

## DATA DOCUMENTATION FORM

REF. No. - TR2779

F004

NOAA FORM 24-13  
(4-77)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
WASHINGTON, DC 20235FORM APPROVED  
O.M.B. No. 41-R2651  
EXPIRES 1-81

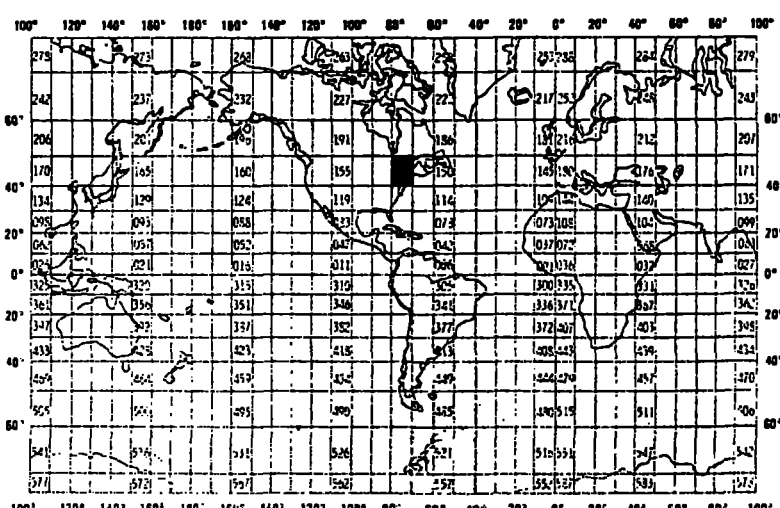
(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

## A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED			
NOAA-NMFS-AEG RR7A Box 522A Narragansett, RI 02882			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
NOAA Ocea- Dumping Program DWD-106 Monitoring		77-05	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR	7. DATES
m/v Gmesader	SHIP	NATIONALITY(IES)	
		PLATFORM	OPERATOR
		SHIP	USA
		FROM: MO, DAY, YR	TO: MO, DAY, YR
		5/5/77	5/6/77
8. ARE DATA PROPRIETARY?		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES		GENERAL AREA	
IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR _____ MONTH _____			
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)			
<input type="checkbox"/> NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)			
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1)			
James Bisagni FTS 838-7143 401-789-9326			



# B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
XBT's				

1. RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
METHOD OF IDENTIFYING EACH RECORD TYPE

USER TAPE

Acc. NO. 78-0049

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN

☐ PL-1

☐ ALGOL

☐ COBOL

☐ FORTRAN

LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

ADDRESS

NOAA/EDS/NODC-D752, (202)634-7505  
8001 Wisconsin Ave, Wash, DC, 20235

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE

☐ BCD

☐ BINARY

☐ ASCII

☒ EBCDIC

6. NUMBER OF TRACKS  
(CHANNELS)

☐ SEVEN

☒ NINE

7. PARITY

☒ ODD

☐ EVEN

8. DENSITY

☐ 200 BPI

☒ 1600 BPI

☐ 556 BPI

☐ 800 BPI

9. LENGTH OF INTER-

RECORD GAP (IF KNOWN)

☒ 3/4 INCH

10. END OF FILE MARK

☐ OCTAL 17

11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE  
ORIGINATOR NAME AND SOME LAY SPECIFICATIONS  
OF DATA TYPE, VOLUME NUMBER)

004377(1,SL)  
DSN=TR2778

12. PHYSICAL BLOCK LENGTH IN BYTES

13. LENGTH OF BYTES IN BITS

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN  (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
<u>File Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"1" (File Header Record)
VESSEL	11	11	11A1	(left aligned)
CRUISE	22	6	6A1	Originator's cruise identifiers
CRUISE DATES	28	17	5(I2,A1), I2	XX/XX/XX-XX/XX/XX Beginning Month, Day, Year; ending Month, Day, Year.
SENIOR SCIENTIST	45	19	19A1	(left aligned)
INVESTIGATOR	64	17	17A1	Responsible Institution (left aligned)
<u>First Station Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"2" (First Station Header Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station.. (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier.
LATITUDE	19	6	3I2	Degrees, Minutes, Seconds
LATHEM	25	1	A1	Hemisphere "N" or "S"
LONGITUDE	26	7	I3,2I2	Degrees, Minutes, Seconds
LONHEM	33	1	A1	Hemisphere "W" or "E"
TIME	34	3	I3	GMT in hours to tenths
DATE	37	8	2(I2,A1),I2	XX/XX/XX Station date; Month, Day, Year
BOTTOM	45	5	I5	Water Depth, meters to tenths
NAVIGATION	50	2	I2	(See attached codes)
METHOD	52	1	I1	(See attached codes)
blank	53	28	28X	blank

FIELD NAME	15. POSITION FROM - 1 MEASURED IN  (e.g., bits, bytes)	16. LENGTH in bytes		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER			
<u>Record Type "2" Terminator</u>					
IDENT	1	10	A3,3I2,A1		Optional; for those who must re-read their file using FORTRAN.
SEQUENCE	11	3	I3		"998" (constant)
blank	14	67	67X		blank
<u>Second Station Header Record</u>					
FILE TYPE	1	3	A3		"004" (constant)
FILE DATE	4	6	3I2		Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1		"3" (Second Station Header Record)
SEQUENCE	11	3	I3		Sequence of this record type within Station (Leading zeros or leading blanks)
STATION	14	5	5A1		Station identifier
BAROMETER	19	3	I3		Pressure in millibars to tenths
DRY BULB	22	4	I4		Air temperature; degrees Celsius to tenths
WET BULB	26	4	I4		Air temperature; degrees Celsius to tenths
DIRECTION	30	2	I2		WMO code 0877; tens of degrees
SPEED	32	2	I2		Knots
SEA DIRECTION	34	2	I2		WMO code 0885; tens of degrees
SEA HEIGHT	36	1	A1		WMO code 1555
SWELL DIRECTION	37	2	I2		WMO code 0885
SWELL HEIGHT	39	1	A1		WMO code 1555
WEATHER	40	1	I1		WMO code 4501
CLOUD TYPE	41	1	A1		WMO code 0500
CLOUD COVER	42	1	I1		WMO code 2700
VISIBILITY	43	1	I1		WMO code 4300
TRANSPARENCY	44	4	I4		SECCHI Disk Depth; meters to tenths
TURBIDITY CODE	48	1	I1		(see attached codes)
blank	49	32	32X		blank

FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER			
Record Type "3" Terminator					Optional for those who must re-read their files in FORTRAN.
IDENT	1	10	A3,3I2,A1		Same as "Second Station Header Record"
SEQUENCE	11	3	I3		"998" (constant)
blank	14	67	67X		blank
Data Record					
FILE TYPE	1	3	A3		"004" (constant)
FILE DATE	4	6	3I2		Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1		"4" (Data Record)
SEQUENCE	11	3	I3		Sequence of this record type within Station. (Leading zeros or leading blanks)
STATION	14	5	5A1		Station identifier
DEPTH	19	4	I4		Sample depth, meters to tenths
TEMPERATURE	23	5	I5		Water temp.; degrees Celsius to thousandths
SALINITY	28	5	I5		Salinity; parts per thousand to thousandths
σ <sub>t</sub>	33	4	I4		Sigma-t to hundredths
TRANSMISSIVITY	37	3	I3		Transmissivity; percent to tenths
PH	40	3	I3		pH to hundredths
EH	43	4	I4		Eh to hundredths
OXYGEN	47	4	I4		Dissolved; hundredths of ml./liter
AMMONIA	51	3	I3		Tenths of microgram (μg)-atoms/liter
NITRITE	54	3	I3		Hundredths of μg-atoms/liter
NITRATE	57	4	I4		Hundredths of μg-atoms/liter
SILICATE	61	4	I4		Hundredths of μg-atoms/liter
PHOSPHATE	65	3	I3		Inorganic; hundredths of μg-atoms/liter
SOLIDS	68	4	I4		Suspended solids in hundredths of mg./liter
TURBIDITY	72	4	I4		Turbidity; in hundredths of mg./liter
CHLOROPHYLL	76	5	I5		Chlorophyll; in hundredths of mg./meter <sup>3</sup>
Record Type "4" Terminator					Optional; for those who must re-read their file using FORTRAN.
IDENT	1	10	A3,3I2,A1		Same as "Data Record"
SEQUENCE	11	3	I3		"998" = end station. "999" = end file
blank	14	67	67X		blank

## Special Codes

### Water Physics and Chemistry

#### NAVIGATION

- 01 = Loran (mixed or unspecified)
- 02 = Radar and/or fixes
- 03 = Raydist without complications
- 04 = Raydist with errors, drifting, etc.
- 05 = Satellite
- 06 = Omega
- 07 = Loran A only
- 08 = Loran C only

#### TURBIDITY CODE

- 1 = Turbidometer; in JTU
- 2 = Transmissometer; in percent of light transmission over a 10 cm. path.
- 3 = Fluorometer; suspended solids calibration

#### METHOD CODE

- 1 = STD (Salinity, Temperature, and Depth recorder)
- 2 = XBT (Expendable Bathythermograph)
- 3 = Nansen Cast
- 4 = MBT (Mechanical Bathythermograph)

TABLE 21

## Present Weather

WMO Code 4501 for recording present weather

Code  
figure

- 0 Clear (no cloud at any level)
- 1 Partly cloudy (scattered or broken)
- 2 Continuous layer(s) of cloud(s)
- 3 Sandstorm, duststorm, or blowing snow
- 4 Fog, thick dust or haze
- 5 Drizzle
- 6 Rain
- 7 Snow, or rain and snow mixed
- 8 Shower(s)
- 9 Thunderstorm(s)

3-31-76

TABLE 27

## Visibility

WMO Code 4300 for recording visibility at surface

## Code

- 0 Less than 50 metres (less than 55 yards)
- 1 50-200 metres (approx. 55-220 yards)
- 2 200-500 metres (approx. 220-550 yards)
- 3 500-1,000 metres (approx. 550 yards-5/8 n.m.)
- 4 1- 2 km (approx. 5/8-1 n.m.)
- 5 2- 4 km (approx. 1- 2 n.m.)
- 6 4-10 km (approx. 2- 6 n.m.)
- 7 10-20 km (approx. 6-12 n.m.)
- 8 20-50 km (approx. 12-30 n.m.)
- 9 50 km or more (30 n.m. or more)



TABLE 10

## Height

WMO Code 1555 for recording height of the dominant waves

Code		Code	If 50 is added to direction
0	Less than $\frac{1}{4}$ m (1 ft).	0	5 m (16 ft)
1	$\frac{1}{2}$ m (1 $\frac{1}{2}$ ft)	1	5 $\frac{1}{2}$ m (17 $\frac{1}{2}$ ft)
2	1 m (3 ft)	2	6 m (19 ft)
3	1 $\frac{1}{2}$ m (5 ft)	3	6 $\frac{1}{2}$ m (21 ft)
4	2 m (6 $\frac{1}{2}$ ft)	4	7 m (22 $\frac{1}{2}$ ft)
5	2 $\frac{1}{2}$ m (8 ft)	5	7 $\frac{1}{2}$ m (24 ft)
6	3 m (9 $\frac{1}{2}$ ft)	6	8 m (25 $\frac{1}{2}$ ft)
7	3 $\frac{1}{2}$ m (11 ft)	7	8 $\frac{1}{2}$ m (27 ft)
8	4 m (13 ft)	8	9 m (29 ft)
9	4 $\frac{1}{2}$ m (14 ft)	9	9 $\frac{1}{2}$ m (30 $\frac{1}{2}$ ft)
x	Height not determined		

## Notes:

- (1) Each code figure provides for reporting a range of heights. For example: 1 =  $\frac{1}{4}$  m (1 ft) to  $\frac{3}{4}$  m (2  $\frac{1}{2}$  ft); 5 = 2  $\frac{1}{4}$  m (7 ft) to 2  $\frac{3}{4}$  m (9 ft); 9 = 4  $\frac{1}{4}$  m (13  $\frac{1}{2}$  ft) to 4  $\frac{3}{4}$  m (15 ft), etc.
- (2) If a wave height comes exactly midway between the heights corresponding to two code figures, the lower code figure is reported; e.g. a height of 2  $\frac{3}{4}$  m is reported by code figure 5.
- (3) In aeronautical forecast codes, only the left-hand table is to be used, and code figure 9 has the meaning: 4  $\frac{1}{2}$  m (14 ft) or more.
- (4) The average value of the wave height (vertical distance between trough and crest) is reported, as obtained from the larger well formed waves of the wave system being observed.

TABLE 25

## Cloud Type (Genus)

WMO Code 0500 for recording cloud type (genus).

## Code

0	Cirrus . . . . .	Ci
1	Cirrocumulus . . . . .	Cc
2	Cirrostratus . . . . .	Cs
3	Alto cumulus . . . . .	Ac
4	Alto stratus . . . . .	As
5	Nimbostratus . . . . .	Ns
6	Stratocumulus . . . . .	Sc
7	Stratus . . . . .	St
8	Cumulus . . . . .	Cu
9	Cumulonimbus . . . . .	Cb
x	Cloud not visible owing to darkness, fog, duststorm, sandstorm, or other analogous phenomena	

TABLE 26

## Cloud Amount

WMO Code 2700 for recording cloud amount

## Code

0	0	0
1	1 okta or less, but not zero	$\frac{1}{10}$ or less, but not zero
2	2 oktas	$\frac{2}{10} - \frac{3}{10}$
3	3 oktas	$\frac{4}{10}$
4	4 oktas	$\frac{5}{10}$
5	5 oktas	$\frac{6}{10}$
6	6 oktas	$\frac{7}{10} - \frac{8}{10}$
7	7 oktas or more, but not 8 oktas	$\frac{9}{10}$ or more, but not $\frac{10}{10}$
8	8 oktas	$\frac{10}{10}$
9	Sky obscured, or cloud amount cannot be estimated	

TABLE 8

## Direction

In tens of degrees from which waves and/or winds  
are coming

Code		Code	
00	Calm (no waves - no motion)	22	215° - 224°
01	5° - 14°	23	225° - 234°
02	15° - 24°	24	235° - 244°
03	25° - 34°	25	245° - 254°
04	35° - 44°	26	255° - 264°
05	45° - 54°	27	265° - 274°
06	55° - 64°	28	275° - 284°
07	65° - 74°	29	285° - 294°
08	75° - 84°	30	295° - 304°
09	85° - 94°	31	305° - 314°
10	95° - 104°	32	315° - 324°
11	105° - 114°	33	325° - 334°
12	115° - 124°	34	335° - 344°
13	125° - 134°	35	345° - 354°
14	135° - 144°	36	355° - 4°
15	145° - 154°		
16	155° - 164°	49	Waves confused, direction indeterminate (waves equal to or less than $4\frac{3}{4}$ metres)
17	165° - 174°		
18	175° - 184°		
19	185° - 194°		
20	195° - 204°		
21	205° - 214°	99	Waves confused, direction indeterminate (waves greater than $4\frac{3}{4}$ metres)
			Winds variable, or all directions or unknown

Table 8 is a combination of WMO Codes 0885 and 0877.

ACCESSION  
NUMBER

78-0049

## DATA DOCUMENTATION FORM

REF. No. - TR2778

F004

NOAA FORM 24-13  
(4-77)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
WASHINGTON, DC 20235FORM APPROVED  
O.M.B. No. 41-R2651  
EXPIRES 1-81

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NOAA Ocea- Dumping Program DWD-106 Monitoring		77-03	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
m/v Crusader Port Jefferson Ocean Prince	SHIP	PLATFORM OPERATOR SHIP USA	FROM: MO, DAY, YR TO: MO, DAY, YR 3/15/77 3/16/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR MONTH		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNA- TIONAL EXCHANGE?) <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)		GENERAL AREA	
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELE- PHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1) James Bisagni FTS 838-7143 401-789-9326			

# B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
XBT's				

## C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
 GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

Orig.

## 2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

Punch cards received and converted to tape at NODC with  
 tape characteristics as outlined under blocks #5-#13 below.

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL  
☐ FORTRAN ☐ \_\_\_\_\_ LANGUAGE

## 4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER (NODC for tape; NMFS/AEG, U. of Rhode  
 ADDRESS Island for punch card submission)

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE <input type="checkbox"/> BCD <input type="checkbox"/> BINARY <input type="checkbox"/> ASCII <input checked="" type="checkbox"/> EBCDIC <input type="checkbox"/> _____	9. LENGTH OF INTER-RECORD GAP (IF KNOWN) <input checked="" type="checkbox"/> 3/4 INCH <input type="checkbox"/> _____
6. NUMBER OF TRACKS (CHANNELS) <input type="checkbox"/> SEVEN <input checked="" type="checkbox"/> NINE <input type="checkbox"/> _____	10. END OF FILE MARK <input checked="" type="checkbox"/> OCTAL 17 <input type="checkbox"/> _____
7. PARITY <input checked="" type="checkbox"/> ODD <input type="checkbox"/> EVEN	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) Vol. Ser. = 14637 (orig.) Vol. Ser. = (o/c)
8. DENSITY <input type="checkbox"/> 200 BPI <input checked="" type="checkbox"/> 1600 BPI <input type="checkbox"/> 556 BPI <input type="checkbox"/> 800 BPI <input type="checkbox"/> _____	
12. PHYSICAL BLOCK LENGTH IN BYTES 4000	
13. LENGTH OF BYTES IN BITS 8	

# C. DATA FORMAT

COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL  
☒ FORTRAN ☐ \_\_\_\_\_ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER \_\_\_\_\_

ADDRESS \_\_\_\_\_

## COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

<b>5. RECORDING MODE</b> <input type="checkbox"/> BCD <input type="checkbox"/> BINARY <input type="checkbox"/> ASCII <input checked="" type="checkbox"/> EBCDIC <input type="checkbox"/> _____	<b>9. LENGTH OF INTER-RECORD GAP (IF KNOWN)</b> <input checked="" type="checkbox"/> 3/4 INCH <input type="checkbox"/> _____
<b>6. NUMBER OF TRACKS (CHANNELS)</b> <input type="checkbox"/> SEVEN <input checked="" type="checkbox"/> NINE <input type="checkbox"/> _____	<b>10. END OF FILE MARK</b> <input checked="" type="checkbox"/> OCTAL 17 <input type="checkbox"/> _____
<b>7. PARITY</b> <input checked="" type="checkbox"/> ODD <input type="checkbox"/> EVEN	<b>11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</b> Vol. Ser. = 14637 (orig.) Vol. Ser. = 13927-SL-(c/c) Vol. Ser. = 12832 (c/c for QUAD)
<b>8. DENSITY</b> <input type="checkbox"/> 200 BPI <input checked="" type="checkbox"/> 1600 BPI <input type="checkbox"/> 556 BPI <input type="checkbox"/> 800 BPI <input type="checkbox"/> _____	
<b>12. PHYSICAL BLOCK LENGTH IN BYTES</b> 4000	
<b>13. LENGTH OF BYTES IN BITS</b> 8	

## C. DATA FORMAT

This information is requested only for data transmitted on punched cards or magnetic tape. Have one of your data processing specialists furnish answers either on the form or by attaching equivalent readily available documentation. Identify the nature and meaning of all entries and explain any codes used.

1. List the record types contained in your file transmittal (e.g., tape label record, master, detail, standard depth, etc.).
2. Describe briefly how your file is organized.
- 3-13. Self-explanatory.
14. Enter the field name as appropriate (e.g., header information, temperature, depth, salinity.
15. Enter starting position of the field.
16. Enter field length in number columns and unit of measurement (e.g., bit, byte, character, word) in unit column.
17. Enter attributes as expressed in the programming language specified in item 3 (e.g., "F 4.1," "BINARY FIXED (5.1)").
18. Describe field. If sort field, enter "SORT 1" for first, "SORT 2" for second, etc. If field is repeated, state number of times it is repeated.



COMPLETE THIS SECTION FOR PUNCHED CARDS OR TAPE, MAGNETIC TAPE, OR DISC SUBMISSIONS.

1. RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
 METHOD OF IDENTIFYING EACH RECORD TYPE

USER TAPE  
 ACC. NO. 78-0049

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. CONTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL  
☐ FORTRAN ☐ \_\_\_\_\_ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

ADDRESS

NOAA/EDS/NODE-D752, (202)634-7505  
 2001 Wisconsin Ave, Wash, DC 20235

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

<p>5. RECORDING MODE</p> <p><input type="checkbox"/> BCD <input type="checkbox"/> BINARY</p> <p><input type="checkbox"/> ASCII <input checked="" type="checkbox"/> EBCDIC</p> <p><input type="checkbox"/> _____</p>	<p>9. LENGTH OF INTER-RECORD GAP (IF KNOWN) <input checked="" type="checkbox"/> 3/4 INCH</p>
<p>6. NUMBER OF TRACKS (CHANNELS)</p> <p><input type="checkbox"/> SEVEN</p> <p><input checked="" type="checkbox"/> NINE</p> <p><input type="checkbox"/> _____</p>	<p>10. END OF FILE MARK <input type="checkbox"/> OCTAL 17</p> <p><input type="checkbox"/> _____</p>
<p>7. PARITY</p> <p><input checked="" type="checkbox"/> ODD</p> <p><input type="checkbox"/> EVEN</p>	<p>11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p> <p>004377(1,SL)          DSN=TR2778</p>
<p>8. DENSITY</p> <p><input type="checkbox"/> 200 BPI <input checked="" type="checkbox"/> 1600 BPI</p> <p><input type="checkbox"/> 556 BPI</p> <p><input type="checkbox"/> 800 BPI</p> <p><input type="checkbox"/> _____</p>	<p>12. PHYSICAL BLOCK LENGTH IN BYTES</p> <p>4800</p> <p>13. LENGTH OF BYTES IN BITS</p> <p>80</p>

FIELD NAME	15. POSITION	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
	FROM - 1 MEASURED IN (e.g., bits, bytes)	in bytes		(FORTRAN)	
		NUMBER			
<u>File Header Record</u>					
FILE TYPE	1	3	A3	"004" (constant)	
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation	
RECORD TYPE	10	1	A1	"1" (File Header Record)	
VESSEL	11	11	11A1	(left aligned)	
CRUISE	22	6	6A1	Originator's cruise identifiers	
CRUISE DATES	28	17	5(I2,A1), I2	XX/XX/XX-XX/XX/XX	
				Beginning Month, Day, Year;	
				ending Month, Day, Year.	
SENIOR SCIENTIST	45	19	19A1	(left aligned)	
INVESTIGATOR	64	17	17A1	Responsible Institution (left aligned)	
<u>First Station Header Record</u>					
FILE TYPE	1	3	A3	"004" (constant)	
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation	
RECORD TYPE	10	1	A1	"2" (First Station Header Record)	
SEQUENCE	11	3	I3	Sequence of this record type within	
				Station. (Leading zeros or leading blanks	
				blanks)	
STATION	14	5	5A1	Station identifier.	
LATITUDE	19	6	3I2	Degrees, Minutes, Seconds	
LATHEM	25	1	A1	Hemisphere "N" or "S"	
LONGITUDE	26	7	I3,2I2	Degrees, Minutes, Seconds	
LONHEM	33	1	A1	Hemisphere "W" or "E"	
TIME	34	3	I3	GMT in hours to tenths	
DATE	37	8	2(I2,A1),I2	XX/XX/XX Station date; Month, Day, Year	
BOTTOM	45	5	I5	Water Depth, meters to tenths	
NAVIGATION	50	2	I2	(See attached codes)	
METHOD	52	1	I1	(See attached codes)	
blank	53	28	28X	blank	

Water Physics and Chemistry (File Type "004")

2 3

14. NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER		
Record Type "2" Terminator				Optional; for those who must re-read their file using FORTRAN.
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	"998" (constant)
blank	14	67	67X	blank
Second Station Header Record				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"3" (Second Station Header Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier
BAROMETER	19	3	I3	Pressure in millibars to tenths
DRY BULB	22	4	I4	Air temperature; degrees Celsius to tenths
WET BULB	26	4	I4	Air temperature; degrees Celsius to tenths
WIND DIRECTION	30	2	I2	WMO code 0877; tens of degrees
WIND SPEED	32	2	I2	Knots
SEA DIRECTION	34	2	I2	WMO code 0885; tens of degrees
SEA HEIGHT	36	1	A1	WMO code 1555
SWELL DIRECTION	37	2	I2	WMO code 0885
SWELL HEIGHT	39	1	A1	WMO code 1555
WEATHER	40	1	I1	WMO code 4501
CLOUD TYPE	41	1	A1	WMO code 0500
CLOUD COVER	42	1	I1	WMO code 2700
VISIBILITY	43	1	I1	WMO code 4300
TRANSPARENCY	44	4	I4	SECCHI Disk Depth; meters to tenths
TURBIDITY CODE	48	1	I1	(see attached codes)
blank	49	32	32X	blank.

14. RECORD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes NUMBER	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
<b>Record Type "3" Terminator</b>				
IDENT	1	10	A3,3I2,A1	Optional for those who must re-read their files in FORTRAN.
SEQUENCE	11	3	I3	Same as "Second Station Header Record"
blank	14	67	67X	"998" (constant) blank
<b>Data Record</b>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"4" (Data Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station. (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier
DEPTH	19	4	I4	Sample depth, meters to tenths
TEMPERATURE	23	5	I5	Water temp.; degrees Celsius to thousandths
SALINITY	28	5	I5	Salinity; parts per thousand to thousandths
SIGMA-T	33	4	I4	Sigma-t to hundredths
TRANSMISSIVITY	37	3	I3	Transmissivity; percent to tenths
PH	40	3	I3	pH to hundredths
EH	43	4	I4	EH to hundredths
OXYGEN	47	4	I4	Dissolved; hundredths of ml./liter
AMMONIA	51	3	I3	Tenths of microgram (µg)-atoms/liter
NITRITE	54	3	I3	Hundredths of µg-atoms/liter
NITRATE	57	4	I4	Hundredths of µg-atoms/liter
SILICATE	61	4	I4	Hundredths of µg-atoms/liter
PHOSPHATE	65	3	I3	Inorganic; hundredths of µg-atoms/liter
SOLIDS	68	4	I4	Suspended solids in hundredths of mg./liter
TURBIDITY	72	4	I4	Turbidity; in hundredths of mg./liter
CHLOROPHYLL	76	5	I5	Chlorophyll; in hundredths of mg./meter <sup>3</sup>
<b>Record Type "4" Terminator</b>				
IDENT	1	10	A3,3I2,A1	Optional; for those who must re-read their file using FORTRAN.
SEQUENCE	11	3	I3	Same as "Data Record"
blank	14	67	67X	"998" = end station. "999" = end file blank

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
<u>File Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"1" (File Header Record)
VESSEL	11	11	11A1	(left aligned)
CRUISE	22	6	6A1	Originator's cruise identifiers
CRUISE DATES	28	17	5(I2,A1), I2	XX/XX/XX-XX/XX/XX Beginning Month, Day, Year; ending Month, Day, Year.
SENIOR SCIENTIST	45	19	19A1	(left aligned)
INVESTIGATOR	64	17	17A1	Responsible Institution (left aligned)
<u>First Station Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"2" (First Station Header Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station..(Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier.
LATITUDE	19	6	3I2	Degrees, Minutes, Seconds
LATHEM	25	1	A1	Hemisphere "N" or "S"
LONGITUDE	26	7	I3,2I2	Degrees, Minutes, Seconds
LONHEM	33	1	A1	Hemisphere "W" or "E"
TIME	34	3	I3	GMT in hours to tenths
DATE	37	8	2(I2,A1),I2	XX/XX/XX Station date; Month, Day, Year
BOTTOM	45	5	I5	Water Depth, meters to tenths
NAVIGATION	50	2	I2	(See attached codes)
METHOD	52	1	I1	(See attached codes)
blank	53	28	28X	blank

FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER			
<u>Record Type "2" Terminator</u>					
IDENT	1	10	A3,3I2,A1		Optional; for those who must re-read their file using FORTRAN.  "998" (constant) blank
SEQUENCE	11	3	I3		
blank	14	67	67X		
<u>Second Station Header Record</u>					
FILE TYPE	1	3	A3		"004" (constant)
FILE DATE	4	6	3I2		Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1		"3" (Second Station Header Record)
SEQUENCE	11	3	I3		Sequence of this record type within Station (Leading zeros or leading blanks)
STATION	14	5	5A1		Station identifier
BAROMETER	19	3	I3		Pressure in millibars to tenths
DRY BULB	22	4	I4		Air temperature; degrees Celsius to tenths
WET BULB	26	4	I4		Air temperature; degrees Celsius to tenths
WIND DIRECTION	30	2	I2		WMO code 0877; tens of degrees
WIND SPEED	32	2	I2		Knots
SEA DIRECTION	34	2	I2		WMO code 0885; tens of degrees
SEA HEIGHT	36	1	A1		WMO code 1555
SWELL DIRECTION	37	2	I2		WMO code 0885
SWELL HEIGHT	39	1	A1		WMO code 1555
WEATHER	40	1	I1		WMO code 4501
CLOUD TYPE	41	1	A1		WMO code 0500
CLOUD COVER	42	1	I1		WMO code 2700
VISIBILITY	43	1	I1		WMO code 4300
TRANSPARENCY	44	4	I4		SECCHI Disk Depth; meters to tenths
TURBIDITY CODE	48	1	I1		(see attached codes)
blank	49	32	32X		blank

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER		
Record Type "3" Terminator				Optional for those who must re-read their files in FORTRAN.
IDENT	1	10	A3,3I2,A1	Same as "Second Station Header Record"
SEQUENCE	11	3	I3	"998" (constant)
blank	14	67	67X	blank
Data Record				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"4" (Data Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station. (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier
DEPTH	19	4	I4	Sample depth, meters to tenths
TEMPERATURE	23	5	I5	Water temp.; degrees Celsius to thousandths
SALINITY	28	5	I5	Salinity; parts per thousand to thousandths
-T	33	4	I4	Sigma-t to hundredths
TRANSMISSIVITY	37	3	I3	Transmissivity; percent to tenths
PH	40	3	I3	pH to hundredths
EH	43	4	I4	Eh to hundredths
OXYGEN	47	4	I4	Dissolved; hundredths of ml./liter
AMMONIA	51	3	I3	Tenths of microgram (µg)-atoms/liter
NITRITE	54	3	I3	Hundredths of µg-atoms/liter
NITRATE	57	4	I4	Hundredths of µg-atoms/liter
SILICATE	61	4	I4	Hundredths of µg-atoms/liter
PHOSPHATE	65	3	I3	Inorganic; hundredths of µg-atoms/liter
SOLIDS	68	4	I4	Suspended solids in hundredths of mg./liter
TURBIDITY	72	4	I4	Turbidity; in hundredths of mg./liter
CHLOROPHYLL	76	5	I5	Chlorophyll; in hundredths of mg./meter <sup>3</sup>
Record Type "4" Terminator				Optional; for those who must re-read their file using FORTRAN.
IDENT	1	10	A3,3I2,A1	Same as "Data Record"
SEQUENCE	11	3	I3	"998" = end station. "999" = end file
blank	14	67	67X	blank

## Special Codes

## Water Physics and Chemistry

## NAVIGATION

- 01 = Loran (mixed or unspecified)
- 02 = Radar and/or fixes
- 03 = Raydist without complications
- 04 = Raydist with errors, drifting, etc.
- 05 = Satellite
- 06 = Omega
- 07 = Loran A only
- 08 = Loran C only

## TURBIDITY CODE

- 1 = Turbidometer; in JTU
- 2 = Transmissometer; in percent of light transmission over a 10 cm. path.
- 3 = Fluorometer; suspended solids calibration

## METHOD CODE

- 1 = STD (Salinity, Temperature, and Depth recorder)
- 2 = XBT (Expendable Bathythermograph)
- 3 = Nansen Cast
- 4 = MBT (Mechanical Bathythermograph)



TABLE 21

## Present Weather

WMO Code 4501 for recording present weather

Code  
figure

- 0 Clear (no cloud at any level)
- 1 Partly cloudy (scattered or broken)
- 2 Continuous layer(s) of cloud(s)
- 3 Sandstorm, duststorm, or blowing snow
- 4 Fog, thick dust or haze
- 5 Drizzle
- 6 Rain
- 7 Snow, or rain and snow mixed
- 8 Shower(s)
- 9 Thunderstorm(s)

2-21-76

TABLE 27

## Visibility

WMO Code 4300 for recording visibility at surface

Code

- 0 Less than 50 metres (less than 55 yards)
- 1 50-200 metres (approx. 55-220 yards)
- 2 200-500 metres (approx. 220-550 yards)
- 3 500-1,000 metres (approx. 550 yards-5/8 n.m.)
- 4 1- 2 km (approx. 5/8-1 n.m.)
- 5 2- 4 km (approx. 1- 2 n.m.)
- 6 4-10 km (approx. 2- 6 n.m.)
- 7 10-20 km (approx. 6-12 n.m.)
- 8 20-50 km (approx. 12-30 n.m.)
- 9 50 km or more (30 n.m. or more)

TABLE 25

## Cloud Type (Genus)

WMO Code 0500 for recording cloud type (genus).

## Code

0	Cirrus . . . . .	Ci
1	Cirrocumulus . . . . .	Cc
2	Cirrostratus . . . . .	Cs
3	Alto cumulus . . . . .	Ac
4	Altostratus . . . . .	As
5	Nimbostratus . . . . .	Ns
6	Stratocumulus . . . . .	Sc
7	Stratus . . . . .	St
8	Cumulus . . . . .	Cu
9	Cumulonimbus . . . . .	Cb
x	Cloud not visible owing to darkness, fog, duststorm, sandstorm, or other analogous phenomena	

TABLE 26

## Cloud Amount

WMO Code 2700 for recording cloud amount

## Code

0	0	0
1	1 okta or less, but not zero	$\frac{1}{10}$ or less, but not zero
2	2 oktas	$\frac{2}{10} - \frac{3}{10}$
3	3 oktas	$\frac{4}{10}$
4	4 oktas	$\frac{5}{10}$
5	5 oktas	$\frac{6}{10}$
6	6 oktas	$\frac{7}{10} - \frac{8}{10}$
7	7 oktas or more, but not 8 oktas	$\frac{9}{10}$ or more, but not $\frac{10}{10}$
8	8 oktas	$\frac{10}{10}$
9	Sky obscured, or cloud amount cannot be estimated	

TABLE 10

## Height

WMO Code 1555 for recording height of the dominant waves

Code		Code	If 50 is added to direction
0	Less than $\frac{1}{4}$ m (1 ft)	0	5 m (16 ft)
1	$\frac{1}{2}$ m (1 $\frac{1}{2}$ ft)	1	5 $\frac{1}{2}$ m (17 $\frac{1}{2}$ ft)
2	1 m (3 ft)	2	6 m (19 ft)
3	1 $\frac{1}{2}$ m (5 ft)	3	6 $\frac{1}{2}$ m (21 ft)
4	2 m (6 $\frac{1}{2}$ ft)	4	7 m (22 $\frac{1}{2}$ ft)
5	2 $\frac{1}{2}$ m (8 ft)	5	7 $\frac{1}{2}$ m (24 ft)
6	3 m (9 $\frac{1}{2}$ ft)	6	8 m (25 $\frac{1}{2}$ ft)
7	3 $\frac{1}{2}$ m (11 ft)	7	8 $\frac{1}{2}$ m (27 ft)
8	4 m (13 ft)	8	9 m (29 ft)
9	4 $\frac{1}{2}$ m (14 ft)	9	9 $\frac{1}{2}$ m (30 $\frac{1}{2}$ ft)
x	Height not determined		

## Notes:

- (1) Each code figure provides for reporting a range of heights. For example: 1 =  $\frac{1}{4}$  m (1 ft) to  $\frac{3}{4}$  m (2  $\frac{1}{2}$  ft); 5 = 2  $\frac{1}{4}$  m (7 ft) to 2  $\frac{3}{4}$  m (9 ft); 9 = 4  $\frac{1}{4}$  m (13  $\frac{1}{2}$  ft) to 4  $\frac{3}{4}$  m (15 ft), etc.
- (2) If a wave height comes exactly midway between the heights corresponding to two code figures, the lower code figure is reported; e.g. a height of 2  $\frac{3}{4}$  m is reported by code figure 5.
- (3) In aeronautical forecast codes, only the left-hand table is to be used, and code figure 9 has the meaning: 4  $\frac{1}{2}$  m (14 ft) or more.
- (4) The average value of the wave height (vertical distance between trough and crest) is reported, as obtained from the larger well formed waves of the wave system being observed.

TABLE 8

## Direction

In tens of degrees from which waves and/or winds  
are coming

Code		Code	
00	Calm (no waves - no motion)	22	215° - 224°
01	5° - 14°	23	225° - 234°
02	15° - 24°	24	235° - 244°
03	25° - 34°	25	245° - 254°
04	35° - 44°	26	255° - 264°
05	45° - 54°	27	265° - 274°
06	55° - 64°	28	275° - 284°
07	65° - 74°	29	285° - 294°
08	75° - 84°	30	295° - 304°
09	85° - 94°	31	305° - 314°
10	95° - 104°	32	315° - 324°
11	105° - 114°	33	325° - 334°
12	115° - 124°	34	335° - 344°
13	125° - 134°	35	345° - 354°
14	135° - 144°	36	355° - 4°
15	145° - 154°		
16	155° - 164°	49	Waves confused, direction indeterminate (waves equal to or less than $4\frac{3}{4}$ metres)
17	165° - 174°		
18	175° - 184°		
19	185° - 194°		
20	195° - 204°		
21	205° - 214°	99	Waves confused, direction indeterminate (waves greater than $4\frac{3}{4}$ metres) Winds variable, or all directions or unknown

Table 8 is a combination of WMO Codes 0885 and 0877.

2-23-77

[illegible]

2-23-77

**DATA RECORD**

[illegible]

# WATER PHYSICS CHEMISTRY

2-23-77

FILE  
HEADER  
STA. HEADER #1  
STA. HEADER #2

FILE		RECORD TYPE	VESSEL	CRUISE	CRUISE DATES			SENIOR SCIENTIST		INVESTIGATOR
TYPE	DATE				BEGIN	END				
(DOF)					MONTH / DAY / YEAR	MONTH / DAY / YEAR				
FILE	FILE	RECORD TYPE	STATION	LATITUDE	LONGITUDE	TIME	STATION DATE	WATER DEPTH	WATER TEMPERATURE	WATER SALINITY
TYPE	DATE		NUMBER	DEG. MIN. SEC. N	DEG. MIN. SEC. E	(GMT in hours to 10)	MONTH / DAY / YEAR	(m. to tenths)		
(DOF)										
FILE	FILE	RECORD TYPE	STATION NUMBER	BARO-METER	DRY BULB	WET BULB	WIND DIRECTION	WIND SPEED	SEA HEIGHT	WAVE PERIOD
TYPE	DATE			(milli-bars to 10)	(°C to 10)	(°C to 10)	(° to 10)	(m. to 10)	(m. to 10)	(m. to 10)
(DOF)										

DATA RECORD

[illegible]



2-23-77.

[illegible]

DATA RECORD

2-23-77

[illegible]

ACCESSION  
NUMBER

78-0049

## DATA DOCUMENTATION FORM

REF. No. - TR2780

F004

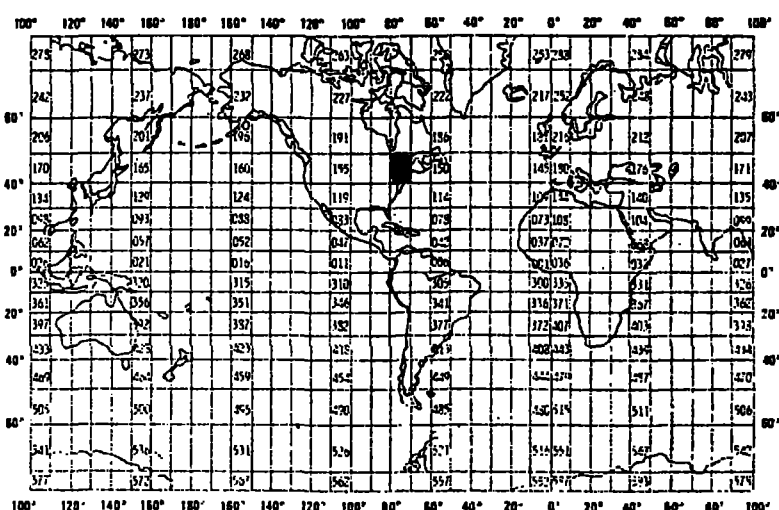
NOAA FORM 24-13  
(4-77)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
WASHINGTON, DC 20235FORM APPROVED  
O.M.B. No. 41-R2651  
EXPIRES 1-81

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

## A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED			
NOAA-NMFS-AEG RR7A Box 522A Narragansett, RI 02882			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
NOAA Ocea- Dumping Program DWD-106 Monitoring		77-06	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
m/v Grusader	SHIP	PLATFORM OPERATOR SHIP USA	FROM: MO, DAY, YR TO: MO, DAY, YR 6/24/77 6/28/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR MONTH		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?) <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)		GENERAL AREA	
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1)  James Bisagni FTS 838-7143 401-789-9326			

# B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
XBT's				

1. LIST RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
METHOD OF IDENTIFYING EACH RECORD TYPE

USER TAPE

Acc No. 78-0049

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. CONTRIBUTES AS EXPRESSED IN

☐ PL-1

☐ ALGOL

☐ COBOL

☐ FORTRAN

☐ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

ADDRESS

NOAA/EDS/NODC-D752 (202) 634-7505  
2001 Wisconsin Ave, Wash, DC 20235

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE

☐ BCD

☐ BINARY

☐ ASCII

☒ EBCDIC

6. NUMBER OF TRACKS  
(CHANNELS)

☐ SEVEN

☒ NINE

7. PARITY

☒ ODD

☐ EVEN

8. DENSITY

☐ 200 BPI

☒ 1600 BPI

☐ 556 BPI

☐ 800 BPI

9. LENGTH OF INTER-

RECORD GAP (IF KNOWN)

☒ 3/4 INCH

10. END OF FILE MARK

☐ OCTAL 17

11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE  
ORIGINATOR NAME AND SOME LAY SPECIFICATIONS  
OF DATA TYPE, VOLUME NUMBER)

004377 (1, SL)

12. PHYSICAL BLOCK LENGTH IN BYTES

4800

13. LENGTH OF BYTES IN BITS

80.

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
<u>File Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"1" (File Header Record)
VESSEL	11	11	11A1	(left aligned)
CRUISE	22	6	6A1	Originator's cruise identifiers
CRUISE DATES	28	17	5(I2,A1), I2	XX/XX/XX-XX/XX/XX Beginning Month, Day, Year; ending Month, Day, Year.
SENIOR SCIENTIST	45	19	19A1	(left aligned)
INVESTIGATOR	64	17	17A1	Responsible Institution (left aligned)
<u>First Station Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"2" (First Station Header Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station.. (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier.
LATITUDE	19	6	3I2	Degrees, Minutes, Seconds
LATHEM	25	1	A1	Hemisphere "N" or "S"
LONGITUDE	26	7	I3,2I2	Degrees, Minutes, Seconds
LONHEM	33	1	A1	Hemisphere "W" or "E"
TIME	34	3	I3	GMT in hours to tenths
DATE	37	8	2(I2,A1), I2	XX/XX/XX Station date; Month, Day, Year
BOTTOM	45	5	I5	Water Depth, meters to tenths
NAVIGATION	50	2	I2	(See attached codes)
METHOD	52	1	I1	(See attached codes)
blank	53	28	28X	blank

Water Physics and Chemistry (File Type "004"))

2 3

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER		
<u>Record Type "2" Terminator</u>				Optional; for those who must re-read their file using FORTRAN..
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	"998" (constant)
blank	14	67	67X	blank
<u>Second Station Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"3" (Second Station Header Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier
BAROMETER	19	3	I3	Pressure in millibars to tenths
DRY BULB	22	4	I4	Air temperature; degrees Celsius to tenths
WET BULB	26	4	I4	Air temperature; degrees Celsius to tenths
WIND DIRECTION	30	2	I2	WMO code 0877; tens of degrees
SPEED	32	2	I2	Knots
DIRECTION	34	2	I2	WMO code 0885; tens of degrees
SEA HEIGHT	36	1	A1	WMO code 1555
SWELL DIRECTION	37	2	I2	WMO code 0885
SWELL HEIGHT	39	1	A1	WMO code 1555
WEATHER	40	1	I1	WMO code 4501
CLOUD TYPE	41	1	A1	WMO code 0500
CLOUD COVER	42	1	I1	WMO code 2700
VISIBILITY	43	1	I1	WMO code 4300
TRANSPARENCY	44	4	I4	SECCHI Disk Depth; meters to tenths
TURBIDITY CODE	48	1	I1	(see attached codes)
blank	49	32	32X	blank

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER		
Record Type "3" Terminator				Optional for those who must re-read their files in FORTRAN. Same as "Second Station Header Record" "998" (constant) blank
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	
blank	14	67	67X	
Data Record				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"4" (Data Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station. (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier
DEPTH	19	4	I4	Sample depth, meters to tenths
TEMPERATURE	23	5	I5	Water temp.; degrees Celsius to thousandths
SALINITY	28	5	I5	Salinity; parts per thousand to thousandths
SIGMA-T	33	4	I4	Sigma-t to hundredths
TRANSMISSIVITY	37	3	I3	Transmissivity; percent to tenths
pH	40	3	I3	pH to hundredths
EH	43	4	I4	Eh to hundredths
OXYGEN	47	4	I4	Dissolved; hundredths of ml./liter
AMMONIA	51	3	I3	Tenths of microgram (µg)-atoms/liter
NITRITE	54	3	I3	Hundredths of µg-atoms/liter
NITRATE	57	4	I4	Hundredths of µg-atoms/liter
SILICATE	61	4	I4	Hundredths of µg-atoms/liter
PHOSPHATE	65	3	I3	Inorganic; hundredths of µg-atoms/liter
SOLIDS	68	4	I4	Suspended solids in hundredths of mg./liter
TURBIDITY	72	4	I4	Turbidity; in hundredths of mg./liter
CHLOROPHYLL	76	5	I5	Chlorophyll; in hundredths of mg./meter <sup>3</sup>
Record Type "4" Terminator				Optional; for those who must re-read their file using FORTRAN. Same as "Data Record" "998" = end station. "999" = end file blank
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	
blank	14	67	67X	



## Special Codes

## Water Physics and Chemistry

## NAVIGATION

- 01 = Loran (mixed or unspecified)
- 02 = Radar and/or fixes
- 03 = Raydist without complications
- 04 = Raydist with errors, drifting, etc.
- 05 = Satellite
- 06 = Omega
- 07 = Loran A only
- 08 = Loran C only

## TURBIDITY CODE

- 1 = Turbidometer; in JTU
- 2 = Transmissometer; in percent of light transmission over a 10 cm. path.
- 3 = Fluorometer; suspended solids calibration

## METHOD CODE

- 1 = STD (Salinity, Temperature, and Depth recorder)
- 2 = XBT (Expendable Bathythermograph)
- 3 = Nansen Cast
- 4 = MBT (Mechanical Bathythermograph)

TABLE 25

## Cloud Type (Genus)

WMO Code 0500 for recording cloud type (genus).

## Code

0	Cirrus . . . . .	Ci
1	Cirrocumulus . . . . .	Cc
2	Cirrostratus . . . . .	Cs
3	Alto cumulus . . . . .	Ac
4	Altostratus . . . . .	As
5	Nimbostratus . . . . .	Ns
6	Stratocumulus . . . . .	Sc
7	Stratus . . . . .	St
8	Cumulus . . . . .	Cu
9	Cumulonimbus . . . . .	Cb
x	Cloud not visible owing to darkness, fog, duststorm, sandstorm, or other analogous phenomena	

TABLE 26

## Cloud Amount

WMO Code 2700 for recording cloud amount

## Code

0	0	0
1	1 okta or less, but not zero	$\frac{1}{10}$ or less, but not zero
2	2 oktas	$\frac{2}{10} - \frac{3}{10}$
3	3 oktas	$\frac{3}{10}$
4	4 oktas	$\frac{4}{10}$
5	5 oktas	$\frac{5}{10}$
6	6 oktas	$\frac{7}{10} - \frac{8}{10}$
7	7 oktas or more, but not 8 oktas	$\frac{9}{10}$ or more, but not $\frac{10}{10}$
8	8 oktas	$\frac{10}{10}$
9	Sky obscured, or cloud amount cannot be estimated	

TABLE 10

Height

WMO Code 1555 for recording height of the dominant waves

Code		Code	If 50 is added to direction
0	Less than $\frac{1}{4}$ m (1 ft)	0	5 m (16 ft)
1	$\frac{1}{2}$ m (1 $\frac{1}{2}$ ft)	1	5 $\frac{1}{2}$ m (17 $\frac{1}{2}$ ft)
2	1 m (3 ft)	2	6 m (19 ft)
3	1 $\frac{1}{2}$ m (5 ft)	3	6 $\frac{1}{2}$ m (21 ft)
4	2 m (6 $\frac{1}{2}$ ft)	4	7 m (22 $\frac{1}{2}$ ft)
5	2 $\frac{1}{2}$ m (8 ft)	5	7 $\frac{1}{2}$ m (24 ft)
6	3 m (9 $\frac{1}{2}$ ft)	6	8 m (25 $\frac{1}{2}$ ft)
7	3 $\frac{1}{2}$ m (11 ft)	7	8 $\frac{1}{2}$ m (27 ft)
8	4 m (13 ft)	8	9 m (29 ft)
9	4 $\frac{1}{2}$ m (14 ft)	9	9 $\frac{1}{2}$ m (30 $\frac{1}{2}$ ft)
x	Height not determined		

Notes:

- (1) Each code figure provides for reporting a range of heights. For example: 1 =  $\frac{1}{4}$  m (1 ft) to  $\frac{3}{4}$  m (2  $\frac{1}{2}$  ft); 5 = 2  $\frac{1}{4}$  m (7 ft) to 2  $\frac{3}{4}$  m (9 ft); 9 = 4  $\frac{1}{4}$  m (13  $\frac{1}{2}$  ft) to 4  $\frac{3}{4}$  m (15 ft), etc.
- (2) If a wave height comes exactly midway between the heights corresponding to two code figures, the lower code figure is reported; e.g. a height of 2  $\frac{3}{4}$  m is reported by code figure 5.
- (3) In aeronautical forecast codes, only the left-hand table is to be used, and code figure 9 has the meaning: 4  $\frac{1}{2}$  m (14 ft) or more.
- (4) The average value of the wave height (vertical distance between trough and crest) is reported, as obtained from the larger well formed waves of the wave system being observed.

TABLE 8

## Direction

In tens of degrees from which waves and/or winds  
are coming

Code		Code	
00	Calm (no waves - no motion)	22	215° - 224°
01	5° - 14°	23	225° - 234°
02	15° - 24°	24	235° - 244°
03	25° - 34°	25	245° - 254°
04	35° - 44°	26	255° - 264°
05	45° - 54°	27	265° - 274°
06	55° - 64°	28	275° - 284°
07	65° - 74°	29	285° - 294°
08	75° - 84°	30	295° - 304°
09	85° - 94°	31	305° - 314°
10	95° - 104°	32	315° - 324°
11	105° - 114°	33	325° - 334°
12	115° - 124°	34	335° - 344°
13	125° - 134°	35	345° - 354°
14	135° - 144°	36	355° - 4°
15	145° - 154°		
16	155° - 164°	49	Waves confused, direction indeterminate (waves equal to or less than $4\frac{3}{4}$ metres)
17	165° - 174°		
18	175° - 184°		
19	185° - 194°		
20	195° - 204°		
21	205° - 214°	99	Waves confused, direction indeterminate (waves greater than $4\frac{3}{4}$ metres) Winds variable, or all directions or unknown

Table 8 is a combination of WMO Codes 0885 and 0877.

TABLE 21

## Present Weather

WMO Code 4501 for recording present weather

Code  
figure

- 0 Clear (no cloud at any level)
- 1 Partly cloudy (scattered or broken)
- 2 Continuous layer(s) of cloud(s)
- 3 Sandstorm, duststorm, or blowing snow
- 4 Fog, thick dust or haze
- 5 Drizzle
- 6 Rain
- 7 Snow, or rain and snow mixed
- 8 Shower(s)
- 9 Thunderstorm(s)

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TABLE 27

## Visibility

WMO Code 4300 for recording visibility at surface

Code

- 0 Less than 50 metres (less than 55 yards)
- 1 50-200 metres (approx. 55-220 yards)
- 2 200-500 metres (approx. 220-550 yards)
- 3 500-1,000 metres (approx. 550 yards-5/8 n.m.)
- 4 1-2 km (approx. 5/8-1 n.m.)
- 5 2-4 km (approx. 1-2 n.m.)
- 6 4-10 km (approx. 2-6 n.m.)
- 7 10-20 km (approx. 6-12 n.m.)
- 8 20-50 km (approx. 12-30 n.m.)
- 9 50 km or more (30 n.m. or more)

## DATA DOCUMENTATION FORM

REF. No. - TR 2781

F004

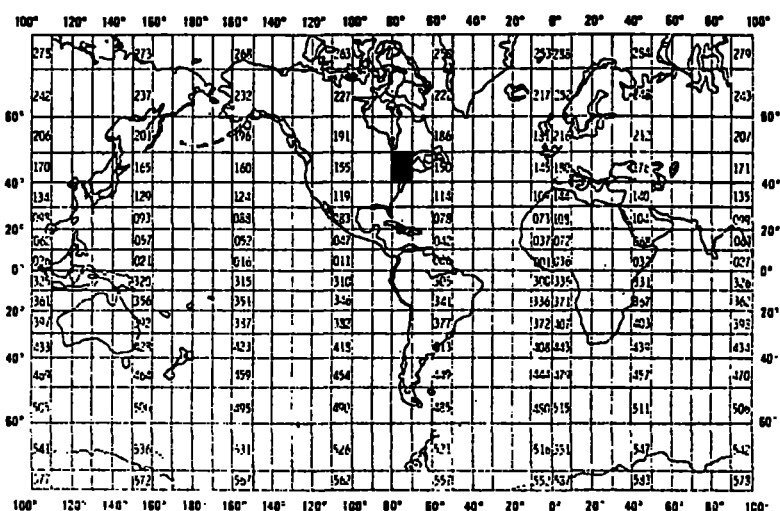
NOAA FORM 24-13  
(4-77)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
WASHINGTON, DC 20235FORM APPROVED  
O.M.B. No. 41-R2651  
EXPIRES 1-81

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

## A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED			
NOAA-NMFS-AEG RR7A Box 522A Narragansett, RI 02882			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
NOAA Ocea- Dumping Program DWD-106 Monitoring		77-07	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
m/v Port Jefferson	SHIP	PLATFORM OPERATOR SHIP USA	FROM: MO, DAY, YR TO: MO, DAY, YR 7/26/77 7/27/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR _____ MONTH _____		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
9. ARE DATA DECLARED NATIONAL PROGRAM (ONP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNA- TIONAL EXCHANGE?) <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)		GENERAL AREA	
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELE- PHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1) James Bisagni FTS 838-7143 401-789-9326			

# B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
XBT's				

1. RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

USER TAPE

Acc No. 78-0049

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN

☐ PL-1

☐ ALGOL

☐ COBOL

☐ FORTRAN

☐ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

ADDRESS

NOAA/EDS/NODC-D752, (202) 634-7505  
2001 Wisconsin Ave, Wash, DC 20235

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE

☐ BCD

☐ BINARY

☐ ASCII

☒ EBCDIC

6. NUMBER OF TRACKS  
(CHANNELS)

☐ SEVEN

☒ NINE

7. PARITY

☒ ODD

☐ EVEN

8. DENSITY

☐ 200 BPI

☒ 1600 BPI

☐ 556 BPI

☐ 800 BPI

9. LENGTH OF INTER-  
RECORD GAP (IF KNOWN)

☒ 3/4 INCH

10. END OF FILE MARK

☐ OCTAL 17

11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE  
ORIGINATOR NAME AND SOME LAY SPECIFICATIONS  
OF DATA TYPE, VOLUME NUMBER)

004377 (1, SL)

DSN = TR2778

12. PHYSICAL BLOCK LENGTH IN BYTES

4800

13. LENGTH OF BYTES IN BITS

80



14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN  (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
<u>File Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"1" (File Header Record)
VESSEL	11	11	11A1	(left aligned)
CRUISE	22	6	6A1	Originator's cruise identifiers
CRUISE DATES	28	17	5(I2,A1), I2	XX/XX/XX-XX/XX/XX Beginning Month, Day, Year; ending Month, Day, Year.
SENIOR SCIENTIST	45	19	19A1	(left aligned)
INVESTIGATOR	64	17	17A1	Responsible Institution (left aligned)
<u>First Station Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1	"2" (First Station Header Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station.. (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier.
LATITUDE	19	6	3I2	Degrees, Minutes, Seconds
LATHEM	25	1	A1	Hemisphere "N" or "S"
LONGITUDE	26	7	I3,2I2	Degrees, Minutes, Seconds
LONHEM	33	1	A1	Hemisphere "W" or "E"
TIME	34	3	I3	GMT in hours to tenths
DATE	37	8	2(I2,A1),I2	XX/XX/XX Station date; Month, Day, Year
BOTTOM	45	5	I5	Water Depth, meters to tenths
NAVIGATION	50	2	I2	(See attached codes)
METHOD	52	1	I1	(See attached codes)
blank	53	28	28X	blank

14. RECORD NAME	15. POSITION FROM -1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER			
Record Type "2" Terminator					Optional; for those who must re-read their file using FORTRAN.
IDENT	1	10	A3,3I2,A1		
SEQUENCE	11	3	I3		"998" (constant)
blank	14	67	67X		blank
Second Station Header Record					
FILE TYPE	1	3	A3		"004" (constant)
FILE DATE	4	6	3I2		Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1		"3" (Second Station Header Record)
SEQUENCE	11	3	I3		Sequence of this record type within Station (Leading zeros or leading blanks)
STATION	14	5	5A1		Station identifier
BAROMETER	19	3	I3		Pressure in millibars to tenths
DRY BULB	22	4	I4		Air temperature; degrees Celsius to tenths
WET BULB	26	4	I4		Air temperature; degrees Celsius to tenths
WIND DIRECTION	30	2	I2		WMO code 0877; tens of degrees
WIND SPEED	32	2	I2		Knots
SEA DIRECTION	34	2	I2		WMO code 0885; tens of degrees
SEA HEIGHT	36	1	A1		WMO code 1555
SWELL DIRECTION	37	2	I2		WMO code 0885
SWELL HEIGHT	39	1	A1		WMO code 1555
WEATHER	40	1	I1		WMO code 4501
CLOUD TYPE	41	1	A1		WMO code 0500
CLOUD COVER	42	1	I1		WMO code 2700
VISIBILITY	43	1	I1		WMO code 4300
TRANSPARENCY	44	4	I4		SECCHI Disk Depth; meters to tenths
TURBIDITY CODE	48	1	I1		(see attached codes)
blank	49	32	32X		blank

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER		
<u>Record Type "3" Terminator</u>				Optional for those who must re-read their files in FORTRAN. Same as "Second Station Header Record" "998" (constant) blank
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	
blank	14	67	67X	
<u>Data Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"4" (Data Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station. (Leading zeros or leading blanks).
STATION	14	5	5A1	Station identifier
DEPTH	19	4	I4	Sample depth, meters to tenths
TEMPERATURE	23	5	I5	Water temp.; degrees Celsius to thousandths
SALINITY	28	5	I5	Salinity; parts per thousand to thousandths
SIGMA-T	33	4	I4	Sigma-t to hundredths
TRANSMISSIVITY	37	3	I3	Transmissivity; percent to tenths
PH	40	3	I3	pH to hundredths
EH	43	4	I4	Eh to hundredths
OXYGEN	47	4	I4	Dissolved; hundredths of ml./liter
AMMONIA	51	3	I3	Tenths of microgram (µg)-atoms/liter
NITRITE	54	3	I3	Hundredths of µg-atoms/liter
NITRATE	57	4	I4	Hundredths of µg-atoms/liter
SILICATE	61	4	I4	Hundredths of µg-atoms/liter
PHOSPHATE	65	3	I3	Inorganic; hundredths of µg-atoms/liter
SOLIDS	68	4	I4	Suspended solids in hundredths of mg./liter
TURBIDITY	72	4	I4	Turbidity; in hundredths of mg./liter
CHLOROPHYLL	76	5	I5	Chlorophyll; in hundredths of mg./meter <sup>3</sup>
<u>Record Type "4" Terminator</u>				Optional; for those who must re-read their file using FORTRAN. Same as "Data Record" "998" = end station. "999" = end file blank
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	
blank	14	67	67X	

## Special Codes

## Water Physics and Chemistry

## NAVIGATION

- 01 = Loran (mixed or unspecified)
- 02 = Radar and/or fixes
- 03 = Raydist without complications
- 04 = Raydist with errors, drifting, etc.
- 05 = Satellite
- 06 = Omega
- 07 = Loran A only
- 08 = Loran C only

## TURBIDITY CODE

- 1 = Turbidometer; in JTU
- 2 = Transmissometer; in percent of light transmission over a 10 cm. path.
- 3 = Fluorometer; suspended solids calibration

## METHOD CODE

- 1 = STD (Salinity, Temperature, and Depth recorder)
- 2 = XBT (Expendable Bathythermograph)
- 3 = Nansen Cast
- 4 = MBT (Mechanical Bathythermograph)

TABLE 21

## Present Weather

WMO Code 4501 for recording present weather

Code  
figure

- 0 Clear (no cloud at any level)
- 1 Partly cloudy (scattered or broken)
- 2 Continuous layer(s) of cloud(s)
- 3 Sandstorm, duststorm, or blowing snow
- 4 Fog, thick dust or haze
- 5 Drizzle
- 6 Rain
- 7 Snow, or rain and snow mixed
- 8 Shower(s)
- 9 Thunderstorm(s)

3-31-76

TABLE 27

## Visibility

WMO Code 4300 for recording visibility at surface

Code

- 0 Less than 50 metres (less than 55 yards)
- 1 50-200 metres (approx. 55-220 yards)
- 2 200-500 metres (approx. 220-550 yards)
- 3 500-1,000 metres (approx. 550 yards-5/8 n.m.)
- 4 1- 2 km (approx. 5/8-1 n.m.)
- 5 2- 4 km (approx. 1- 2 n.m.)
- 6 4-10 km (approx. 2- 6 n.m.)
- 7 10-20 km (approx. 6-12 n.m.)
- 8 20-50 km (approx. 12-30 n.m.)
- 9 50 km or more (30 n.m. or more)

TABLE 25

## Cloud Type (Genus)

WMO Code 0500 for recording cloud type (genus).

## Code

0	Cirrus . . . . .	Ci
1	Cirrocumulus . . . . .	Cc
2	Cirrostratus . . . . .	Cs
3	Alto cumulus . . . . .	Ac
4	Alto stratus . . . . .	As
5	Nimbo stratus . . . . .	Ns
6	Strato cumulus . . . . .	Sc
7	Stratus . . . . .	St
8	Cumulus . . . . .	Cu
9	Cumulonimbus . . . . .	Cb
x	Cloud not visible owing to darkness, fog, duststorm, sandstorm, or other analogous phenomena	

TABLE 26

## Cloud Amount

WMO Code 2700 for recording cloud amount

## Code

0	0	0
1	1 okta or less, but not zero	$\frac{1}{10}$ or less, but not zero
2	2 oktas	$\frac{2}{10} - \frac{3}{10}$
3	3 oktas	$\frac{4}{10}$
4	4 oktas	$\frac{5}{10}$
5	5 oktas	$\frac{6}{10}$
6	6 oktas	$\frac{7}{10} - \frac{8}{10}$
7	7 oktas or more, but not 8 oktas	$\frac{9}{10}$ or more, but not $\frac{10}{10}$
8	8 oktas	$\frac{10}{10}$
9	Sky obscured, or cloud amount cannot be estimated	

TABLE 10

## Height

WMO Code 1555 for recording height of the dominant waves

Code		Code	If 50 is added to direction
0	Less than $\frac{1}{4}$ m (1 ft)	0	5 m (16 ft)
1	$\frac{1}{2}$ m (1 $\frac{1}{2}$ ft)	1	5 $\frac{1}{2}$ m (17 $\frac{1}{2}$ ft)
2	1 m (3 ft)	2	6 m (19 ft)
3	1 $\frac{1}{2}$ m (5 ft)	3	6 $\frac{1}{2}$ m (21 ft)
4	2 m (6 $\frac{1}{2}$ ft)	4	7 m (22 $\frac{1}{2}$ ft)
5	2 $\frac{1}{2}$ m (8 ft)	5	7 $\frac{1}{2}$ m (24 ft)
6	3 m (9 $\frac{1}{2}$ ft)	6	8 m (25 $\frac{1}{2}$ ft)
7	3 $\frac{1}{2}$ m (11 ft)	7	8 $\frac{1}{2}$ m (27 ft)
8	4 m (13 ft)	8	9 m (29 ft)
9	4 $\frac{1}{2}$ m (14 ft)	9	9 $\frac{1}{2}$ m (30 $\frac{1}{2}$ ft)
x	Height not determined		

## Notes:

- (1) Each code figure provides for reporting a range of heights. For example: 1 =  $\frac{1}{4}$  m (1 ft) to  $\frac{3}{4}$  m (2  $\frac{1}{2}$  ft); 5 = 2  $\frac{1}{4}$  m (7 ft) to 2  $\frac{3}{4}$  m (9 ft); 9 = 4  $\frac{1}{4}$  m (13  $\frac{1}{2}$  ft) to 4  $\frac{3}{4}$  m (15 ft), etc.
- (2) If a wave height comes exactly midway between the heights corresponding to two code figures, the lower code figure is reported; e.g. a height of 2  $\frac{3}{4}$  m is reported by code figure 5.
- (3) In aeronautical forecast codes, only the left-hand table is to be used, and code figure 9 has the meaning: 4  $\frac{1}{2}$  m (14 ft) or more.
- (4) The average value of the wave height (vertical distance between trough and crest) is reported, as obtained from the larger well formed waves of the wave system being observed.

TABLE 8

## Direction

In tens of degrees from which waves and/or winds  
are coming

Code		Code	
00	Calm (no waves - no motion)	22	215° - 224°
01	5° - 14°	23	225° - 234°
02	15° - 24°	24	235° - 244°
03	25° - 34°	25	245° - 254°
04	35° - 44°	26	255° - 264°
05	45° - 54°	27	265° - 274°
06	55° - 64°	28	275° - 284°
07	65° - 74°	29	285° - 294°
08	75° - 84°	30	295° - 304°
09	85° - 94°	31	305° - 314°
10	95° - 104°	32	315° - 324°
11	105° - 114°	33	325° - 334°
12	115° - 124°	34	335° - 344°
13	125° - 134°	35	345° - 354°
14	135° - 144°	36	355° - 4°
15	145° - 154°		
16	155° - 164°	49	Waves confused, direction indeterminate (waves equal to or less than $4\frac{3}{4}$ metres)
17	165° - 174°		
18	175° - 184°		
19	185° - 194°		
20	195° - 204°		
21	205° - 214°	99	Waves confused, direction indeterminate (waves greater than $4\frac{3}{4}$ metres)
			Winds variable, or all directions or unknown

Table 8 is a combination of WMO Codes 0885 and 0877.



2-23-77

FILE HEADER STA. HEADER #1 STA. HEADER #2

**DATA RECORD**

[illegible]

## DATA DOCUMENTATION FORM

REF. No. - TR2782

F004

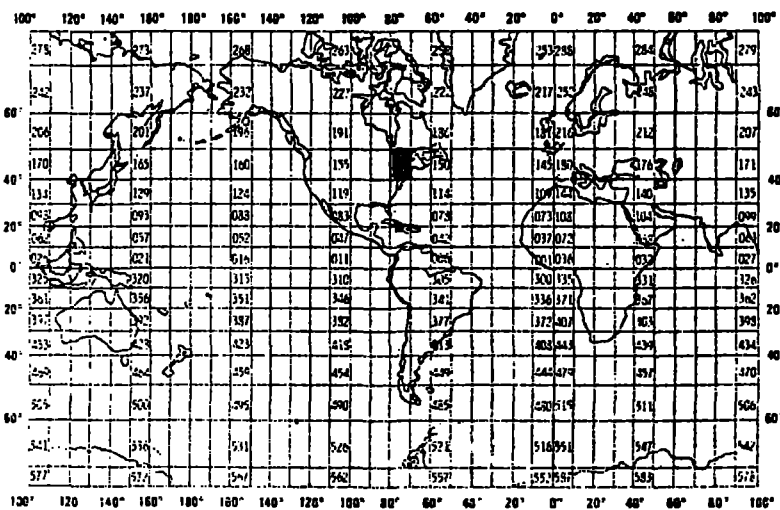
NOAA FORM 24-13  
(4-77)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
WASHINGTON, DC 20235FORM APPROVED  
O.M.B. No. 41-R2651  
EXPIRES 1-81

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

## A. ORIGINATOR IDENTIFICATION

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1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED NOAA-NMFS-AEG RR7A Box 522A Narragansett, RI 02882			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED NOAA Ocea- Dumping Program DWD-106 Monitoring		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT 77-09	
4. PLATFORM NAME(S) m/v Crusader	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.) SHIP	6. PLATFORM AND OPERATOR NATIONALITY(IES) PLATFORM OPERATOR SHIP USA	7. DATES FROM: MO/DAY/YR TO: MO/DAY/YR 9/19/77 9/20/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR MONTH		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED. GENERAL AREA	
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?) <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)			
10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1) James Bisagni FTS 838-7143 401-789-9326			

## B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
XBT's				

1. RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
GIVE METHOD OF IDENTIFYING EACH RECORD TYPE

**USER TAPE**

Acc. No. 78-0049

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN ☐ PL-1 ☐ ALGOL ☐ COBOL  
☐ FORTRAN ☐ \_\_\_\_\_ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

ADDRESS

NOAA/EDS/NOOS-D752 (202) 634-7505  
2001 Wisconsin Ave, Wash, DC 20235

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE

☐ BCD ☐ BINARY  
☐ ASCII ☒ EBCDIC  
☐ \_\_\_\_\_

6. NUMBER OF TRACKS (CHANNELS)

☐ SEVEN  
☒ NINE  
☐ \_\_\_\_\_

7. PARITY

☒ ODD  
☐ EVEN

8. DENSITY

☐ 200 BPI ☒ 1600 BPI  
☐ 556 BPI  
☐ 800 BPI  
☐ \_\_\_\_\_

9. LENGTH OF INTER-RECORD GAP (IF KNOWN)

☒ 3/4 INCH  
☐ \_\_\_\_\_

10. END OF FILE MARK

☐ OCTAL 17  
☐ \_\_\_\_\_

11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)

004377(1, SL)  
DSN=TR2778

12. PHYSICAL BLOCK LENGTH IN BYTES

4800

13. LENGTH OF BYTES IN BITS

80

ACCESSION  
NUMBER

78-0049

## DATA DOCUMENTATION FORM

REF. No. - TR2783

F004

NOAA FORM 24-13  
(4-77)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
WASHINGTON, DC 20235FORM APPROVED  
O.M.B. No. 41-R2651  
EXPIRES 1-81

(While you are not required to use this form, it is the most desirable mechanism for providing the required ancillary information enabling the NODC and users to obtain the greatest benefit from your data.)

This form should accompany all data submissions to NODC. Section A, Originator Identification, must be completed when the data are submitted. It is highly desirable for NODC to also receive the remaining pertinent information at that time. This may be most easily accomplished by attaching reports, publications, or manuscripts which are readily available describing data collection, analysis, and format specifics. Readable, handwritten submissions are acceptable in all cases. All data shipments should be sent to the above address.

## A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED  NOAA-NMFS-AEG RR7A Box 522A Narragansett, RI 02882			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED  NOAA Ocea- Dumping Program DWD-106 Monitoring		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT  77-10	
4. PLATFORM NAME(S)  m/v Ocean Prince	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)  SHIP	6. PLATFORM AND OPERATOR NATIONALITY(IES)  SHIP USA	7. DATES  FROM: MO, DAY, YR TO: MO, DAY, YR  10/20/77 10/21/77
8. ARE DATA PROPRIETARY?  <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES  IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR MONTH		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.  GENERAL AREA 	
9. ARE DATA DECLARED NATIONAL PROGRAM (ONP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)  <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)		10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1)  James Bisagni FTS 838-7143 401-789-9326	

RECORD TYPES CONTAINED IN THE TRANSMITTAL OF YOUR FILE  
 METHOD OF IDENTIFYING EACH RECORD TYPE

**USER TAPE**

**ACC. No. 78-0049**

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

3. ATTRIBUTES AS EXPRESSED IN

☐ PL-1

☐ ALGOL

☐ COBOL

☐ FORTRAN

LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER

ADDRESS

**NOAA/EDS/NO DCD 752 (202) 634-7505**  
**2001 Wisconsin Ave, WASH, DC 20235**

COMPLETE THIS SECTION IF DATA ARE ON MAGNETIC TAPE

5. RECORDING MODE

☐ BCD

☐ BINARY

☐ ASCII

☒ EBCDIC

☐

6. NUMBER OF TRACKS  
 (CHANNELS)

☐ SEVEN

☒ NINE

☐

7. PARITY

☒ ODD

☐ EVEN

8. DENSITY

☐ 200 BPI

☒ 1600 BPI

☐ 556 BPI

☐ 800 BPI

☐

9. LENGTH OF INTER-  
 RECORD GAP (IF KNOWN)

☒ 3/4 INCH

10. END OF FILE MARK

☐ OCTAL 17

11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE  
 ORIGINATOR NAME AND SOME LAY SPECIFICATIONS  
 OF DATA TYPE, VOLUME NUMBER)

**004377(1, SL)**  
**DSN = TR 2778**

12. PHYSICAL BLOCK LENGTH IN BYTES

**4800**

13. LENGTH OF BYTES IN BITS

**80**

# B. SCIENTIFIC CONTENT

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF OBSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
XBT's				



14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN  (e.g., bits, bytes)	16. LENGTH in bytes		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER			
<u>File Header Record</u>					
FILE TYPE	1	3	A3		"004" (constant)
FILE DATE	4	6	3I2		Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1		"1" (File Header Record)
VESSEL	11	11	11A1		(left aligned)
CRUISE	22	6	6A1		Originator's cruise identifiers
CRUISE DATES	28	17	5(I2,A1), I2		XX/XX/XX-XX/XX/XX Beginning Month, Day, Year; ending Month, Day, Year.
SENIOR SCIENTIST	45	19	19A1		(left aligned)
INVESTIGATOR	64	17	17A1		Responsible Institution (left aligned)
<u>First Station Header Record</u>					
FILE TYPE	1	3	A3		"004" (constant)
FILE DATE	4	6	3I2		Yr., Mo., Dy. of file generation
RECORD TYPE	10	1	A1		"2" (First Station Header Record)
SEQUENCE	11	3	I3		Sequence of this record type within Station..(Leading zeros or leading blanks)
STATION	14	5	5A1		Station identifier.
LATITUDE	19	6	3I2		Degrees, Minutes, Seconds
LATHEM	25	1	A1		Hemisphere "N" or "S"
LONGITUDE	26	7	I3,2I2		Degrees, Minutes, Seconds
LONHEM	33	1	A1		Hemisphere "W" or "E"
TIME	34	3	I3		GMT in hours to tenths
DATE	37	8	2(I2,A1),I2		XX/XX/XX Station date; Month, Day, Year
BOTTOM	45	5	I5		Water Depth, meters to tenths
NAVIGATION	50	2	I2		(See attached codes)
METHOD	52	1	I1		(See attached codes)
blank	53	28	28X		blank

Water Physics and Chemistry (File Type "004"))

2 3

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER		
<u>Record Type "2" Terminator</u>				Optional; for those who must re-read their file using FORTRAN.
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	"998" (constant)
blank	14	67	67X	blank
<u>Second Station Header Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"3" (Second Station Header Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier
BAROMETER	19	3	I3	Pressure in millibars to tenths
DRY BULB	22	4	I4	Air temperature; degrees Celsius to tenths
WET BULB	26	4	I4	Air temperature; degrees Celsius to tenths
WIND DIRECTION	30	2	I2	WMO code 0877; tens of degrees
WIND SPEED	32	2	I2	Knots
SEA DIRECTION	34	2	I2	WMO code 0885; tens of degrees
SEA HEIGHT	36	1	A1	WMO code 1555
SWELL DIRECTION	37	2	I2	WMO code 0885
SWELL HEIGHT	39	1	A1	WMO code 1555
WEATHER	40	1	I1	WMO code 4501
CLOUD TYPE	41	1	A1	WMO code 0500
CLOUD COVER	42	1	I1	WMO code 2700
VISIBILITY	43	1	I1	WMO code 4300
TRANSPARENCY	44	4	I4	SECCHI Disk Depth; meters to tenths
TURBIDITY CODE	48	1	I1	(see attached codes)
blank	49	32	32X	blank

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH in bytes NUMBER	17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
<u>Record Type "3" Terminator</u>				Optional for those who must re-read their files in FORTRAN. Same as "Second Station Header Record" "998" (constant) blank
IDENT	1	10	A3,3I2,A1	
SEQUENCE	11	3	I3	
blank	14	67	67X	
<u>Data Record</u>				
FILE TYPE	1	3	A3	"004" (constant)
FILE DATE	4	6	3I2	Yr., Mo., Dy., of file generation
RECORD TYPE	10	1	A1	"4" (Data Record)
SEQUENCE	11	3	I3	Sequence of this record type within Station. (Leading zeros or leading blanks)
STATION	14	5	5A1	Station identifier
DEPTH	19	4	I4	Sample depth, meters to tenths
TEMPERATURE	23	5	I5	Water temp.; degrees Celsius to thousandths
SALINITY	28	5	I5	Salinity; parts per thousand to thousandths
SIGMA-T	33	4	I4	Sigma-t to hundredths
TRANSMISSIVITY	37	3	I3	Transmissivity; percent to tenths
PH	40	3	I3	pH to hundredths
EH	43	4	I4	Eh to hundredths
OXYGEN	47	4	I4	Dissolved; hundredths of ml./liter
AMMONIA	51	3	I3	Tenths of microgram (µg)-atoms/liter
NITRITE	54	3	I3	Hundredths of µg-atoms/liter
NITRATE	57	4	I4	Hundredths of µg-atoms/liter
SILICATE	61	4	I4	Hundredths of µg-atoms/liter
PHOSPHATE	65	3	I3	Inorganic; hundredths of µg-atoms/liter
SOLIDS	68	4	I4	Suspended solids in hundredths of mg./liter
TURBIDITY	72	4	I4	Turbidity; in hundredths of mg./liter
CHLOROPHYLL	76	5	I5	Chlorophyll; in hundredths of mg./meter <sup>3</sup>
<u>Record Type "4" Terminator</u>				Optional; for those who must re-read their file using FORTRAN.
IDENT	1	10	A3,3I2,A1	Same as "Data Record"
SEQUENCE	11	3	I3	"998" = end station. "999" = end file
blank	14	67	67X	blank

## Special Codes

### Water Physics and Chemistry

#### NAVIGATION

- 01 = Loran (mixed or unspecified)
- 02 = Radar and/or fixes
- 03 = Raydist without complications
- 04 = Raydist with errors, drifting, etc.
- 05 = Satellite
- 06 = Omega
- 07 = Loran A only
- 08 = Loran C only

#### TURBIDITY CODE

- 1 = Turbidometer; in JTU
- 2 = Transmissometer; in percent of light transmission over a 10 cm. path.
- 3 = Fluorometer; suspended solids calibration

#### METHOD CODE

- 1 = STD (Salinity, Temperature, and Depth recorder)
- 2 = XBT (Expendable Bathythermograph)
- 3 = Nansen Cast
- 4 = MBT (Mechanical Bathythermograph)

TABLE 21

## Present Weather

WMO Code 4501 for recording present weather

Code  
figure

- 0 Clear (no cloud at any level)
- 1 Partly cloudy (scattered or broken)
- 2 Continuous layer(s) of cloud(s)
- 3 Sandstorm, duststorm, or blowing snow
- 4 Fog, thick dust or haze
- 5 Drizzle
- 6 Rain
- 7 Snow, or rain and snow mixed
- 8 Shower(s)
- 9 Thunderstorm(s)

3-31-76

TABLE 27

## Visibility

WMO Code 4300 for recording visibility at surface

Code

- 0 Less than 50 metres (less than 55 yards)
- 1 50-200 metres (approx. 55-220 yards)
- 2 200-500 metres (approx. 220-550 yards)
- 3 500-1,000 metres (approx. 550 yards-5/8 n.m.)
- 4 1- 2 km (approx. 5/8-1 n.m.)
- 5 2- 4 km (approx. 1- 2 n.m.)
- 6 4-10 km (approx. 2- 6 n.m.)
- 7 10-20 km (approx. 6-12 n.m.)
- 8 20-50 km (approx. 12-30 n.m.)
- 9 50 km or more (30 n.m. or more)

TABLE 25

## Cloud Type (Genus)

WMO Code 0500 for recording cloud type (genus).

## Code

0	Cirrus . . . . .	Ci
1	Cirrocumulus . . . . .	Cc
2	Cirrostratus . . . . .	Cs
3	Alto cumulus . . . . .	Ac
4	Altostratus . . . . .	As
5	Nimbostratus . . . . .	Ns
6	Stratocumulus . . . . .	Sc
7	Stratus . . . . .	St
8	Cumulus . . . . .	Cu
9	Cumulonimbus . . . . .	Cb
x	Cloud not visible owing to darkness, fog, duststorm, sandstorm, or other analogous phenomena	

TABLE 26

## Cloud Amount

WMO Code 2700 for recording cloud amount

## Code

0	0	0
1	1 oktas or less, but not zero	$\frac{1}{10}$ or less, but not zero
2	2 oktas	$\frac{2}{10} - \frac{3}{10}$
3	3 oktas	$\frac{4}{10}$
4	4 oktas	$\frac{5}{10}$
5	5 oktas	$\frac{6}{10}$
6	6 oktas	$\frac{7}{10} - \frac{8}{10}$
7	7 oktas or more, but not 8 oktas	$\frac{9}{10}$ or more, but not $\frac{10}{10}$
8	8 oktas	$\frac{10}{10}$
9	Sky obscured, or cloud amount cannot be estimated	

TABLE 10

## Height

WMO Code 1555 for recording height of the dominant waves

Code		Code	If 50 is added to direction
0	Less than $\frac{1}{4}$ m (1 ft)	0	5 m (16 ft)
1	$\frac{1}{2}$ m (1 $\frac{1}{2}$ ft)	1	5 $\frac{1}{2}$ m (17 $\frac{1}{2}$ ft)
2	1 m (3 ft)	2	6 m (19 ft)
3	1 $\frac{1}{2}$ m (5 ft)	3	6 $\frac{1}{2}$ m (21 ft)
4	2 m (6 $\frac{1}{2}$ ft)	4	7 m (22 $\frac{1}{2}$ ft)
5	2 $\frac{1}{2}$ m (8 ft)	5	7 $\frac{1}{2}$ m (24 ft)
6	3 m (9 $\frac{1}{2}$ ft)	6	8 m (25 $\frac{1}{2}$ ft)
7	3 $\frac{1}{2}$ m (11 ft)	7	8 $\frac{1}{2}$ m (27 ft)
8	4 m (13 ft)	8	9 m (29 ft)
9	4 $\frac{1}{2}$ m (14 ft)	9	9 $\frac{1}{2}$ m (30 $\frac{1}{2}$ ft)
x	Height not determined		

## Notes :

- (1) Each code figure provides for reporting a range of heights. For example: 1 =  $\frac{1}{4}$  m (1 ft) to  $\frac{3}{4}$  m (2  $\frac{1}{2}$  ft); 5 = 2  $\frac{1}{4}$  m (7 ft) to 2  $\frac{3}{4}$  m (9 ft); 9 = 4  $\frac{1}{4}$  m (13  $\frac{1}{2}$  ft) to 4  $\frac{3}{4}$  m (15 ft), etc.
- (2) If a wave height comes exactly midway between the heights corresponding to two code figures, the lower code figure is reported; e.g. a height of 2  $\frac{3}{4}$  m is reported by code figure 5.
- (3) In aeronautical forecast codes, only the left-hand table is to be used, and code figure 9 has the meaning: 4  $\frac{1}{2}$  m (14 ft) or more.
- (4) The average value of the wave height (vertical distance between trough and crest) is reported, as obtained from the larger well formed waves of the wave system being observed.

TABLE 8

## Direction

In tens of degrees from which waves and/or winds  
are coming

Code		Code	
00	Calm (no waves - no motion)	22	215° - 224°
01	5° - 14°	23	225° - 234°
02	15° - 24°	24	235° - 244°
03	25° - 34°	25	245° - 254°
04	35° - 44°	26	255° - 264°
05	45° - 54°	27	265° - 274°
06	55° - 64°	28	275° - 284°
07	65° - 74°	29	285° - 294°
08	75° - 84°	30	295° - 304°
09	85° - 94°	31	305° - 314°
10	95° - 104°	32	315° - 324°
11	105° - 114°	33	325° - 334°
12	115° - 124°	34	335° - 344°
13	125° - 134°	35	345° - 354°
14	135° - 144°	36	355° - 4°
15	145° - 154°		
16	155° - 164°	49	Waves confused, direction indeterminate (waves equal to or less than $4\frac{3}{4}$ metres)
17	165° - 174°		
18	175° - 184°		
19	185° - 194°		
20	195° - 204°		
21	205° - 214°	99	Waves confused, direction indeterminate (waves greater than $4\frac{3}{4}$ metres)
			Winds variable, or all directions or unknown

Table 8 is a combination of WMO Codes 0885 and 0877.



2-23-77

FILE HEADER STA. #1  
FILE HEADER STA. #2

DATA RECORD

[illegible]

Dr. Ridlon,  
This data set  
is OK - record type #1  
is on the tape

3/28/78

Bul

Access #78-0049

Track # 2778-83

<u>Dates</u>	<u>Ship</u>	<u>Cruise #</u>	<u>File ID</u>	<u>Track #</u>
5/5/77-5/6/77	Crusader	77-05	771001	TR 2779
6/24/77-6/24/77	Crusader	77-06	770707	TR 2780
7/26/77-7/27/77	Port Jefferson	77-07	770803	TR 2781
9/19/77-9/20/77	Crusader	77-09	770927	TR 2782
10/20/77-10/21/77	Ocean Prince	77-10	771027	TR 2783
3/15/77-3/16/77	Crusader	77-03	770524	TR 2785

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
7800049	F004	TR2778	0067	31U5	32RU	1977/03/03	77-03	306357
7800049	F004	TR2779	0067	31U5	32RU	1977/05/05	77-05	306358
7800049	F004	TR2780	0067	31U5	32RU	1977/06/24	77-06	306359
7800049	F004	TR2781	0067	31U5	32P9	1977/07/27	77-07	306360
7800049	F004	TR2782	0067	31U5	32RU	1977/09/20	77-09	306361
7800049	F004	TR2783	0067	31U5	32OP	1977/10/20	7710	306362
7800049	L156	L00729	9999	3102	317F	1976/12/04	NULL	306363

(7 rows affected)

Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
-----	-----	-----	-----	-----	-----	-----	-----
7800049	F004	TR2778	32RU	10	83	77/03/03	77/03/16
7800049	F004	TR2779	32RU	11	80	77/05/05	77/05/06
7800049	F004	TR2780	32RU	10	158	77/06/24	77/06/24
7800049	F004	TR2781	32P9	11	179	77/07/27	77/07/27
7800049	F004	TR2782	32RU	11	168	77/09/20	77/09/20
7800049	F004	TR2783	32OP	11	74	77/10/20	77/10/21
7800049	L156	L00729	317F	1	NULL	76/12/04	77/10/27

(7 rows affected)