1 = Instrumental, 2 = Felt Area, 3 = Maximum Intensity
MAG	F3.1	NCEER Magnitude

Table 2

MAGNITUDE CONVERSION CODES (ITM)

CATALOG TERM	FORMAT	DESCRIPTION
A	Intensity falloff	Nuttli (1979)
B	Intensity falloff	Bollinger (1979) or Nuttli, Bollinger, and Griffiths (1979).
C	Epicentral intensity	M = 2/3 I + 1, Gutenberg and Richter (1956).
D	Felt area	Street, et al. (1984).
E	Intensity falloff	Bollinger (1977), USGS Professional Paper 1028.
F	Epicentral intensity	Nuttli (1974).
G	Epicentral intensity, falloff, and total felt area.	Nuttli and Brill (1981).
H	Area MMI >= IV	Street, et al. (1984).
I	Area MMI >= IV	Street and Turcotte (1977).
L	Total felt area	Street and Lacroix (1979).
M	Total felt area and felt area MMI >= IV	Street and Lacroix (1979).
N	Total felt area, I=IV felt area and m_b (FI)	Street and Lacroix (1979).
P	Area MMI >= IV	Nuttli, Bollinger and Griffiths (1979), m_{bLg} = 1.13 log (Arv) – 0.45
Q	Total felt area	Nuttli, Bollinger and Griffiths (1979), m_{bLg} = 3.25-0.25log (A_f)+0.098(log A_f)**2
X	Expert judgement	See comments.
Z	Felt area	Nuttle and Zollweg (1974).

Table 3

LOCATION AND INTENSITY UNCERTAINTY CODES

CODE	DEFINED VALUE
A	+/- 5 km
B	+/- 10 km
C	+/- 25 km
D	+/- 50 km
E	+/- 100 km

INTENSITY UNCERTAINTY CODES (Ur)

CODE	DEFINED VALUE
A	+/- -0
B	+/- 1
C	+/- 2
D	+/- 3
E	- 0.5
F	- 1
G	- 2
H	+/- 0.5
I	+ 1
J	+ 2
K	+ 0.5

Table 4

MAGNITUDE UNCERTAINTY CODES (U_M)

CODE	DATUM	VALUE
A	Instrumental	+/- 0.3 (date <= 1940)
		+/- 0.2 (1941 – 1963)
		+/- 0.1 (>= 1964)
B	Intensity fallout	+/- 0.2
C	Felt area	+/- 0.3
D	Epicentral intensity	+/- 0.6
E	Shallow event	Cannot reliably estimate magnitude from intensity
F – L	Non-instrumental	Uncertainty based on expert judgement as follows:
F	Non-instrumental	+/- 0.1
G	Non-instrumental	+/- 0.2
H	Non-instrumental	+/- 0.3
I	Non-instrumental	+/- 0.4
J	Non-instrumental	+/- 0.6
K	Non-instrumental	+/- 0.8
L	Non-instrumental	+/- 1.0

Table 5

GLOBAL DEFAULT DEFINITION TABLE

GLOBAL DEFAULT	DESCRIPTION
0	Earthquake entry to be deleted from the GDI catalog. All entries with the same EQID are put in the GDO file. These events are typically ghosts of valid GD1 entries.
1	EPRI Project preferred entry.
3	Blast/Explosion.
4	Reservoir induced event.
5	Event not to be used because of inadequate observational information.
7	Cryoseism.
8	Sonic boom.
9	Mine collapse.

Table 6a

EPRI PHASE I
PROJECT EARTHQUAKE CATALOG SOURCE CODES

(Listed by Compiler)

COMPILER	SRC	SOURCE
NOAA	NOA	National Earthquake Information Service
	WES	Weston Observatory
	BOL	Bollinger, VPI
	SEU	Southeast U.S. Seismic Network
	NUT	Nuttli, St. Louis University
	EUS	Tarr, USGS
	CAN	Earth Physics Branch, Canada
	LLL	Lawrence Livermore National Laboratory
	STR	Stover, USGS
	G-R	Gutenberg and Richter
	PWP	Attributed to Paul Pomeroy by LLNL
	EQH	Von Hake, NOAA
	GS	U.S. Geological Survey – in EQH
	CSC	University of South Carolina – in EQH
	USE	U.S. Earthquakes – in EQH
	CGS	U.S. Coast and Geodetic Survey – in USE
	ERL	Environmental Research Lab – in USE
	NOS	U.S. National Ocean Survey – in USE

Table 6a (continued)

Dewey & Gordon	D&G	Dewey & Gordon
St. Louis University (Central Mississippi Valley Seismic Network)	SLU	St. Louis University
Earth Physics Branch, Canada	EPB	Earth Physics Branch (includes other sources prior to 1968)
	PDE	Preliminary Determination of Epicenters
	LDO	Lamont – Doherty Geophysical Observatory
	NSA	Northeastern Seismological Centre
	ISC	International Seismologic Centre
	WES	Weston Observatory
	GS	United States Geological Survey
Virginia Polytechnic Institute (Southeast U.S. Seismic Network)	GIT	Georgia Institute of Technology
	HLZ	Herrmann et al, BSSA 72, 1219-1239, 1981
	NEI	National Earthquake Information Service
	TEI	Tennessee Earthquake Information Center
	USC	University of South Carolina
	USG	U.S. Geological Survey
	VPI	Virginia Polytechnic Institute
	REC	Events for various sources that were subsequently reclassified by VPI as blasts or reservoir-associated events

Table 6a (continued)

Weston Observatory (Northeastern U.S. Seismic Network)	WES	Weston Geophysical Observatory
Kansas Geological Survey	KAN	Kansas Geological Survey
Oklahoma Geophysical Observatory	OKD	Docekal, 1970
	OKO	Oklahoma Geophysical Observatory
	OKT	Tryggvason
	OKU	United States Earthquakes
	OKW	Wells, 1975
	OKZ	Zollweg, 1974
University of Nebraska	NBA	Docekal, 1970
	NBB	Zollweg, 1974
	NBC	National Earthquake Information Service
	NEB	Nebraska Geological Survey

Table 6b

EPRI PHASE I PARENT EARTHQUAKE CATALOG SOURCE CODES

SOURCE CODE	CATALOG SOURCE
ANA	Canadian Parent Catalog
EWE	Dewey and Gordon Parent Catalog
ANS	Kansas Parent Catalog
LNL	Livermore Parent Catalog
EBR	Nebraska Parent Catalog
EDF	NOAA Parent Catalog
KLA	Oklahoma Parent Catalog
SOU	SEUSSN Parent Catalog
TLO	St. Louis University Parent Catalog
STO	Stover Parent Catalog
TAG	Taggert Parent Catalog
EBE	Weston Parent Catalog
UTT	Nuttli Parent Catalog

These entries are from the Phase I data tapes. They were primarily used as reference for checking the initial Phase II catalog entries.

Table 6c

EPRI PHASE II ADDITIONAL SOURCE CODES

CODE	DEFINEDVALUE
DOC	Docekal thesis (1970)
NBG	Nuttli, Bollinger, and Griffiths (1979)
OKK	Oklahoma Geophysical Observatory
VIS	Visvanathan, South Carolina Geol, Soc. Bulletin No. 40, 1980