National Archives and Records Administration

8601 Adelphi Road
College Park, Maryland 20740-6001

REFERENCE COPY OF TECHNICAL DOCUMENTATION FOR ACCESSIONED ELECTRONIC RECORDS
November 19, 2002

Combat Naval Gunfire Support File (CONGA), 1966-73
RG 218, NARA Compiled Documentation (Fixed Length deNIPSed File)

The National Archives and Records Administration (NARA) has been accepting electronic records into its holdings since the early 1970s. Technical documentation has accompanied each transfer of electronic records. The documentation is necessary to understand the meaning of the digitized bits of information within the electronic records.

Over the decades, NARA has had different procedures for compiling technical documentation into an organized unit for researchers, and different expectations regarding the content and extent of any NARA-produced portions of the documentation. Consequently, the structure, organization and contents of the documentation reflect the procedures in place when the technical documentation was compiled and arranged and may include out of date addresses, telephone numbers, or other items of unrevised information related to the agency that created or transferred the documentation and electronic records to NARA, to the NARA unit that processed these materials, or to the physical media of the electronic records files.

In creating the reference copy of the documentation package, NARA staff have selected from the technical and/or supplementary documentation available for this series or file(s). We have annotated or highlighted the table of contents that follows to indicate which portions of the full documentation for this series or file are included in this reference copy of documentation. Any materials not included here are available upon request. Any user notes prepared after the table of contents was prepared appear before the table of contents. This documentation will differ in structure, organization and contents from technical documentation for other series or files of accessioned electronic records. The readability and visual quality are also variable.

NATIONAL
ARCHIVES

Supplemental User Note
Combat Naval Gunfire Support File (CONGA), 1966-1973:
Fixed-length deNIPSed file
NN3-218-76-028
Records of the U.S. Joint Chiefs of Staff (Record Group 218)

In a subsequent review of the file, staff determined that a significant number of the values in the field "RANGE TO TARGET IN THOUSANDS OF YARDS" produce distances beyond the accurate range of typical gunfire. This was later confirmed by a researcher. Although staff question the unit of measurement for this field, the agency documentation provides no additional information about this field.

Lynn Goodsell, Archivist
Electronic and Special Media Records Services Division (NWME)
July 6, 2011

National Archives and Records Administration

8601 Adelphi Road
College Park, Maryland 20740-6001

List of Documentation for the
Combat Naval Gunfire Support File (CONGA), 1966-73:
Fixed-length deNIPSed file

Records of the U.S. Joint Chiefs of Staff
Record Group 218

NARA Compiled Documentation:	# Pages
User Note describing files, documentation, and file characteristics	2
Technical Information Paper describing EBCDIC zoned-decimal data	4
NARA prepared record layout	2
Sample Printout of CONGA records	2
Selected pages from agency documentation for NIPS format file	18
Total	28

Automated Electronic Records Inspection and Control (AERIC) Utility verification reports	available upon request

Supplemental Documentation:	# Pages
Agency documentation for use with NIPS format file (CONGA File User Instructions, 18 August 1972)	244

"National Military Command System Information Processing System 360 Formatted File System (NIPS 360 FFS)" software manuals (Washington, DC: National Military Command System Support Center, Defense Communications Agency, 1971-73 editions; Washington, DC: Command and Control Technical Center, Defense Communications Agency, 1978 editions); filed with documentation for the Combat Air Summary File (OPREA), RG 218, NN3-218-76-025. Manuals (1971-74, with changes) also available through regional depository libraries and NARA RG 287 at SUDOC D 5.109.

NN3-218-76-028
Theodore J. Hull
June 25, 2002

National Archives and Records Administration

8601 Adelphi Road
College Park, Maryland 20740-6001

User Note
Combat Naval Gunfire Support File (CONGA), 1966-73:
Fixed-length deNIPSed file

Records of the U.S. Joint Chiefs of Staff
Record Group 218

June 10, 2002

Records Processing: In June 2002, a team processing backlog category accessions examined the processing status of the Combat Naval Gunfire Support File (CONGA), 1966-73 accession (NN3-218-76-028). NARA received the CONGA file in July 1977 from J-3 (Operations) Directorate, Joint Chiefs of Staff. The file was received in National Information Processing System (NIPS) format and subsequently converted by NARA to 1) a fixed length, de-NIPSed format and 2) a variable length, de-NIPSed format. NARA has retained all three versions of the CONGA file.

Documentation: The documentation for the Combat Naval Gunfire Support File (CONGA), 1966-73, deNIPSed files was compiled in June 2002. Two versions of this documentation are available; one for the fixed-length deNIPSed version and a second for the variable-length deNIPSed version. The agency documentation describing the NIPS format file is also available.

As a result of the de-NIPSing process, a number of fields contains an EBCDIC zoned-decimal character. These include the following: UDATE, NPKIA, NPMIA, NACFT, TSORT, and NSEXP. To assist researchers with processing zoned-decimal characters a copy of a Technical Information Paper describing the EBCDIC zoned-decimal format is enclosed. The team also added sample dumps for each of the four record types present in the variable-length de-NIPSed file to this documentation.

The fixed-length de-NIPSed version of this file was also verified using the Archival Electronic Records Inspection and Control (AERIC) utility and the reports from that verification are included in this documentation package. No problems were encountered during automated verification.

Data Structure: The data structure of the fixed length deNIPSed version of the CONGA file reflects the hierarchical nature of the original NIPS file and sequential data processing of records stored on magnetic tape. Researchers attempting to use the fixed length deNIPSed CONGA file should be aware that the Control Set data is repeated at the beginning of all but 60 of the records in the file. However, Fixed Set fields are not repeated for each set of successive Periodic Set records originally associated with them in the NIPS file. Researchers should also be aware that there are up to three different Periodic Sets. Data is not necessarily recorded in each of the three Periodic Sets, resulting in many NULL (blank) data in many fields. Researchers who want to process and analyze "complete" records will necessarily

have to first undertake pre-processing activities to physically restructure the records, or write the necessary program code, to associate the relevant Control Set and Fixed Set data with the relevant Periodic Set data.

THEODORE J. HULL
Archivist
Electronic & Special Media Records Services Division

DRAFT TECHNICAL INFORMATION PAPER ON DRAFT
-THE OCCURRENCE OF EBCDIC ZONED-DECIMAL DATA
IN THE HOLDINGS OF THE CENTER FOR ELECTRONIC RECORDS

Some files in the holdings of the Center for Electronic Records of the National Archives contain data which is stored in EBCDIC zoned-decimal format. This data format occurs primarily from two sources: Internal Revenue Service (RG 58) Corporate Sourcebook data which was received in packed decimal format and was unpacked by Archives staff using COBOL DISPLAY data items and Department of Defense Vietnam War data files (RG 218, RG 330, and RG 341) which was received in NIPS format and was de-NIPS-ed by Archives staff using NIPS report formats.

In order for researchers to use these files, the researcher's application software must be able to correctly recognize and interpret zoned-decimal data or the researcher must convert these data to normal decimal format before trying to use the data. The Center for Electronic Records does not perform this conversion as part of the reproduction procedures.

A description of the zoned-decimal format and instructions on how to convert such data follow this introduction.

Reference Copy #4

Zoned-decimal data may be generated by COBOL systems using DISPLAY data items, by PL/1 systems using PICTURE data items, or by ASSEMBLER systems using zoned-decimal data items. The general format of a zoned decimal number is one digit per byte. Each byte other than the last contains a hexadecimal "F" in the four leftmost bits (the zone nibble) and each byte contains a single digit in the rightmost four bits (the number nibble). The last byte contains a hexadecimal "C" or "F" in the leftmost four bits for positive numbers or a hexadecimal "D' or "E" for negative numbers. Leading blanks and coded decimal points are permitted. Zoned decimal is simply a formatted field in which the sign is an overpunch in the rightmost position.

If a data field recorded in zoned-decimal format is not specifically defined as such by the application software used to analyze the data, then errors will result when the data is read because the last (rightmost) byte, as explained above, appears as a non-numeric character in a numeric field. Instead it will appear as a letter, special character, or undefined character according to its hexadecimal representation.

The chart below shows the correct zoned-decimal representation/interpretation, the standard EBCDIC representation/interpretation when not defined as zoned decimal, and the hexadecimal representation.

	Positive										Negative									
Zoned-Decimal Representation	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
Regular EBCDIC Representation	{	A	B	C	D	E	F	G	H	I		J	K	L	M	N	O	P	Q	R
Hexadecimal Representation	C 0	C 1	C 2	C 3	C 4	C 5	C 6	C 7	C 8	C 9	DE 00	DE 11	DE 22	DE 33	DE 44	DE 55	DE 66	DE 77	DE 88	DE 99

Reference Copy #5

TECHNICAL INFORMATION PAPER ON CONVERSION OF EBCDIC ZONED-DECIMAL DATA TO ASCII IN VIETNAM WAR-RELATED FILES ORIGINALLY STORED IN NIPS

Most if not all of the Vietnam War-related files which were stored in the NIPS software contain numeric data fields recorded in EBCDIC zoned-decimal format. The general format of a zoned-decimal number is one digit per byte. Each byte other than the last (rightmost) byte, which represents the lowest order digit, contains a hexadecimal "F" in the four leftmost bits (the zone nibble) and a single digit representing the numeric value of the number in the four rightmost bits (the number nibble). The last byte contains a hexadecimal "F" or "C" in the zone nibble for positive numbers and a hexadecimal "D" or "E" for negative numbers. Leading blanks and coded decimal points are permitted. In other words, zoned-decimal data is a numeric field in which the "sign" of the number is carried in only the last (rightmost) digit.

The Conversion Problem for the Last (Rightmost) Byte.

In most if not all of the Vietnam War-related files, these NIPS zoned-decimal fields are positive numbers with a "C" in the zone nibble of the last (rightmost) byte. This results in the rightmost digit appearing as the alphabetic characters "A", "B", "C", "D", "E", "F", "G", "H", and "I" for the digits 1 through 9 [hexadecimal representations are C1, C2, C3, C4, C5, C6, C7, C8, and C9] and as a left bracket "{" [hexadecimal C0] for the digit "0" when read as a regular EBCDIC character.

When EBCDIC zoned-decimal data is converted to ASCII, each byte in the field other than the last (rightmost) byte is converted to its same number value. The last (rightmost) digit of each field is converted to the same character in ASCII that it represents in EBCDIC. Thus, a zoned-decimal rightmost byte representing the value of "1" which is stored as "A" [hexadecimal C1] in EBCDIC is converted to an "A" [hexadecimal 41] in ASCII, "2" stored as "B" [C2] to "B" [42], etc. So the rightmost digit of zoned-decimal numbers 1 through 9 still contains these digits in the number nibble of the hexadecimal representation. However, the zoned-decimal number "0" which is stored as "{" [hexadecimal C0] is converted from hexadecimal "C0" in EBCDIC to the ASCII "{" which is represented in hexadecimal as 7B. It is not converted to hexadecimal 40 in the same pattern as the other zoned-decimal digits are. Thus an EBCDIC zoned-decimal "0" does not retain its correct value in the number nibble of the ASCII hexadecimal representation.

The following table shows the value, normal representation, and hexadecimal representation in EBCDIC and ASCII, and the additional conversion necessary in order to represent properly the last (rightmost) digit in zoned-decimal fields that have been converted from EBCDIC to ASCII.

EBCDIC Zoned-Decimal Value	EBCDIC Zoned-Decimal Representation	EBCDIC Hexadecimal Representation	ASCII Representation after Conversion	ASCII Hexadecimal Representation	Needs to be Converted to ASCII value
0	{	C0	{	7B	0
1	A	C1	A	41	1
2	B	C2	B	42	2
3	C	C3	C	43	3
4	D	C4	D	44	4
5	E	C5	E	45	5
6	F	C6	F	46	6
7	G	C7	G	47	7
8	H	C8	H	48	8
9	I	C9	I	49	9

Reference Copy #6

When a file stored in EBCDIC containing zoned-decimal data is converted to ASCII without identifying each zoned-decimal field and first converting it to normal decimal data, the resulting ASCII file contains numeric fields whose rightmost digit has been converted to its corresponding alphabetic or special character representation. For example, when a zoned-decimal field containing the number 242 is converted from EBCDIC to ASCII without first being converted from zoned-decimal becomes 24B in the ASCII file rather than 242 as in EBCDIC zoned decimal. The Center for Electronic Records converts from EBCDIC to ASCII at the file or record level rather than at the field level. Therefore, all zoned-decimal values become non-numeric fields when converted to ASCII.

Therefore, if a researcher requests that a copy of a file that contains zoned-decimal data be converted to ASCII, the researcher receives a file in which fields defined as numeric in the documentation contain non-numeric data. In order to use this data, the researcher must convert the file again in order to convert the non-numeric data in the original zoned-decimal fields to numeric. The table below provides the explanation of the conversion that must be performed.

EBCDIC Zoned-Decimal Value	EBCDIC Zoned-Decimal Representation	EBCDIC Hexadecimal Representation	ASCII Representation after Conversion	ASCII Hexadecimal Representation	Needs to be Converted to ASCII value
0	{	C0	{	7B	0
1	A	C1	A	41	1
2	B	C2	B	42	2
3	C	C3	C	43	3
4	D	C4	D	44	4
5	E	C5	E	45	5
6	F	C6	F	46	6
7	G	C7	G	47	7
8	H	C8	H	48	8
9	I	C9	I	49	9

Reference Copy #7

INPUT, OUTPUT, MASTER DEFINITION (Excluding Reports)

1. PAGE 1 OF 2

2. NAME: Combat Naval Gunfire Support File (CONGA)

3. TYPE OF RECORD: ☐ INPUT ☐ OUTPUT ☒ MASTER

4. RECORD SIZE: 149

5. DATE PREPARED: March 1977

6. SYSTEM

7. PREPARED BY: Ross J Cameron

8. DEFINITION

LINE NO.	DATA ELEMENT	FIELD LOCATION	CLASS A/N	SIGN (If numeric)	SIZE	TYPE OF DATA STANDARD	REFERENCE: IDENT. AND PAGE	REFERENCE: LINE NO.	NOTE
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.
	SDATE - Mission Firing DATE	1-6	A		6				
	STIME - Mission START Time	7-12	A		6				
Control RCTRL	ETIME - Mission End Time	13-18	A		6				
	UIC - Unit IDENTIFICATION Code (of ship)	19-24	A		6				
	SERES - Series Number	25-27	A		3				
	UDATE - DATE of LAST UpdATE	28-32	N		5				
	SHPNM - NAME of FIRING ship	33-48	A		16				
	SHPTP - Hull Type of FIRING Ship	49-52	A		4				
	HLLNO - Hull Number of Firing Ship	53-56	A		4				
	ARCOD - AREA CODE	57	A		1				
	COARD - TARGET COORDINATES	58-65	A		8				
	OPCOD - Type of OPERATION	66-67	A		2				
	OPNAM - NICKNAME of OPERATION	68-80	A		13				
	FCSUP - Force SUPPORTED	81-87	A		7				
	TCODE - Period of DAY (D-N)	88	A		1				
	TGCOD - TARGET Type Code	89-90	A		2				
	PCODE - Province Code	91-92	A		2				
	SPOTS - SpOTTER INFORMATION	93	A		1				
	DEDAF - DESTRUCTION OR DAMAGE FOR SHIP	94-96	A		3				
	NPKIA - Friendly Personnel Killed	97-98	N		2				
	NPWIA - Friendly Personnel Wounded	99-100	N		2				
	NPMIA - Friendly Personnel Missing	101-102	N		2				

Reference Copy #8

INPUT, OUTPUT, MASTER DEFINITION (Excluding Reports)

1. PAGE 2 OF 2

2. NAME: CombAT NAVAL GunFire Support File (CONGA)

3. TYPE OF RECORD: ☐ INPUT ☐ OUTPUT ☒ MASTER

4. RECORD SIZE: 149

5. DATE PREPARED: March 1977

6. SYSTEM:

7. PREPARED BY: Ross J. Cameron

8. DEFINITION

LINE NO.	DATA ELEMENT ? what ?	FIELD LOCATION	CLASS A/N	SIGN (If numeric)	SIZE	TYPE OF DATA STANDARD	REFERENCE IDENT. AND PAGE	REFERENCE LINE NO.	NOTE
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.
	WDI - (Wh) InFLicTed DAMAge	103	N		1				
	~~PARA 2 SET~~								
P-Set 1	PARA1 - SubseT No. For Ordnance Info.	104	A		1				
	CALEX - CALiber Expended	105-108	A		4				
	ORTYP - ORdnance Type	109-113	A		5				
	QTYEX - QuanTiTy Expended	114-118	N		5				
	RANGE - Range in Thousands of Yards	119-121	N		3				
PSET2	PARA2 - SubseT No. For SorTie InFo.	122	A		1				
	ACTYP - AirCeAFT Type	123-128	A		6				
	NACFT - No. of SorTies AvaiLable	129-130	N		2				
	TSORT - No. of SorTies Flown	131-132	N		2				
	NSEXP - No. of SorTies Expending Ammo	133-134	N		2				
Occ 3	~~PSET 2 Group~~								
	PARA3 - SubseT No. For Enemy loss InFo.	135	A		1				
	LCODE - Loss Code	136-137	A		2				
	MLQTY - Loss QuanTiTy	138-140	N		3				
	MLUNT - Loss UniTs	141-143	A		3				
	MLDDD - DesTroyed or DAmaged Descriptio	144-146	A		3				
	EPKIL - Enemy Personnel KilLed	147-149	N		3				

Reference Copy #9

National Archives and Records Administration

8601 Adelphi Road
College Park, Maryland 20740-6001

Theodore J. Hull
June 25, 2002
3-218-76-028

Sample Dumps of the
Combat Naval Gunfire Support File (CONGA), 1966-73:
Fixed-length deNIPSed file

Records of the U.S. Joint Chiefs of Staff
Record Group 218

Following is a page listing a sample of records generated from the Combat Naval Gunfire Support File (CONGA), 1966-73: Fixed-length deNIPSed file, created from the records as preserved by the Electronic & Special Media Records Services Division. NARA created this file in 1977 by converting it from a software dependent format (NIPS) and last preserved the fixed-length de-NIPed version in EBCDIC, with IBM-standard labels on 18-track, 37,871 bpi, 3480-class tape cartridge (2002-02619). The NIPS version of the CONGA file was last preservation copied on 2001-01649.

APS RECORD DUMP Date: 06/19/2002 Time: 13:22

```
FILE #1  BLOCK # 0  RECORD # 0
0000    660301010032010036N521860016911BORLECK          DD   8862
0040     NGEAGLE CLAW   1ST CAVDAJ      000000 15/38AAC  00030000
0080

FILE #1  BLOCK # 0  RECORD # 1
0095    660301010037010058N521860016911BORLECK          DD   8862
00D5     NGEAGLE CLAW   1ST CAVDAI      000000 15/38AAC  00078000
0115

FILE #1  BLOCK # 0  RECORD # 2
012A    660301010037010058N52186001
016A                                              25/38WP   00001000
01AA

FILE #1  BLOCK # 0  RECORD # 3
01BF    660301010116010121N521860016911BORLECK          DD   8862
01FF     NGEAGLE CLAW   1ST CAVDAI      000000 15/38AAC  00049000
023F

FILE #1  BLOCK # 0  RECORD # 4
0254    660301010116010121N52186001
0294                                              25/38WP   00001000
02D4
```


Reference Copy #11

ABBREVIATED CONGA FFT

FIELD	SET	LENGTH	TABLE	MEANING
SDATE	C	6		Mission Firing Date (YYMMDD)
STIME	C	6		Mission Start Time (DDZZZZ)
ETIME	C	6		Mission End Time (DDZZZZ)
UIC	C	6		UIC of Firing Ship
RCTRL	C	27		All Above
UDATE	F	5		Date of Last Update (YYJJJ)
SHPNM	F	16		Name of Firing Ship
SHPTP	F	4		Hull Type of Firing Ship
HLLNO	F	4		Hull Number of Firing Ship
ARCOD	F	1		CTZ to which Firing was Directed
COARD	F	8		UTM Coordinates of Target
OPNAM	F	13		Nickname of Operation Supported
FCSUP	F	7		Force Supported
TCODE	F	1		Period of the Day (D - N)
TGCOD	F	2	TARES	Target Type Code
PCODE	F	2	PROVS	Province Code
SPOTS	F	1		Spotter Info (None, Ground, Air, Ship)
DEDAF	F	3		DES or DAM to Ship
NPKIA	F	2		Friendly Personnel KIA
NPWIA	F	2		" " WIA
NPMIA	F	2		" " MIA
WDI	F	1		What Inflicted Damage (See Attached Table
FRSET	F	10		DEDAF, NPKIA, NPWIA, NPMIA, WDI
CALEX	1	4		Caliber of Ordnance Expended
ORTYP	1	5		Ordnance Type Expended
QTYEX	1	5		Quantity of Ordnance Expended
RANGE	1	3		Range to Target in Thousands of Yards
PSET1	1	18		CALEX, ORTYP, OTYEX, RANGE
ACTYP	2	6		Aircraft Envolved in Firing Mission
NACFT	2	2		Number of Aircraft available to Fly Sorti
TSORT	2	2		Number of Sorties Flown during Mission
NSEXP	2	2		Number of Sorties Expending Ammunition
LCODE	3	2	TARES	Enemy Loss Codes
MLQTY	3	3		Quantity of Enemy Loss
MLUNT	3	3		Enemy Loss by Unit Measurement
MLDDD	3	3		Enemy DES or DAM
EPKIL	3	3		Enemy Personnel KIA
PSET3	3	15		LCODE, MLQTY, MLUNT, MLDDD EPKIL

TABLES & CODES

WDI F 1 What Inclicted Damage (To Friendly Ship)

C CD Site
M Missile
S Ship
A Aircraft
I Unknown
N Mine

Reference Copy #12

CONGA File User Instructions

I. Data content

A. Basic data information - information pertaining to naval gunfire support missions in South Vietnam and shore bombardment in North Vietnam.

B. Specific data types

1. Identification of each record by firing date, starting time, ending time, ship UIC and message serial number.

2. Data about ship-operation area, target and friendly loss data.

3. Contains ordnance expenditure data - as reported by the daily Oprep-5 message.

4. Aircraft sortie data.

5. Structure and material enemy losses.

C. Geographic breakout - Data is available by area code (corp), province (for South Vietnam only) and geographic coordinates.

D. Time span - 1966 to present.

E. Level of data - daily.

F. Update cycle - updated daily in a batch mode.

G. File structure - One record per ship incident consisting of three subsets, with the fixed set describing friendly loss data and three periodic sets used to describe ordnance data, aircraft sortie data, and enemy loss data respectively.

Reference Copy #13

Reference Copy #14

H. Record Structure

SDATE STIME ETIME UIC SERES

CONTROL FIELDS

UDATE SHPNM SHPTP HLLNO ARCOD COARD

OPCOD OPNAM FCSUP TCODE TGCOD PCODE

SPOTS DEDAF NPKIA NPWIA NPMIA WDI

FIXED SET

PARA1 CALEX ORTYP QTYEX RANGE

PERIODIC SET 1

PARA2 ACTYP NACFT TSORT NSEXP

PERIODIC SET 2

PARA3 LCODE MLQTY MLUNT MLDDD EPKIL

PERIODIC SET 3

II. File Fields and Descriptions

A. FFT fields

NAME	FLD/GRP	LENGTH	MODE	SET	DESCRIPTION
SDATE	FIELD	006	ALPHA	CTL	firing date
STIME	FIELD	006	ALPHA	CTL	starting time
ETIME	FIELD	006	ALPHA	CTL	ending time
UIC	FIELD	006	ALPHA	CTL	ship UIC
SERES	FIELD	003	ALPHA	CTL	series number
RCTRL	GROUP		ALPHA	CTL	control group
UDATE	FIELD	005	NUMER	FIX	date of last update
SHPNM	FIELD	016	ALPHA	FIX	ship name
SHPTP	FIELD	004	ALPHA	FIX	ship type
HLLNO	FIELD	004	ALPHA	FIX	hull number
ARCOD	FIELD	001	ALPHA	FIX	area code
COARD	FIELD	008	ALPHA	FIX	target coords
OPCOD	FIELD	002	ALPHA	FIX	operation type
OPNAM	FIELD	013	ALPHA	FIX	operation supported
FCSUP	FIELD	007	ALPHA	FIX	force supported
TCODE	FIELD	001	ALPHA	FIX	period of day
TGCOD	FIELD	002	ALPHA	FIX	target type code
PCODE	FIELD	002	ALPHA	FIX	province code
SPOTS	FIELD	001	ALPHA	FIX	spotter info
DEDAF	FIELD	003	ALPHA	FIX	DES or DAM for ship
NPKIA	FIELD	002	NUMER	FIX	friendly personnel killed
NPWIA	FIELD	002	NUMER	FIX	friendly personnel wounded
NPMIA	FIELD	002	NUMER	FIX	friendly personnel missing
WDI	FIELD	001	ALPHA	FIX	who inflicted damage
FRSET	GROUP	010	ALPHA	FIX	fixed friendly informati
PARA1	FIELD	001	ALPHA	SET1	subset no. for ordn. ini
CALEX	FIELD	004	ALPHA	SET1	caliber expended
ORTYP	FIELD	005	ALPHA	SET1	ordnance type
QTYEX	FIELD	005	NUMER	SET1	quantity expended - RDS
RANGE	FIELD	003	NUMER	SET1	range in thousands of yards
PSET1	GROUP	018			PERIODIC Ammunition info
PARA2	FIELD	001	ALPHA	SET2	subset no. for sortie information

Reference Copy #15

NAME	FLD/GRP	LENGTH	MODE	SET	DESCRIPTION
ACTYP	FIELD	006	ALPHA	SET2	aircraft type
NACFT	FIELD	002	NUMER	SET2	no. of sorties available
TSORT	FIELD	002	NUMER	SET2	no. of sorties flown
NSEXP	FIELD	002	NUMER	SET2	no. of sorties expending ammo
PSET2	GROUP	013			Periodic sortie info.
PARA3	FIELD	001	ALPHA	SET3	subset # for enemy loss ini
LCODE	FIELD	002	ALPHA	SET3	loss code
MLQTY	FIELD	003	NUMER	SET3	loss quantity
MLUNT	FIELD	003	ALPHA	SET3	loss units
MLDDD	FIELD	003	ALPHA	SET3	DES or DAM designation
EPKIL	FIELD	003	NUMER	SET3	enemy personnel killed
PSET3	GROUP	015			Periodic enemy loss inf

Reference Copy #16

B. Field Descriptions

Control set

NAME	FLD/GRP	LENGTH	MODE	SET
SDATE	FIELD	006	ALPHA	CTL

Definition - contains the first two digits for year, second two digits for month, and the third two digits for day.
Example - 720620

STIME	FIELD	006	ALPHA	CTL

Definition - contains the first two digits for day firing began. Digits 3-6 are for the hour that the firing began in Zulu time.
Example - 280808

ETIME	FIELD	006	ALPHA	CTL

Definition - contains the first two digits for day firing ended with digits 3-6 for the hour that the firing ended in Zulu time.
Example - 280815

UIC	FIELD	006	ALPHA	CTL

Definition - contains the unit identification code of the ship/command originating the message.
Example - N52192

SERES	FIELD	003	ALPHA	CTL

Definition - contains the series number of the Oprep-5 message.
Example - 001

RCTRL	GROUP	027	ALPHA	CTL

Definition - this group consists of SDATE, STIME, ETIME, UIC and SERES.

Reference Copy #17

NAME	FLD/GRP	LENGTH	MODE	SET
UDATE	FIELD	005	NUMER	FIX

Definition - contains the date when the data record was last updated. It includes the first two digits for year and digits 3-5 for Julian day.
Example - 72173

SHPNM	FIELD	016	ALPHA	FIX

Definition - contains the name of the firing ship, truncated to sixteen characters if required.
Example - USS Hanson

SHPTP	FIELD	004	ALPHA	FIX

Definition - contains the hull type of the firing ship.
Example - DDG, CA, DD, DLG, CL, CLG

HLLNO	FIELD	004	ALPHA	FIX

Definition - contains the specific hull number of the firing ship.
Example - 1045

ARCOD	FIELD	001	ALPHA	FIX

Definition - contains the identification of the corps area to which the gunfire support was provided for South Vietnam only.
Values - 1, 2, 3, 4

COARD	FIELD	008	ALPHA	FIX

Definition - contains the universal transverse mercator (UTM) coordinates of the target.
Example - XE510520

OPCOD	FIELD	002	ALPHA	FIX

Definition - contains the type of operation being reported which is NVN and SVN.
Values - NG - Naval Gunfire - VS
SE - Sea Dragon - VN

Reference Copy #18

NAME	FLD/GRP	LENGTH	MODE	SET
OPNAM	FIELD	013	ALPHA	FIX

Definition - contains the 'nickname' of the operation supported if a specific named operation is involved.
For sea dragon records field provides identification of record as 'Sea Dragon' left justified.

FCSUP	FIELD	007	ALPHA	FIX

Definition - contains identification of the ground forces supported, if available. If available in Sea Dragon records, this field reports inflictor of damage or destruction.
Example - VNMC

TCODE	FIELD	001	ALPHA	FIX

Definition - contains an indicator whether the mission commenced during the day or night.
Values - D - day
N - night

TGCOD	FIELD	002	ALPHA	FIX

Definition - contains the description of target type. For output, the code is automatically converted by the TARES table.
Codes - A - WBLC Offshire
AA - Comm Site
AB - CSWY
AC - H and I
AD - Interdiction PT
AE - Naval Base
AF - Port Facility
AG - R/R Depot
AI - VC/NVA Posit
AJ - Artillary Site
AK - Bunker
AL - Infiltration PT
AM - Livestock
AN - Mortar Site
AP - Sampan
AQ - Assembly Area
AR - Base Camp

Reference Copy #19

AS - Aircraft
AT - Minefield
AU - Weapon
AV - Barge
AW - Supply Rte
AX - Area/LZ Prep
AY - Illumination
AZ - Observ Post
B - WBLC Beached
BA - Tunnel
BB - Auto Weap Posit
BC - Village
BD - Staging Area
BE - Secondary Exp
BF - Junk
BG - Cargo Vessel
BH - Beach Strafe
BI - Hostile Fire
BJ - Fortified Area
BK - Fighting Holes
BL - Sniper Fire
BM - Recon by Fire
BN - Training Area
BO - Trench Line
BP - Unknown
C - WBLC Inland
D - CD Site
E - Missile Site
F - Radar Site
G - Road Segment
H - R/R Segment
I - Bridge/APP
J - Ferry/APP
K - Tranship Area
L - Supply Area
M - Military Instal
N - Troop Conc
O - Struct/Building
PØ - Vehicle
P1 - Truck
P2 - Tank
R - Choke PT
S - Other
T - AA Site

Reference Copy #20

U - AMMO Storage
V - Boat Repair
W - Bypass
X - Cave
Y - Check PT
Z - CMD Post

NAME	FLD/GRP	LENGTH	MODE	SET
PCODE	FIELD	002	ALPHA	FIX

Definition - contains identity of the province in which the firing mission ended. The code is converted automatically by the PROVS table. Province codes are for SVN only.

Codes - 00 - Unknown
01 - Quang Tri
02 - Thua Thien
03 - Quang Nam
04 - Quang Tin
05 - Quang Ngai
06 - Kontum
07 - Binh Dinh
08 - Pleiku
09 - Phu Yen
10 - Darlac
11 - Khanh Hoa
12 - Tuyen Duc
13 - Quang Duc
14 - Phuoc Long
15 - Lam Dong
16 - Ninh Thuan
17 - Binh Thuan
18 - Binh Tuy
19 - Long Khanh
20 - Phuoc Thanh
21 - Binh Long
22 - Tay Ninh
23 - Binh Duong
24 - Gia Dinh
25 - Bien Hoa
26 - Phuoc Tuy
27 - Long An
28 - Kien Tuong

Reference Copy #21

29 - Kien Phong
30 - Dinh Tuong
31 - An Giang
32 - Vinh Long
33 - Kien Hoa
34 - Vinh Binh
35 - Phong Dinh
36 - Kien Giang
37 - Chuong Thien
38 - Ba Xuyen
39 - An Xuyen
40 - Con Son
41 - Phu Bon
42 - Hau Nghia
43 - Go Cong
44 - Bac Lieu
45 - Trung Phon
46 - Sac Dec,
47 - Chau Doc
48 - Haut Chhlong
49 - Phu Quoc Isl
50 - DMZ
51 - Buffer Zone
60 - Mud River
61 - Dump Truck

NAME	FLD/GRP	LENGTH	MODE	SET
SPOTS	FIELD	001	ALPHA	FIX

Definition - contains information concerning what type of spotters were used for the firing mission.
Values - N - None
G - Ground
A - Air
S - Ship

DEDAF	FIELD	003	ALPHA	FIX

Definition - contains information as to whether the firing ship has been destroyed or damaged. Field will be blank if there is no damage.
Examples - DES
DAM

Reference Copy #22

NAME	FLD/GRP	LENGTH	MODE	SET
NPKIA	FIELD	002	NUMER	FIX

Definition - contains the number of friendly personnel on the firing ship killed in firing action.
Example - 10

NPWIA	FIELD	002	NUMER	FIX

Definition - contains the number of friendly personnel on the firing ship wounded in action.
Example - 15

NPMIA	FIELD	002	NUMER	FIX

Definition - contains the number of friendly personnel on the firing ship missing in firing action.
Example - 19

WDI	FIELD	001	ALPHA	FIX

Definition - contains which weapon inflicted damage to the firing ship.
Values - C - CD Site
M - Missile
S - Ship
A - Aircraft
1 - Unknown
T - Torpedo
N - Mine

FRSET	GROUP	010	ALPHA	FIX

Definition - this group consists of DEDAF, NPKIA, NPWIA, and WDI.

Reference Copy #23

NAME	FLD/GRP	LENGTH	MODE	SET
PARA1	FIELD	001	ALPHA	SET1

Definition - contains a one digit designator to identify entry in the D2 paragraph in the reporting message which lists data on ammunition expenditure contained in specific subset of periodic set 1.

Example - 1

CALEX	FIELD	004	ALPHA	SET1

Definition - contains the identification of the caliber of ordnance expended on the given target during the mission.

Example - 5/38,40MM

ORTYP	FIELD	005	ALPHA	SET1

Definition - contains the type of ordnance on the given target during the mission.

Example - HE, VT

QTYEX	FIELD	005	NUMER	SET1

Definition - contains the total number of rounds of the indicated caliber and type expended on the target.

Example - 1000

RANGE	FIELD	003	NUMER	SET1

Definition - contains the range to the target in thousands of yards.

Example - 15

PSET1	GROUP	018	ALPHA	SET1

Definition - this group consists of PARA1, CALEX, ORTYP, QTYEX, and RANGE.

Reference Copy #24

NAME	FLD/GRP	LENGTH	MODE	SET
PARA2	FIELD	001	ALPHA	SET2

Definition - contains a one digit designator to identify entry in the F1 paragraph of the reporting message which lists data on structures destroyed/damaged in specific subset of periodic set 2.

Example - 2

ACTYP	FIELD	006	ALPHA	SET2

Definition - contains the aircraft involved in a firing mission.

Example - OV-21

NACFT	FIELD	002	NUMER	SET2

Definition - contains the number of aircraft available to fly sorties.

Example - 10

TSORT	FIELD	002	NUMER	SET2

Definition - contains the number of sorties flown during firing mission.

Example - 12

NSEXP	FIELD	002	NUMER	SET2

Definition - contains the number of sorties that expended ammunition during a firing mission.

Example - 15

PSET2	GROUP	013	ALPHA	SET2

Definition - this group consists of PARA2, ACTYP, NACFT, TSORT and NSEXP.

Reference Copy #25

NAME	FLD/GRP	LENGTH	MODE	SET
PARA3	FIELD	001	ALPHA	SET3

Definition - contains a one digit designator to identify entry in the K1 paragraph of the reporting message which lists data on structures destroyed/damaged contained in specific subset of periodic set 3.

Example - 3

LCODE	FIELD	002	ALPHA	SET3

Definition - contains the types of enemy losses. The code is automatically converted by the TARES table.

Codes - A - WBLC Offshore
AA - Comm Site
AB - CSWY
AC - H and I
AD - Interdiction PT
AE - Naval Base
AF - Port Facility
AG - R/R Depot
AI - VC/NVA Posit
AJ - Artillery Site
AK - Bunker
AL - Infiltration PT
AM - Livestock
AN - Mortar Site
AP - Sampan
AQ - Assembly Area
AR - Base Camp
AS - Aircraft
AT - Mine Field
AU - Weapon
AV - Barge
AW - Supply Rte
AX - Area/LZ Prep
AY - Illumination
AZ - Observ Post
B - WBLC Beached
BA - Tunnel
BB - Auto Weap Posit

Reference Copy #26

BC - Village
BD - Staging Area
BE - Secondary Exp
BF - Junk
BG - Cargo Vessel
BH - Beach Strafe
BI - Hostile Fire
BJ - Fortified Area
BK - Fighting Holes
BL - Sniper Fire
BM - Recon by Fire
BN - Training Area
BO - Trench Line
BP - Unknown
C - WBLC Inland
D - CD Site
E - Missile Site
F - Radar Site
G - Road Segment
H - R/R Segment
I - Bridge/APP
J - Ferry/APP
K - Tranship Area
L - Supply Area
M - Military Instal
N - Troop Conc
O - Struct/Building
PØ - Vehicle
P1 - Truck
P2 - Tank
R - Choke PT
S - Other
T - AA Site
U - AMMO Storage
V - Boat Repair
W - Bypass
X - Cave
Y - Check PT
Z - CMD Post

Reference Copy #27

NAME	FLD/GRP	LENGTH	MODE	SET

MLQTY FIELD 003 NUMER SET3
Definition - contains the amount of enemy loss during the firing mission.
Example - 10

MLUNT FIELD 003 ALPHA SET3
Definition - contains the unit of measurement for the material reported.
Example - TNS, EA

MLDDD FIELD 003 ALPHA SET3
Definition - contains 'DES' if material was destroyed and 'DAM' if material was damaged according to reported results.

EPKIL FIELD 003 NUMER SET3
Definition - contains the number of enemy personnel killed during firing mission.
Example - 10

PSET3 GROUP 015 ALPHA SET3
Definition - this group consists of PARA3, LCODE, MLQTY, MLUNT, MLDDD, and EPKIL.

Reference Copy #28

TABLE TARES (89-90) (136-137)

FOR FIELD TGCOD & LCODE

A	WBLC OFFSHORE
AA	COMM SITE
AB	CSWY
AC	H AND I
AD	INTERDICTION PT
AE	NAVAL BASE
AF	PORT FACILITY
AG	R/R DEPOT
AI	VC/NVA POSIT
AJ	ARTILLARY SITE
AK	BUNKER
AL	INFILTRATION PT
AM	LIVESTOCK
AN	MORTAR SITE
AO	RICE STORAGE
AP	SAMPAN
AQ	ASSEMBLY AREA
AR	BASE CAMP
AS	AIRCRAFT
AT	MINEFIELD
AU	WEAPON
AV	BARGE
AW	SUPPLY RTE
AX	AREA/LZ PREP
AY	ILLUMINATION
AZ	OBSERV POST
B	WBLC BEACHED
BA	TUNNEL
BB	AUTO WEAP POSIT
BC	VILLAGE
BD	STAGING AREA
BE	SECONDARY EXP
C	WBLC INLAND
D	CD SITE
E	MISSILE SITE
F	RADAR SITE
G	ROAD SEGMENT
H	R/R SEGMENT
I	BRIDGE/APP
J	FERRY/APP
K	TRANSHIP AREA
L	STORAGE AREA
M	MILITARY INSTAL
N	TROOP CONC
O	STRUCT/BUILDING
P	VEHICLE
R	CHOKE PT
Q	POL DEPOT
S	OTHER
T	AA SITE
U	AMMO STORAGE
V	BOAT REPAIR
W	BYPASS
X	CAVE
Y	CHECK PT
Z	CMD POST

TABLE PROVS (91-96)

FOR FIELD PCODE

00	UNKNOWN
01	QUANG TRI
02	THUA THIEN
03	QUANG NAM
04	QUANG TIN
05	QUANG NGAI
06	KONTUM
07	BINH DINH
08	PLEIKU
09	PHU YEN
10	DARLAC
11	KHANH HOA
12	TUYEN DUC
13	QUANG DUC
14	PHUOC LONG
15	LAM DONG
16	NINH THUAN
17	BINH THUAN
18	BINH TUY
19	LONG KHANH
20	PHUOC THANH
21	BINH LONG
22	TAY NINH
23	BINH DUONG
24	GIA DINH
25	BIEN HOA
26	PHUOC TUY
27	LONG AN
28	KIEN TUONG
29	KIEN PHONG
30	DINH TUONG
31	AN GIANG
32	VINH LONG
33	KIEN HOA
34	VINH BINH
35	PHONG DINH
36	KIEN GIANG
37	CHUONG THIEN
38	BA XUYEN
39	AN XUYEN
40	CON SON
41	PHU BON
42	HAU NGHIA
43	GO CONG
44	BAC LIEU
45	TRUNG PHON
46	SA DEC
47	CHAU DOC
48	HAUT CHHLONG
49	PHU QUOC ISL
50	DMZ
51	BUFFER ZONE
60	MUD RIVER
61	DUMP TRUCK

Reference Copy #29