

ERROR CORRECTION DOCUMENTATION FORM

DATE:

DDF A: 3: 03

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700946

- 1) File Type: F081 F144
2) Project Ident.: VIMS-OCS
3) Track Nos.: TR1346 TT3042-TT3048
TT3055-TT3056.

I. Error Corrections as reported to Principal Investigator:

ErrorCorrection Completed (Check)

II. Additional error corrections:

ErrorCorrection Completed (Check)

III. Processor Name: _____

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR 1346

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM190	SL	80	80	9-t 1600BPI EBCDIC	
Duplicate	W11038	SL	80	4000	9-t 1600BPI ASCII	
Reformatted						
First User						
Final User						

DATA SET ROUTE SHEET

ACCESSION/TRACK # 7700446/TK1346

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	3/8/83	8210	VCM190	3	80	80	
QUADI/SCAN TAPE	3/8/83	8210	W11038	3	4000	80	
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

Dump 5/26/77

DATA DOCUMENTATION FORM

Corrected file name

NOAA FORM 24-13
(6-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL SYSTEMS OF GEOGRAPHIC INFORMATION
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

VCM 190

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

Virginia Institute of Marine Science
Gloucester Point, Virginia 23062

NODC DUP. TAPE: 6495

2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED

BLM

3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT

BLM 04B

TRACEMENTS. 081

VCM 190

4. PLATFORM NAME(S)

G.W. Pierce

5. PLATFORM TYPE(S)
(E.G., SHIP, BUOY, ETC.)

SHIP

6. PLATFORM AND OPERATOR 7. NATIONALITY(IES)

PLATFORM OPERATOR

G.W.
PierceTracor
Marine

08/24/76 09/02/76

8. ARE DATA PROPRIETARY?

☒ NO ☐ YESIF 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.

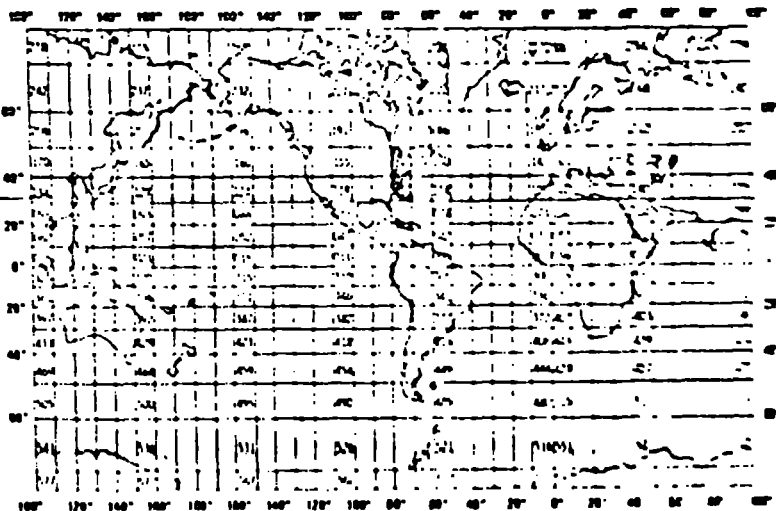
GENERAL AREA

9. ARE DATA DECLARED NATIONAL PROGRAM (ONPI)?

(I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)

☒ NO ☐ YES ☐ PART (SPECIFY BELOW)

10. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1)

Dr. Gerald L. Engel
Virginia Institute of Marine
Science
Gloucester Point, Va. 23062
804-642-2111

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 SAMPLING AND AVERAGING
Latitude & Long.	Degrees, mins., seconds	Loran C SIMRAD Model LC 101		Program used to convert from Loran C coordinates to Latitude & Longitude
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Wrist Watch Checked daily with WWV		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Sediment temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Barometric pressure	millibars, tens to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind Direction	tens of degrees WMO Code 0877	Ship's compass		
Wind Speed	knots	Anemometer Taylor Wind- scope Model 3105		
Wave direction	tens of degrees WMO Code 0877	Ship's Compass		
Wave height	1/2 meters WMO Code 1555	Vis. Obs.		
Swell Direction	tens of degrees WMO Code 0877	Ship's Compass		
Swell Height	1/2 meters WMO Code 1555	Vis. Obs.		
Weather	WMO Code 4677	Vis. Obs.		
Cloud type	WMO Codes 0513, 0515, 0509	Vis. Obs.		

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
Cloud cover	WMO code 2700	Visual estimate		
Visibility	WMO code 4300	Visual estimate		
Wave period	seconds	Wrist watch		
Swell period	seconds	Wrist watch		
Trace Metals a) Sediment- Leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5N HNO ₃ b) Total digest with HCl/ HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varian AA-5 2) Proton induced X-ray emission (PIXE)	Mean ± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Sample Header 2 Positions 1-10 identical to the last sample header "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for each sample Positions 1-10 identical to last data record, "998" - position 11-13
8. File Terminator Positions 1-10 Identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record.
Following this are Data Records for that sample followed by Terminator record.
Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 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</p> <p><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>VCM190 Va. Inst. of Marine Science Trace Metals (081) BLM04B File label: 'TRACEMTS. 77/05/06'</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 80</p> <p>13. LENGTH OF BYTES IN BITS 8</p>

RECORD FORMAT DESCRIPTION

RECORD NAME FILE HEADER

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN 15/16 (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals'
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 & 3 B2=Blend of replicates 4,5 & 6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN BYTES (e.g., 010, 010, 010)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	bytes	67X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"001" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	5A1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file genera- tion
File Date	4	5	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	5A1	Sample identifier (14-15 station code)
Element	19	2	Chars	A2	Element analyzed (standard element abbreviation)
Wet or dry	21	1	Chars	A1	W=data expressed on wet weight basis D=data expressed on dry weight basis
Method	22	2	Bytes	I2	Code: See attached sheet
Mean	24	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations)
SD	33	9	Bytes	F9.3*	Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

*Decimal place is IMPLIED;
"period" is not present.

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 Measurement Technique

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

Method

- 01 = Atomic Absorbtion (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALIBRATED (✓)
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Inst. CTD MK III	July, 1976	✓			✓				
Beckman Minds D. O. Sensor	July, 1976	✓			✓				
Beckman Inductive Salinometer RS 7B	Dec. 1975	✓		* ✓ Annually					

SESSION NO. _____ FILETYPE F144 TRACK NO. _____ PROJECT IDENTIFICATION 0084
~~7~~ 7700446 TT3042-TT3048, TT3055-TT3056 OCS - MID ATLANTIC
 7800387 TT3057-TT3062 VIMS
 7800388 TT3049-TT3054, TT3063 TAPE OR NO. NO.
 DATE INIT. DISK DSN. FILES LRECL BLK SIZE RECORD

1. G. TAPE		7700446	7700446				
2. PLICATE TAPE	7700446	7700446	7700446		7700446		7700446
3. FORMATTED TAPE	1-10-89	R.P.S.	W02579 *	1	80	8000	64545
4. FORMATTED DISK							
5. 1ST MULCHEK							
6. 2ND MULCHEK							
7. 3RD OR F022							
8. TA SET FINALIZED							

ERRORS REPORTED TO PRINCIPAL INVESTIGATOR: LABEL * DNODEC * F0810UT.
 →

D144P

ADDITIONAL ERRORS/CORRECTIONS (NOT REPORTED TO P.I.)

REMARKS (TRACKS DELETED, FIELDS DELETED, ETC.)

02/10/89

TO: E/OC12 - Branch Chief
E/OC11 - P. Hadsell
FROM: E/OC13 - A. Picciolo
SUBJECT: Data Transfer

The following listed data sets have been transferred as indicated:

Marine Pollution

(F144)

Acc: 7800388	Ref: TT3063 - TT3063	20 sta. 3,546 rec.
Acc: 7800388	Ref: TT3049 - TT3054	93 sta. 16,481 rec.
Acc: 7700446	Ref: TT3042 - TT3048	132 sta. 23,401 rec.
Acc: 7700446	Ref: TT3055 - TT3056	21 sta. 3,723 rec.
Acc: 7800387	Ref: TT3057 - TT3062	98 sta. 17,373 rec.

64,524

VIMS

(VIMS F081 conv. to F144)

cc: Division Director

11

DINDB QUERY LISTING
01/12/1989

ACC-NO	REFNO	F-A	PROJ	INST	PLAT	CRUISE	***CRUISE START	DATES*** END	STA IN	STA OUT
7700446	TT3042	F144	0084	3128	32CW	TR1340	08/23/1976	08/25/1976	8✓	53
	TT3043	F144	0084	3128	31GI	TR1341	06/15/1976	06/23/1976	26✓	131
	TT3044	F144	0084	3128	32IC	TR1342	10/28/1975	11/05/1975	27✓	210
	TT3045	F144	0084	3128	31PP	TR1343	10/23/1975	10/29/1975	7✓	18
	TT3046	F144	0084	3128	31PP	TR1344	02/05/1976	02/15/1976	11✓	54
	TT3047	F144	0084	3128	31PP	TR1345	02/20/1976	03/23/1976	54✓	202
	TT3048	F144	0084	3128	31PP	TR1346	08/15/1976	09/01/1976	49	204

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?g-
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364
~~426~~ STA.

DINDB QUERY LISTING
01/12/1989

* -	ACC-NO	REFNO	F-A	PROJ	INST	PLAT	CRUISE	***CRUISE START	DATES*** END	STA IN	STA OUT

* 7800388	TT3049	F144	0084	3128	31FY	TR3050	11/21/1976	11/28/1976	10✓	62	
* TT3050	F144	0084	3128	32VS	TR3051	11/05/1976	11/25/1976	10✓	34		
* TT3051	F144	0084	3128	31FY	TR3052	02/08/1977	03/13/1977	41-	164		
* TT3052	F144	0084	3128	31FY	TR3053	02/20/1977	03/06/1977	17✓	91		
* TT3053	F144	0084	3128	31FY	TR3056	05/18/1977	05/28/1977	15✓	74		
* TT3054	F144	0084	3128	31FY	TR3057	08/20/1977	08/29/1977	12✓	82		
* 7700446	TT3055	F144	0084	3128	32VS	TR1347	06/08/1976	06/16/1976	15✓	19	
* TT3056	F144	0084	3128	32VS	TR1348	08/31/1976	09/08/1976	6✓	19		
* 7800387	TT3057	F144	0084	3128	31FY	TR3043	05/31/1977	06/03/1977	20✓	80	
* TT3058	F144	0084	3128	31FY	TR3044	08/04/1977	08/16/1977	42✓	168		
* TT3059	F144	0084	3128	32CW	TR3045	11/09/1976	11/17/1976	9✓	34		
* TT3060	F144	0084	3128	31GI	TR3046	03/19/1977	03/24/1977	9✓	34		
* TT3061	F144	0084	3128	32CW	TR3047	05/16/1977	05/21/1977	9✓	37		
* TT3062	F144	0084	3128	32CW	TR3048	09/07/1977	09/15/1977	9	63		
* 7800388	TT3063	F144	0084	3128	31FY	TR3049	11/07/1976	11/16/1976	20✓	142	

02/10/89

TO: E/OC12 - Branch Chief
E/OC11 - P. Hadsell
FROM: E/OC13 - A. Picciolo
SUBJECT: Data Transfer

The following listed data sets have been transferred as indicated:

Marine Pollution

(F144)

Acc: 7800388	Ref: TT3063 - TT3063	20 sta. 3,546 rec.
Acc: 7800388	Ref: TT3049 - TT3054	93 sta. 16,481 rec.
Acc: 7700446	Ref: TT3042 - TT3048	132 sta. 23,401 rec.
Acc: 7700446	Ref: TT3055 - TT3056	21 sta. 3,723 rec.
Acc: 7800387	Ref: TT3057 - TT3062	98 sta. 17,373 rec.

VIMS

(VIMS F081 conv. to F144)

64,524

~~64,600~~
records
64,545 records

cc: Division Director

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
7700446	F144	TT3042	0084	3128	32CW	1976/08/23	BLM04T	327048
7700446	F144	TT3043	0084	3128	31GI	1976/06/15	BLM03B	327049
7700446	F144	TT3044	0084	3128	32IC	1975/10/28	BLM01B	327050
7700446	F144	TT3045	0084	3128	31PP	1975/10/23	BLM01W	327051
7700446	F144	TT3046	0084	3128	31PP	1976/02/05	BLM02W	327052
7700446	F144	TT3047	0084	3128	31PP	1976/02/20	BLM02B	327053
7700446	F144	TT3048	0084	3128	31PP	1976/08/15	BLM04B	327054
7700446	F144	TT3055	0084	3128	32VS	1976/06/08	BLM03W	327055
7700446	F144	TT3056	0084	3128	32VS	1976/08/31	BLM04W	327056

(9 rows affected)

Password:

accNo	fileA	refNo	ship	staCnt	recCnt	startDate	endDate
7700446	F144	TT3042	32CW	8	1914	76/08/23	76/08/25
7700446	F144	TT3043	31GI	26	5242	76/06/15	76/06/23
7700446	F144	TT3044	32IC	27	6890	75/10/28	75/11/05
7700446	F144	TT3045	31PP	7	739	75/10/23	75/10/29
7700446	F144	TT3046	31PP	11	2474	76/02/05	76/02/15
7700446	F144	TT3047	31PP	54	8123	76/02/20	76/03/23
7700446	F144	TT3048	31PP	49	8274	76/08/15	76/09/01
7700446	F144	TT3055	32VS	15	921	76/06/08	76/06/16
7700446	F144	TT3056	32VS	6	733	76/08/31	76/09/08

(9 rows affected)

VCM 192

DATA DOCUMENTATION FORM

DDF-A: 3: 03

NOAA FORM 24-13
(4-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852FORM APPROVED
O.M.B. No. 41-R2651TT3042-TT3048
TT3055-TT3056

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.

F144

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											
Virginia Institute of Marine Science Gloucester Point, Virginia 23062		NODC DUP. TAPE: 5864									
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT									
BLM 04T		BLM04T TRALEMTS. 081 VCM 192									
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR 7. DATES									
R/V Cape Henlopen	Ship	<table border="1"> <tr> <th>PLATFORM</th> <th>OPERATOR</th> <th>FROM: MO/DAY/YR</th> <th>TO: MO/DAY/YR</th> </tr> <tr> <td>R/V Cape University Henlopen of Delaware</td> <td></td> <td>08/23/76</td> <td>08/27/76</td> </tr> </table>		PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR	R/V Cape University Henlopen of Delaware		08/23/76	08/27/76
PLATFORM	OPERATOR	FROM: MO/DAY/YR	TO: MO/DAY/YR								
R/V Cape University Henlopen of Delaware		08/23/76	08/27/76								
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 IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR _____ MONTH _____		GENERAL AREA									
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)											
<input checked="" type="checkbox"/> NO <input 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)											
Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111											

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
Latitude & Long.	Degrees, mins., seconds	Loran "C" SIMRAD Model LC101		Program used to convert from LORAN C coordiant to Lat. & Long.
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	min to nearest tenth of an hour	Wrist watch checked daily with WWV		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CID Bell Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	millibars, hundredths to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	tens or degrees WHO code 0877	Ship's compass		
Wind speed	knots	Anemometer Taylor Wind-scope Model 3105		
Wave direction	tens or degrees WHO code 0877	Ship's compass - Visual observation		
Wave height	1/2 meters WHO code 1555	Visual observation		
Swell direction	tens or degrees WHO code 0877	Ship's compass - visual observation		
Swell height	1/2 meters WHO code 1555	Visual observation		
Weather	WHO code 4877	Visual observation		
Cloud type	WHO codes 0515, 0515, 0509	Visual observation		
Cloud cover	WHO code 1715	Visual observation		
Visibility	WHO code 4815	Visual observation		
Wave period	seconds	Wrist watch - visual observation		

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
Swell period	seconds	Wrist watch - visual observation		..
Trace Metals a) Sediment-leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5N HNO ₃ b) Total digest with HCl/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean ± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Positions 1-10 identical to the last sample header Sample Header 2 "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record. Following this are Data Records for that sample followed by Terminator record. Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 inch
6. NUMBER OF TRACKS (CHANNELS) <input type="checkbox"/> SEVEN <input checked="" type="checkbox"/> NINE <input type="checkbox"/> _____	10. END OF FILE MARK <input 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) VCM192 Va. Inst. of Marine Science Trace Metals (081) BLM04T File label: 'TRACEMTS. 77/05/09'
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 80 13. LENGTH OF BYTES IN BITS 8

RECORD FORMAT DESCRIPTION

CORD NAME

FILE HEADER

FIELD NAME	15. POSITION FROM -1 MEASURED IN BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 & 3 B2=Blend of replicates 4,5 & 6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN BYTES (e.g., 010, 010-01)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	67	bytes	67X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"001" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	5A1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WMO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WMO code 0377; tens of degrees
Wave height	36	1	byte	I1	WMO code 1555
Swell Direction	37	2	bytes	I2	WMO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WMO code 1555
Weather	40	2	bytes	I2	WMO code 4577
Cloud type	42	3	bytes	I3	WMO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WMO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WMO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record 2 "993" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file generation
File Date	4	3	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample Sample identifier (14-15 station code)
Sample	14	5	chars	5A1	
Element	19	2	Chars	A2	
Wet or dry	21	1	Chars	A1	Element analyzed (standard element abbreviation) W=data expressed on wet weight basis D=data expressed on dry weight basis Code: See attached sheet
Method	22	2	Bytes	I2	
Mean	24	9	Bytes	F9.3*	
SD	33	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations) Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

*Decimal place is IMPLIED;
"period" is not present.

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 Measurement Technique

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

Method

- 01 = Atomic Absorbtion (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Inst. CTD MK III	July, 1976	✓			✓				
Beckman Minds D. O. Sensor	July, 1976	✓			✓				
Beckman Inductive Salinometer RS 7B	Dec. 1975	✓		* ✓ Annually					

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: F081
- 2) Project Ident.: VIMS-OC5
- 3) Track Nos.: TR1340

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

ACCESSION/TRACK # 7700446/TR1340

<u>Step</u>	<u>Completion Date/Init.</u>		<u>Tape # or DSN</u>	<u># of Files</u>	<u>BLKSIZE</u>	<u>LRECL</u>	<u># RECORDS</u>
ORIGINATOR TAPE	5/20/83	88R	VCM192	3	80	80	1815
QUADI/SCAN TAPE	5/20/83	88R	W12340	3	4000	80	1815
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR1340

Type of Tape	Tape Number	Label	RECL	BLKSIZE	RECFM	Remarks
Originator	VCM192	SL	80	80	9-tr 1600 BPI EBCDIC	
Duplicate	W12340	SL	80	4000	9-tr 1600 BPI ASCII	
Reformatted						
First User						
Final User						

NODC CR. TR 1341 DATA DOCUMENTATION FORM DDF A: 3:03

NOAA FORM 24-13
10-75

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL SYSTEMS OF GEOGRAPHIC INFORMATION
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

VCMA 186

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			
Virginia Institute of Marine Science Gloucester Point, Virginia 23062		NODC DUP. TAPE: 11169	
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM		BLM3B TRAEMTS. 081 VCMA 186	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
R/V J. M. Gilliss	SHIP	R/V J. M. Gilliss University of Miami	06/14/76 06/24/76
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 checked="" type="checkbox"/> NO <input 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)			
Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111			

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 FORMULAS AND AVERAGING
Latitude & Long.	Degrees, mins., seconds	Loran C SIMRAD Model LC 101		Program used to convert from Loran C coordinates to Latitude & Longitude
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Wrist Watch Checked daily with WWV		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Sediment temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Barometric pres- sure	millibars, tens to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Pendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Pendix Model 566		
Wind Direction	tens of degrees WMO Code 0877	Ship's compass		
Wind Speed	knots	Anemometer Taylor Wind- scope Model 3105		
Wave direction	tens of degrees WMO Code 0877	Ship's Compass		
Wave height	1/2 meters WMO Code 1555	Vis. Obs.		
Swell Direction	tens of degrees WMO Code 0877	Ship's Compass		
Swell Height	1/2 meters WMO Code 1555	Vis. Obs.		
Weather	WMO Code 4677	Vis. Obs.		
Cloud type	WMO Codes 0513, 0515, 0509	Vis. Obs.		

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
Cloud cover	WMO code 2700	Visual estimate		
Visibility	WMO code 4300	Visual estimate		
Wave period	seconds	Wrist watch		
Swell period	seconds	Wrist watch		
Trace Metals a) Sediment-Leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5NHNO ₃ b) Total digest with HCl/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Positions 1-10 identical to the last sample header Sample Header 2 "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 Identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record. Following this are Data Records for that sample followed by Terminator record. Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH</p> <p><input checked="" type="checkbox"/> 0.6 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</p> <p><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>VCM186 Va. Inst. of Marine Science Trace Metals (081) BLM03B File label: 'TRACEMTS. 77/05/05'</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>13. LENGTH OF BYTES IN BITS</p> <p>8</p>	

RECORD FORMAT DESCRIPTION

RECORD NAME FILE HEADER

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals'
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 & 3 B2=Blend of replicates 4,5 & 6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN BYTES (e.g., 876, 876-1)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	bytes	67X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"081" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0502
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file genera- tion
File Date	4	5	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample identifier (14-15 station code)
Element	19	2	Chars	A2	Element analyzed (standard element abbreviation)
Wet or dry	21	1	Chars	A1	W=data expressed on wet weight basis D=data expressed on dry weight basis
Method	22	2	Bytes	I2	Code: See attached sheet
Mean	24	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations)
SD	33	9	Bytes	F9.5*	Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

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 Measurement Technique

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

Method

- 01 = Atomic Absorbtion (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED				
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)
Neil Brown Inst. CTD MK III	July, 1976	✓			✓			
Beckman Minds D. O. Sensor	July, 1976	✓			✓			
Beckman Inductive Salinometer RS 7B	Dec. 1975	✓		* ✓ Annually				

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: F081
- 2) Project Ident.: VIMS-OCS
- 3) Track Nos.: TR1341

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR 1341

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM186	SL	80	80	9-tr 1600BPI EBCDIC	
Duplicate	W10013	SL	80	4000	9-tr 1600BPI ASCII	
Reformatted						
First User						
Final User						

ACCESSION/TRACK # 7700446/TR1341

<u>Step</u>	<u>Completion Date/Init.</u>		<u>Tape # or DSN</u>	<u># of Files</u>	<u>BLKSIZE</u>	<u>LRECL</u>	<u># RECORDS</u>
ORIGINATOR TAPE	4/7/83	8/10/83	VCMI86	3	80	80	
QUADI/SCAN TAPE	4/7/83	8/10/83	W10013	3	4000	80	
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

VCM178

DATA DOCUMENTATION FORM

DDF A:3:03

NOAA FORM 24-13
(4-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852FORM APPROVED
O.M.B. No. 41-R2051

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			
Virginia Institute of Marine Science Gloucester Point, Virginia 23062		NODC DUP. TAPE 2 409R	
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM 01B		BLM01B TRACEMTS. 081 VCM178	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
Iselin	Ship	PLATFORM OPERATOR R/V Columbus Iselin University of Miami	FROM: MO/DAY/YR TO: MO/DAY/YR 10/27/75 11/06/75
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 checked="" type="checkbox"/> NO <input 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) Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111			

CRUISE BLM 001B

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
Latitude & Long.	Degrees, mins., seconds	Loran C SIMRAD Model LC 101		Program used to convert from Loran C coordinates to Latitude & Longitude
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Ships chronometer checked w/ WWV		
Water depth	to nearest tenth of a meter	PDR Hydroproducts		
Water sample depth	to nearest meter	Neil Brown Ltd. MK III		
Surface water temperature	°C to nearest tenth	Stem thermometer		
Sediment temperature	°C to nearest tenth	Stem thermometer		
Barometric pressure	millibars, tens to tenths	Ships Barometer		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind Direction	tens of degrees WMO Code 0877	Ship's anemometer Bendix-Friez Model 120/135		
Wind Speed	knots	Ship's anemometer Bendix-Friez Model 120/135		
Wave direction	tens of degrees WMO Code 0877	Ship's compass		
Wave height	1/2 meters WMO Code 1555	Visual estimate		
Swell Direction	tens of degrees WMO Code 0877	Ship's Compass		
Swell Height	1/2 meters WMO Code 1555	Visual estimate		
Weather	WMO Code 4677	Visual estimate		
Cloud type	WMO Codes 0513, 0515, 0509	Visual estimate		

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
Cloud cover	WMO code 2700	Visual estimate		
Visibility	WMO code 4300	Visual estimate		
Wave period	seconds	Wrist watch		
Swell period	seconds	Wrist watch		
Trace Metals a) Sediment- Leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5NHNO ₃ b) Total digest with HCL/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Positions 1-10 identical to the last sample header Sample Header 2 "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record. Following this are Data Records for that sample followed by Terminator record. Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 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</p> <p><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>VCML178 Va. Inst. of Marine Science Trace Metals (081) BLM01B File label: 'TRACEMTS. 77/05/05'</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>80</p> <p>13. LENGTH OF BYTES IN BITS</p> <p>8</p>

RECORD FORMAT DESCRIPTION

RECORD NAME

FILE HEADER

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN Bytes (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institutions responsible for data.

RECORD FORMAT DESCRIPTION

CORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type (trace metals)
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 & 3 B2=Blend of replicates 4,5 & 6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN BYTES (e.g., 876, 676)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	67	bytes	67X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"001" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	5A1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4677
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

CORD NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record "993" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file genera- tion
File Date	4	5	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample identifier (14-15 station code)
Element	19	2	Chars	A2	Element analyzed (standard element abbreviation)
Wet or dry	21	1	Chars	A1	W=data expressed on wet weight basis D=data expressed on dry weight basis
Method	22	2	Bytes	I2	Code: See attached sheet
Mean	24	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations)
SD	33	9	Bytes	F9.5*	Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	

*Decimal place is IMPLIED;
"period" is not present.

*Decimal place is IMPLIED;
"period" is not present.

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 Measurement Technique

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

Method

- 01 = Atomic Absorbtion (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED (✓)
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Instr. CTD MK III	Oct. 1975		Neil Brown Instr.					X	
Beckman Minds D.D. Sensor	Nov. 1975	X				X			
Beckman Inductive Salinometer RS7B		X		* X Annually					

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700946

- 1) File Type: F081
- 2) Project Ident.: VIMS-OCS
- 3) Track Nos.: TR1342

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

DATA SET ROUTE SHEET

ACCESSION/TRACK # 7700446/TR1342

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	3/11/83	8120	VCMI78	3	80	80	
QUAD/SCAN TAPE	3/11/83	8120	W11009	3	4000	80	
ASSIGNED FOR PROCESS.							
PDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR1342

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM178	SL	80	80	9-tu 1600 BPI EBCDIC	
Duplicate	W11009	SL	80	4000	9-tu 1600 BPI ASCII	
Reformatted						
First User						
Final User						

NODC CR. TR 1343

NUMBER

77-0446-VCM180

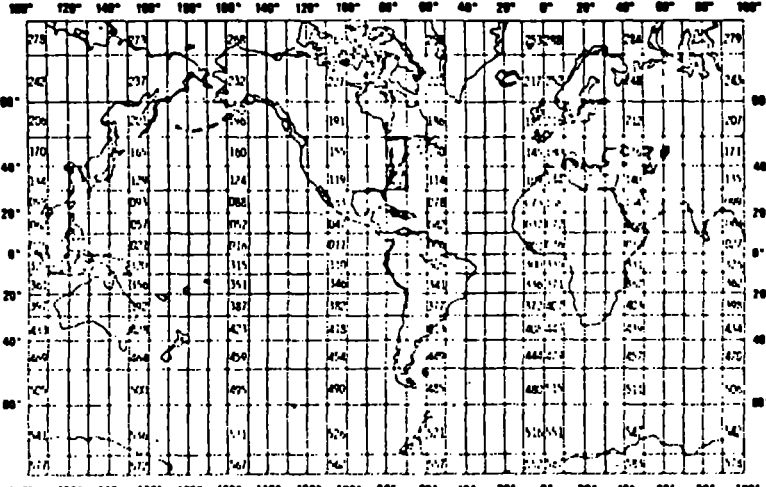
DATA DOCUMENTATION FORM

DDF
A13:03NOAA FORM 24-13
(4-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852FORM APPROVED
O.M.B. No. 41-R2651

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 Virginia Institute of Marine Science Gloucester Point, Virginia 23062 NODC DUP. TAPE = 6766											
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED BLM 01W		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT BLM01W TRALEMTS. 081 VCM180									
4. PLATFORM NAME(S) G W Pierce	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.) Ship	6. PLATFORM AND OPERATOR NATIONALITY(IES) <table border="1"><thead><tr><th>PLATFORM</th><th>OPERATOR</th><th>FROM: MO, DAY, YR</th><th>TO: MO, DAY, YR</th></tr></thead><tbody><tr><td>G W Pierce</td><td>Tracor Marine</td><td>10/22/75</td><td>10/31/75</td></tr></tbody></table>		PLATFORM	OPERATOR	FROM: MO, DAY, YR	TO: MO, DAY, YR	G W Pierce	Tracor Marine	10/22/75	10/31/75
PLATFORM	OPERATOR	FROM: MO, DAY, YR	TO: MO, DAY, YR								
G W Pierce	Tracor Marine	10/22/75	10/31/75								
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 (DNPI)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?) <input checked="" type="checkbox"/> NO <input 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) Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111											

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
Latitude & Long.	Degrees, mins., seconds	Loran "C" SIMRAD Model LC101		Program used to convert from LORAN C coordinant to Lat. & Long.
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Wrist watch checked daily with WWV		
Water depth	to nearest tenth of a meter	Lead weight, wire & meter wheel		
Water sample depth	to nearest meter	CTD (Plessy model 9040)		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	millibars, hundreds to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	tens of degrees WMO code 0877	Ship's compass		
Wind speed	knots	Anemometer Taylor Wind-scope Model 3105		
Wave direction	tens of degrees WMO code 0877	Ship's compass - Visual observation		
Wave height	1/2 meters WMO code 1555	Visual observation		
Swell direction	tens of degrees WMO code 0877	Ship's compass - visual observation		
Swell height	1/2 meters WMO code 1555	Visual observation		
Weather	WMO code 4677	Visual observation		
Cloud type	WMO codes 0513, 0515, 0509	Visual observation		
Cloud cover	WMO code 2700	Visual observation		
Visibility	WMO code 4300	Visual observation		
Wave period	seconds	Wrist watch - Visual observation		

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
Swell period	seconds	Wrist watch - visual observation		
Trace Metals a) Sediment-leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5N HNO ₃ b) Total digest with HCl/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean ± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Sample Header 2 Positions 1-10 identical to the last sample header "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for each sample Positions 1-10 identical to last data record, "998" - position 11-13
8. File terminator Positions 1-10 identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record.
Following this are Data Records for that sample followed by Terminator record.
Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

3. ATTRIBUTES AS EXPRESSED IN

☐ PL-1 ☐ ALGOL ☐ COBOL
☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 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 <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>VCM180 Va. Inst. of Marine Science Trace Metals (081) BLM01W File label: 'TRACEMTS. 77/05/05'</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 80</p> <p>13. LENGTH OF BYTES IN BITS 8</p>

RECORD FORMAT DESCRIPTION

RECORD NAME

FILE HEADER

FIELD NAME	15. POSITION FROM -1 MEASURED IN <u>bytes</u> (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals'
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 & 3 B2=Blend of replicates 4,5 & 6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

12. FIELD NAME	13. POSITION FROM 1 MEASURED IN BYTES	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	bytes	67X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"081" (constant).
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record 2 "993" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file generation
File Date	4	5	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	5A1	
Element	19	2	Chars	A2	
Wet or dry	21	1	Chars	A1	Sample identifier (14-15 station code) Element analyzed (standard element abbreviation) W=data expressed on wet weight basis D=data expressed on dry weight basis Code: See attached sheet
Method	22	2	Bytes	I2	
Mean	24	9	Bytes	F9.3*	
SD	33	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations) Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

*Decimal place is IMPLIED;
"period" is not present.

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 Measurement Technique

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

Method

- 01 = Atomic Absorbtion (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATE (✓)
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Bissett Berman Model E040 STD Conv. to CTD by NOIC San Diego	July 1975		NOIC San Diego				✓		
Beckman Inductive Salinometer RS 7B		✓		Annually ✓					

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: F081
- 2) Project Ident.: VIMS-OCS
- 3) Track Nos.: TR1343

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR1343

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	KCM180	SL	80	80	9-t 1600 BPI EBCDIC	
Duplicate	W11368	SL	80	4000	9-t 1600 BPI ASCII	
Reformatted						
First User						
Final User						

DATA SET ROUTE SHEET

ACCESSION/TRACK # 7700446/TR1343

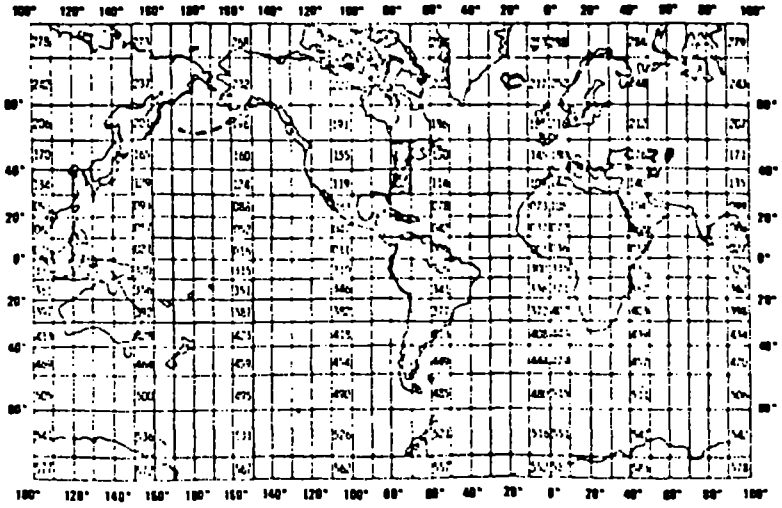
Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	3/16/83	JPB	VCM180	3	80	80	
QUADI/SCAN TAPE	3/16/83	JPB	W11368	3	4000	80	
ASSIGNED FOR PROCESS.							
OF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

VLM 184

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.

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1. NAME AND ADDRESS OF INSTITUTION, LABORATORY, OR ACTIVITY WITH WHICH SUBMITTED DATA ARE ASSOCIATED			
Virginia Institute of Marine Science Gloucester Point, Virginia 23062			
NODC DDP. TAPE: 12495			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM 02W		BLM02W TRALEMTS. 081 VLM VME 184	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
G W Pierce	Ship	PLATFORM OPERATOR	FROM: MO, DAY, YR TO: MO, DAY, YR
		G W Pierce Tracor Marine	02/04/76 02/17/76
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 checked="" type="checkbox"/> NO <input 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)) Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111			

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
Latitude & Long.	Degrees, mins., seconds	Loran "C" SIMRAD Model LC101		Program used to convert from LORAN C coordinant to Lat. & Long.
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GTM to nearest tenth of an hour	Wrist watch checked daily with WWV		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	millibars, hundreds to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	tens of degrees WMO code 0877	Ship's compass		
Wind speed	knots	Anemometer Taylor Wind-scope Model 3105		
Wave direction	tens of degrees WMO code 0877	Ship's compass - Visual observation		
Wave height	1/2 meters WMO code 1555	Visual observation		
Swell direction	tens of degrees WMO code 0877	Ship's compass - visual observation		
Swell height	1/2 meters WMO code 1555	Visual observation		
Weather	WMO code 4677	Visual observation		
Cloud type	WMO codes 0513, 0515, 0509	Visual observation		
Cloud cover	WMO code 2700	Visual observation		
Visibility	WMO code 4300	Visual observation		
Wave period	seconds	Wrist watch - Visual observation		

B. W. Price

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
Swell period	seconds	Wrist watch - visual observation		
Trace Metals a) Sediment-Leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5NHNO ₃ b) Total digest with HCl/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean ± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Positions 1-10 identical to the last sample header Sample Header 2 "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 Identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record.
Following this are Data Records for that sample followed by Terminator record.
Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 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 <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>VCM184 Va. Inst. of Marine Science Trace Metals (081) BLM02W File label: 'TRACEMTS. 77/05/05'</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 80</p> <p>13. LENGTH OF BYTES IN BITS 8</p>

RECORD FORMAT DESCRIPTION

CORD NAME FILE HEADER

FIELD NAME	15. POSITION FROM - 1 MEASURED IN <u>Bytes</u> (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals'
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 & 3 B2=Blend of replicates 4,5 & 6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN BYTES (e.g., 010, 010-01)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	bytes	C7X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"081" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

1. FIELD NAME	15. POSITION FROM-1 MEASURED in byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record 2 "993" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file generation
File Date	4	3	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	5A1	Sample identifier (14-15 station code)
Element	19	2	Chars	A2	Element analyzed (standard element abbreviation)
Wet or dry	21	1	Chars	A1	W=data expressed on wet weight basis D=data expressed on dry weight basis
Method	22	2	Bytes	I2	Code: See attached sheet
Mean	24	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations)
SD	33	9	Bytes	F9.3*	Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

*Decimal place is IMPLIED;
"period" is not present.

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 Measurement Technique

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

Method

- 01 = Atomic Absorbtion (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Instr. CTD MK III	Oct. 1975		Neil Brown Instr.					✓	
Beckman Minds D. O. Sensor	Nov. 1975	✓				✓			
Beckman Inductive Salinometer RS 7B		✓		* ✓ Annually					

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: F081
- 2) Project Ident.: VIMS-OCS
- 3) Track Nos.: TR1344

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR1344

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM184	SL	80	80	9- 12 1600 BPI EBCDIC	
Duplicate	W11773	SL	80	4000	9- 12 1600 BPI ASCII	
Reformatted						
First User						
Final User						

ACCESSION/TRACK # _____

<u>Step</u>	<u>Completion Date/Init.</u>		<u>Tape # or DSN</u>	<u># of Files</u>	<u>BLKSIZE</u>	<u>LRECL</u>	<u># RECORDS</u>
ORIGINATOR TAPE	3/21/83	98R	VCM184	3	80	80	
QUADI/SCAN TAPE	3/21/83	98R	W11773	3	4000	80	
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
<input type="radio"/> IAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

DDF A: 3:03

77-0446

NODC CR.

TR1245

DATA DOCUMENTATION FORM

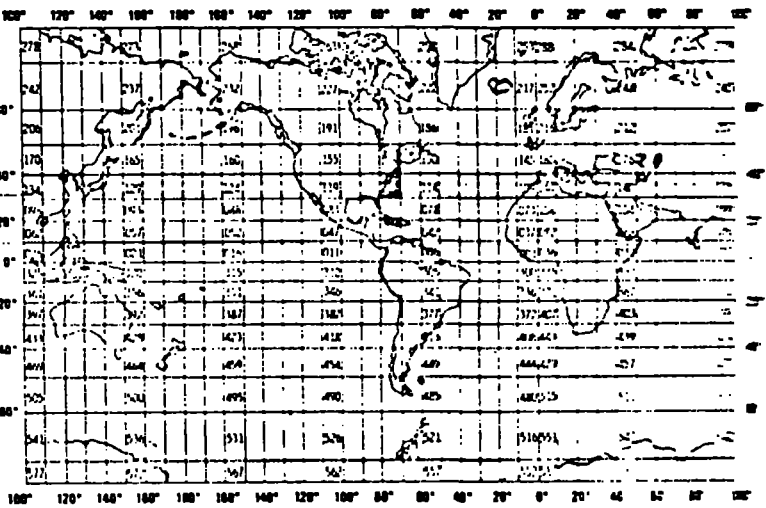
NOAA FORM 24-13
(4-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

VCM 182

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			
Virginia Institute of Marine Science Gloucester Point, Virginia 23062		NODC DUP. TAPE: 6406	
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM 02B		BLMC2B TRALEMTS. 081 VCM 182	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
G.W. Pierce	SHIP	PLATFORM OPERATOR FROM: MO DAY, YR - MO, DA - YR	
		G.W. Pierce Tracor Marine	02/19/76 03/23/76
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 checked="" type="checkbox"/> NO <input 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)			
Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111			

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
Latitude & Long.	Degrees, mins., seconds	Loran C SIMRAD Model LC 101		Program used to convert from Loran C coordinates to Latitude & Longitude
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Wrist Watch Checked daily with WWV		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Sediment temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Barometric pressure	millibars, tens to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind Direction	tens of degrees WMO Code 0877	Ship's compass		
Wind Speed	knots	Anemometer Taylor Wind- scope Model 3105		
Wave direction	tens of degrees WMO Code 0877	Ship's Compass		
Wave height	1/2 meters WMO Code 1555	Vis. Obs.		
Swell Direction	tens of degrees WMO Code 0877	Ship's Compass		
Swell Height	1/2 meters WMO Code 1555	Vis. Obs.		
Weather	WMO Code 4677	Vis. Obs.		
Cloud type	WMO Codes 0513, 0515, 0509	Vis. Obs.		

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
Cloud cover	WMO code 2700	Visual estimate		
Visibility	WMO code 4300	Visual estimate		
Wave period	seconds	Wrist watch		
Swell period	seconds	Wrist watch		
Trace Metals a) Sediment-leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5NHNO ₃ b) Total digest with HCl/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Positions 1-10 identical to the last sample header Sample Header 2 "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 Identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record.
Following this are Data Records for that sample followed by Terminator record.
Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 inch
	10. END OF FILE MARK <input type="checkbox"/> OCTAL 17 <input type="checkbox"/> _____
6. NUMBER OF TRACKS (CHANNELS) <input type="checkbox"/> SEVEN <input checked="" type="checkbox"/> NINE <input type="checkbox"/> _____	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) VCM182 Va. Inst. of Marine Science Trace Metals (081) BLM02B File label: 'TRACEMTS. 77/05/05'
7. PARITY <input checked="" type="checkbox"/> ODD <input type="checkbox"/> EVEN	
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 80
	13. LENGTH OF BYTES IN BITS 8

RECORD FORMAT DESCRIPTION

RECORD NAME FILE HEADER

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN BYTES (0 = bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals'
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 &3 B2=Blend of replicates 4,5 &6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM 1 MEASURED IN BYTES	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	67	bytes	C7X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"001" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record "993" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file genera- tion
File Date	4	5	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample identifier (14-15 station code)
Element	19	2	Chars	A2	Element analyzed (standard element abbreviation)
Wet or dry	21	1	Chars	A1	W=data expressed on wet weight basis D=data expressed on dry weight basis
Method	22	2	Bytes	I2	Code: See attached sheet
Mean	24	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations)
SD	33	9	Bytes	F9.5*	Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

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 Measurement Technique

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

Method

- 01 = Atomic Absorption (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED (✓)
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Instr. CTD MK III	Oct. 1975		Neil Brown Instr.					X	
Beckman Minds D.D. Sensor	Nov. 1975	X				X			
Beckman Inductive Salinometer RS7B		X		* X Annually					

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: F081
- 2) Project Ident.: VIMS-OC5
- 3) Track Nos.: TR1345

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR1345

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM182	SL	80	80	9- tu 1600 BPI EBCDIC	
Duplicate	W11365	SL	80	4000	9- tu 1600 BPI ASCII	
Reformatted						
First User						
Final User						

DATA SET ROUTE SHEET

ACCESSION/TRACK # 7700446 / TR 1345

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	3/15/83	880	WCM182	3	80	80	
QUAD/SCAN TAPE	3/15/83	880	W11365	3	1000	80	
ASSIGNED FOR PROCESS.							
PDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

DATA DOCUMENTATION FORM

Corrected File Name

NOAA FORM 24-13
(6-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL SYSTEMS DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852

VCM 190

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.

DDF A:3:03

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													
Virginia Institute of Marine Science Gloucester Point, Virginia 23062		NODC DUP. TAPE= 6445											
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT											
BLM		BLM 04B TRACEMTS. 081 VCM 190											
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR 7. DATES											
G.W. Pierce	SHIP	<table border="1"> <thead> <tr> <th>NATIONALITY(IES)</th> <th>PLATFORM</th> <th>OPERATOR</th> <th>FROM</th> <th>TO</th> </tr> </thead> <tbody> <tr> <td></td> <td>G.W. Pierce</td> <td>Tracor Marine</td> <td>08/24/76</td> <td>09/02/76</td> </tr> </tbody> </table>		NATIONALITY(IES)	PLATFORM	OPERATOR	FROM	TO		G.W. Pierce	Tracor Marine	08/24/76	09/02/76
NATIONALITY(IES)	PLATFORM	OPERATOR	FROM	TO									
	G.W. Pierce	Tracor Marine	08/24/76	09/02/76									
8. ARE DATA PROPRIETARY?		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.											
<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR _____ MONTH _____		GENERAL AREA											
9. ARE DATA DECLARED NATIONAL PROGRAM (ONP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?)													
<input checked="" type="checkbox"/> NO <input 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)													
Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111													

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 FORMULAS AND AVERAGING
Latitude & Long.	Degrees, mins., seconds	Loran C SIMRAD Model LC 101		Program used to convert from Loran C coordinates to Latitude & Longitude
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Wrist Watch Checked daily with WWV		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Sediment temperature	°C to nearest tenth	Mercury Inglass Stem Thermometer		
Barometric pres- sure	millibars, tens to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Pendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Pendix Model 566		
Wind Direction	tens of degrees WMO Code 0877	Ship's compass		
Wind Speed	knots	Anemometer Taylor Wind- scope Model 3105		
Wave direction	tens of degrees WMO Code 0877	Ship's Compass		
Wave height	1/2 meters WMO Code 1555	Vis. Obs.		
Swell Direction	tens of degrees WMO Code 0877	Ship's Compass		
Swell Height	1/2 meters WMO Code 1555	Vis. Obs.		
Weather	WMO Code 4677	Vis. Obs.		
Cloud type	WMO Codes 0513, 0515, 0509	Vis. Obs.		

B. SCIENTIFIC COMPONENT

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
Cloud cover	WMO code 2700	Visual estimate		
Visibility	WMO code 4300	Visual estimate		
Wave period	seconds	Wrist watch		
Swell period	seconds	Wrist watch		
Trace Metals a) Sediment-leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - longo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5NHNO ₃ b) Total digest with HCl/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean ± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Sample Header 2 Positions 1-10 identical to the last sample header, "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record. Following this are Data Records for that sample followed by Terminator record. Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

3. ATTRIBUTES AS EXPRESSED IN

☐ PL-1 ☐ ALGOL ☐ COBOL
☒ FORTRAN ☐ _____ LANGUAGE

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 inch
6. NUMBER OF TRACKS (CHANNELS) <input type="checkbox"/> SEVEN <input checked="" type="checkbox"/> NINE <input type="checkbox"/> _____	10. END OF FILE MARK <input 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) VCM190 Va. Inst. of Marine Science Trace Metals (081) BLM04B File label: 'TRACEMTS. 77/05/06'
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 80 13. LENGTH OF BYTES IN BITS 8

RECORD FORMAT DESCRIPTION

RECORD NAME FILE HEADER

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

COR AME Sample Header 1

FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals'
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Sub sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 &3 B2=Blend of replicates 4,5 &6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM 1 MEASURED IN BYTES (e.g., 80a, 80b, 80c)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	67	bytes	67X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"081" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0677; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

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RECORD FORMAT DESCRIPTION

EC 3 NAME

4. FIELD NAME	15. POSITION FROM -1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file generation
File Date	4	3	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample Sample identifier (14-15 station code)
Sample	14	5	chars	SA1	
Element	19	2	Chars	A2	
Wet or dry	21	1	Chars	A1	Element analyzed (standard element abbreviation) W=data expressed on wet weight basis D=data expressed on dry weight basis Code: See attached sheet
Method	22	2	Bytes	I2	
Mean	24	9	Bytes	F9.3*	
SD	33	9	Bytes	F9.5*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations) Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

*Decimal place is IMPLIED;
"period" is not present.

Navigation

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- 02 = PIXE

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INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Inst. CTD MK III	July, 1976	✓			✓				
Beckman Minds D. O. Sensor	July, 1976	✓			✓				
Beckman Inductive Salinometer RS 7B	Dec. 1975	✓		* ✓ Annually					

NODC CR. *TR 1347*

NUMBER

*77-0446**VC M 188*

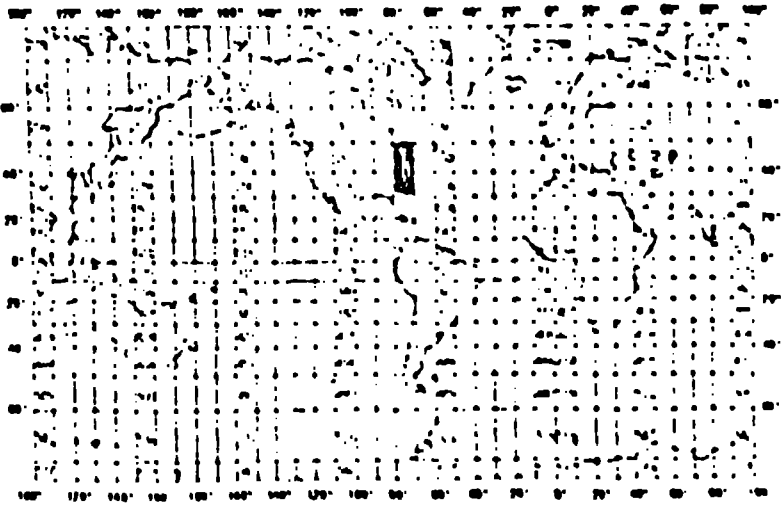
DATA DOCUMENTATION FORM

*Corrected File Name*NOAA FORM 24-13
(4-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
RECORDS SECTION
ROCKVILLE, MARYLAND 20852FORM APPROVED
O.M.B. NO. 41-R-001*DDF A13:03*

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					
Virginia Institute of Marine Science Gloucester Point, Virginia 23062 <i>NODC DUP. TAPE = 12762</i>					
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT			
BLM		BLM03W <i>TRALENTS OBI</i> <i>VC M 188</i>			
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR 7. DATES			
R/V Virginian Sea	Ship	NATIONALITY(IES)			
		PLATFORM	OPERATOR	DATE	DATE
		R/V Virginian Sea	VIMS	06/07/76	06/17/76
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 _____		9. ALL DATA RELEASED NATIONAL PROGRAM (NP)? IF YES, SHOULD THEY BE INCLUDED IN WORLD DATA CENTER HOLDINGS FOR INTERNATIONAL EXCHANGE? <input checked="" type="checkbox"/> NO <input 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)		11. PLEASE DARKEN ALL MARSEEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.			
Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-642-2111					

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
Latitude & Long.	Degrees, mins., seconds	Loran "C" SIMRAD Model LC101		Program used to convert from LORAN C coordinant to Lat. & Long.
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Wrist watch checked daily with W/V		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CID-Mell brown MK III		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	millibars, hundreds to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	tens of degrees WHO code C877	Ship's compass		
Wind speed	knots	Anemometer Taylor Wind-scope Model 3105		
Wave direction	tens of degrees WHO code C877	Ship's compass - Visual observation		
Wave height	1/2 meters WHO code 1555	Visual observation		
Swell direction	tens of degrees WHO code C877	Ship's compass - visual observation		
Swell height	1/2 meters WHO code 1555	Visual observation		
Weather	WMO code 4677	Visual observation		
Cloud type	WMO codes 0513, 0515, 0509	Visual observation		
Cloud cover	WMO code 2700	Visual observation		
Visibility	WMO code 4500	Visual observation		
Wave period	seconds	Wrist watch - Visual observation		

00110360
Va. Sea

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
Swell period	seconds	Wrist watch - visual observation		
Trace Metals a) Sediment-Leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5NHNO ₃ b) Total digest with HCl/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Positions 1-10 identical to the last sample header Sample Header 2 "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 Identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record.
Following this are Data Records for that sample followed by Terminator record.
Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel
ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 inch
	10. END OF FILE MARK <input type="checkbox"/> OCTAL 17 <input type="checkbox"/> _____
6. NUMBER OF TRACKS (CHANNELS) <input type="checkbox"/> SEVEN <input checked="" type="checkbox"/> NINE <input type="checkbox"/> _____	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) VCM188 Va. Inst. of Marine Science Trace Metals (081) BLM03W File Label: 'TRACEMTS. 77/05/06
7. PARITY <input checked="" type="checkbox"/> ODD <input type="checkbox"/> EVEN	
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 80
	13. LENGTH OF BYTES IN BITS 8

RECORD FORMAT DESCRIPTION

RECORD NAME

FILE HEADER

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN <u>bytes</u> (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), 12	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals' Year, month, day of file generation
File date	4	6	Bytes	3I2	
Record type	10	1	Char	A1	
Sequence	11	3	Chars	A3	"2" (first sample header record) Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 & 3 B2=Blend of replicates 4,5 & 6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Long hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM 1 MEASURED IN BYTES (e.g., 010, 010-019)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	bytes	G7X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"081" (constant).
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

4. FIELD NAME	15. POSITION FROM-1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record "993" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file generation
File Date	4	3	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	5A1	Sample identifier (14-15 station code)
Element	19	2	Chars	A2	Element analyzed (standard element abbreviation)
Wet or dry	21	1	Chars	A1	W=data expressed on wet weight basis D=data expressed on dry weight basis
Method	22	2	Bytes	I2	Code: See attached sheet
Mean	24	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations)
SD	33	9	Bytes	F9.5*	Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
					*Decimal place is IMPLIED; "period" is not present.

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 Measurement Technique

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

Method

- 01 = Atomic Absorbtion (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED (✓)
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Inst. CTD MK III	July, 1976	✓			✓				
Beckman Minds D. O. Sensor	July, 1976	✓			✓				
Beckman Inductive Salinometer RS 7B	Dec. 1975	✓		* ✓ Annually					

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: F081
- 2) Project Ident.: VIMS-OCS
- 3) Track Nos.: TR1347

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR1347

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM188	SL	80	80	9-t 16N BPI EBCDIC	
Duplicate	W10080	SL	80	4000	9-t 1600 BPI ASCII	
Reformatted						
First User						
Final User						

DATA SET ROUTE SHEET

ACCESSION/TRACK # _____

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	2/22/83	(9810)	VCMI88	3	80	80	
QUAD/SCAN TAPE	2/22/83	(9810)	W10080	3	1000	80	
ASSIGNED FOR PROCESS.							
OF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

NODC CR. TR1348 DATA DOCUMENTATION FORM

DDF A: 3:03

NOAA FORM 24-13
(6-72)U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEANOGRAPHIC DATA CENTER
NATIONAL SYSTEMS SECTION
ROCKVILLE, MARYLAND 20852FORM APPROVED
O.M.B. No. 41-R-051

VCM 194

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			
Virginia Institute of Marine Science Gloucester Point, Virginia 23062		NODC DUP. TAPE: 5489	
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM 04W		BLM04W TRALEMTS. 081 VCM 194	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR 7. DATES	
R/V Virginian Sea	Ship	PLATFORM OPERATOR	DATE
		R/V Virginian Sea	VIMS 08/30/76 09/10/76
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 MARK IN ALL MARSHALL SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
9. ARE DATA RELEASED NATIONAL PROGRAM (NP)? IF YES, SHOULD THEY BE INCLUDED IN WORLD DATA CENTER HOLDINGS FOR INTERNATIONAL EXCHANGE? <input checked="" type="checkbox"/> NO <input 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)			
Dr. Gerald L. Engel Virginia Institute of Marine Science Gloucester Point, Va. 23062 804-682-2111			

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
Latitude & Long.	Degrees, mins., seconds	Loran "C" SIMRAD Model LC101		Program used to convert from LCRAN C coordiant to Lat. & Long.
Latitudinal Hemisphere	N or S			
Longitudinal Hemisphere	E or W			
Station time	GMT to nearest tenth of an hour	Wrist watch checked daily with W/V		
Water depth	to nearest tenth of a meter	Hydroproducts PDR		
Water sample depth	to nearest meter	CID Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	millibars, hundreds to tenths	Barograph-Castella of London		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	tens of degrees WHO code 0877	Ship's compass		
Wind speed	knots	Anemometer Taylor Windscope Model 3105		
Wave direction	tens of degrees WHO code 0277	Ship's compass - Visual observation		
Wave height	1/2 meters WHO code 1555	Visual observation		
Swell direction	tens of degrees WHO code 0877	Ship's compass - visual observation		
Swell height	1/2 meters WHO code 1555	Visual observation		
Weather	WHO code 4677	Visual observation		
Cloud type	WHO codes 0513, 0515, 0509	Visual observation		
Cloud cover	WHO code 2700	Visual observation		
Visibility	WHO code 4300	Visual observation		
Wave period	seconds	Wrist watch - Visual observation		

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
Swell period	seconds	Wrist watch - visual observation		..
Trace Metals a) Sediment-Leachable total b) Macrofauna c) Zooplankton d) Neuston	µg/g dry weight	Sediment - grab Samples: Benthic cruises Macrofauna - Dredge and trawl cruises Zooplankton & Neuston - bongo tows (202 and/or 505) on water column cruises	Sediment - a) Leach with 5NHNO ₃ b) Total digest with HCL/HNO ₃ /HF/HClO ₄ Macrofauna, Zooplankton, Neuston - digested with 70% HNO ₃ and 30% H ₂ O ₂ Metals Determined By 1) Atomic absorption (AA) on Perkin-Elmer 360 or Varion AA-5 2) Proton induced X-ray emission (PIXE)	Mean ± standard deviation from replicate analyses of a sample.

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

1. File Header "1" in position 10
2. Sample Header 1 "2" in position 10
3. Terminator for Sample Header 1 Positions 1-10 identical to last sample header, "998" in positions 11-13
4. Sample Header 2 "3" in position 10
5. Terminator for Positions 1-10 identical to the last sample header Sample Header 2 "998" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, each sample "998" - position 11-13
8. File Terminator Positions 1-10 Identical to last data record, "999" in Positions 11-13

2. GIVE BRIEF DESCRIPTION OF FILE ORGANIZATION

First record is File Header. Following this are Sample Header records 1 & 2, each followed by a Terminator record. Following this are Data Records for that sample followed by Terminator record. Sample headers, terminators, data records, terminator sequence is repeated until final terminator record.

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

4. RESPONSIBLE COMPUTER SPECIALIST:

NAME AND PHONE NUMBER Gerald L. Engel

ADDRESS Gloucester Point, Virginia

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 type="checkbox"/> 3/4 INCH <input checked="" type="checkbox"/> 0.6 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 <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>VCM194 Va. Inst. of Marine Science Trace Metals (081) BLM04W File label: 'TRACEMTS. 77/05/09'</p>
<p>8. DENSITY</p> <p><input type="checkbox"/> 200 BPI <input checked="" type="checkbox"/> 1600 BPI</p> <p><input type="checkbox"/> 356 BPI</p> <p><input type="checkbox"/> 800 BPI</p> <p><input type="checkbox"/> _____</p>	
<p>12. PHYSICAL BLOCK LENGTH IN BYTES</p> <p>80</p>	
<p>13. LENGTH OF BYTES IN BITS</p> <p>8</p>	

RECORD FORMAT DESCRIPTION

RECORD NAME FILE HEADER

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN <u>bytes</u> (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"001" file type (bacteriological)
File Date	4	6	Bytes	3I2	Year, month, day of file generation
Record Type	10	1	Chars	A1	"1" (File Header record)
Vessel	11	11	Chars	11A1	Vessel name (left-justified)
Cruise	22	6	Chars	6A1	Originator's cruise identifier (left-justified)
Cruise Dates	28	17	Bytes	5 (I2,A1), I2	xx/xx/xx-xx/xx/xx Beginning year, month, day - Ending year, month, day
Senior Scientist	45	19	Chars	19A1	(left justified)
Investigator	64	17	Chars	17A1	Investigators & Institution responsible for data.

RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"081" File-type 'trace metals
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Char	A1	"2" (first sample header record)
Sequence	11	3	Chars	A3	Sequence of this record type within sample
Lab sample no.	14	5	Chars	5A1	Sample identifier (first 2 chars are station I.D.)
Species	19	10	Bytes	I10	Species Code (VIMS code)(or blank if not applicable)
Sample type	29	1	Byte	I1	Type of sample: 1=sediment 2=particulate matter 3=benthic 4=zooplankton 5=neuston
Replicate	30	2	Chars	A2	Replicate no. or code (sediment only) Codes: B1=Blend of replicates 1,2 &3 B2=Blend of replicates 4,5 &6 SB=Blend of all six replicates (1-6)
Latitude	32	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	38	1	Char	A1	Hemisphere, "N" or "S"
Longitude	39	7	Bytes	I3, 2I2	Degrees, minutes, seconds
Lon hem	46	1	Char	A1	Hemisphere, "E" or "W"
Date	47	8	Bytes	2(I2,A1), I2	xx/xx/xx - Sample date (year, month, day)
Time	55	3	Bytes	F3.1*	GMT in hours & tenths
Depth	58	5	Bytes	F5.1*	Water depth, meters & tenths
Z number	63	4	Bytes	I4	Zooplankton collection number (blank if not applicable)
Sample Code	67	1	Char	A1	Sample type code (sediment only) L=Leachable T=Total
Sample weight	68	6	Bytes	F6.3	Weight of sample (grams to thousandths)
Navigation	74	2	Bytes	I2	Navigation method (see attached codes)
Blank	76	5	Bytes	5X	Blank

*Decimal place is implied;
"period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME _____

14. FIELD NAME	15. POSITION FROM 1 MEASURED IN BYTES (e.g., 378, 2798)	16. LENGTH		17. ATTRIBUTES (Fortran)	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "2" Terminators					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	bytes	67X	Blank
Sample Header Record 2					
File Type	1	3	chars	A3	"001" (constant)
File Date	4	6	bytes	3I2	year,month,day of file generation
Record Type	10	1	char	A1	"3" (second sample header record)
Sequence	11	3	bytes	I3	Sequence of this record type within sample
Sample	14	5	chars	SA1	Sample number identifier
Barometer	19	3	bytes	F3.1*	Pressure in millibars
Dry Bulb	22	4	bytes	F4.1*	Air temperature; degrees Celsius
Wet Bulb	26	4	bytes	F4.1*	Air temperature; degrees Celsius
Wind direction	30	2	bytes	I2	WHO code 0877; tens of degrees
Wind speed	32	2	bytes	I2	Knots
Wave direction	34	2	bytes	I2	WHO code 0377; tens of degrees
Wave height	36	1	byte	I1	WHO code 1555
Swell Direction	37	2	bytes	I2	WHO code 0877; tens of degrees
Swell Height	39	1	byte	I1	WHO code 1555
Weather	40	2	bytes	I2	WHO code 4577
Cloud type	42	3	bytes	I3	WHO codes 0513,0515,0500
Cloud cover	45	1	bytes	I1	WHO code 2700; percent of cloud cover
Visibility	46	1	byte	I1	WHO code 4300
Blank	47	1	byte	1X	blank
Turbidity	48	1	byte	I1	Turbidity measurement technique (see attached codes)
Wave Period	49	2	bytes	I2	Seconds
Swell Period	51	2	bytes	I2	Seconds
Sea SFC Temp	53	3	bytes	F3.1*	Sea surface temperature degrees celsius
Blank	56	25	bytes	25X	Blank
*Decimal place is IMPLIED, "period" is not present					

*Decimal place is IMPLIED, "period" is not present

RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN byte	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
Record Type "3" Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Sample Header Record "993" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
Data Record					
File Type	1	3	Chars	A3	"081" (constant) year,month,day of file genera- tion
File Date	4	5	bytes	3I2	
Record Type	10	1	char	A1	
Sequence	11	3	bytes	I3	"4" (data record) Sequence of this record type within sample
Sample	14	5	chars	SA1	
Element	19	2	Chars	A2	
Wet or dry	21	1	Chars	A1	Element analyzed (standard element abbreviation) W=data expressed on wet weight basis D=data expressed on dry weight basis Code: See attached sheet
Method	22	2	Bytes	I2	
Mean	24	9	Bytes	F9.3*	
SD	33	9	Bytes	F9.3*	Mean concentration (ppm to thousandths)(999999999=not determined or less than 2 standard deviations) Standard Deviation (ppm to nearest thousandth)
Data Record Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record, "998" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
File Terminator					
Ident	1	10	bytes	A3,3I2,A1	Same as Data Record "999" (constant) Blank
Sequence	11	3	chars	A3	
Blank	14	67	bytes	67X	
*Decimal place is IMPLIED; "period" is not present.					

*Decimal place is IMPLIED;
"period" is not present.

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 Measurement Technique

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

Method

- 01 = Atomic Absorption (AA)
- 02 = PIXE

D. INSTRUMENT CALIBRATION

This calibration information will be utilized by NOAA's National Oceanographic Instrumentation Center in their efforts to develop calibration standards for voluntary acceptance by the oceanographic community. Identify the instruments used by your organization to obtain the scientific content of the DDF (i.e., STD, temperature and pressure sensors, salinometers, oxygen meters, velocimeters, etc.) and furnish the calibration data requested by completing and/or checking ("✓") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LAST CALIBRATION	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED					INSTRUMENT IS NOT CALI- BRATED
		YOUR ORGANIZATION (✓)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (✓)	BEFORE OR AFTER USE (✓)	BEFORE AND AFTER USE (✓)	ONLY AFTER REPAIR (✓)	ONLY WHEN NEW (✓)	
Neil Brown Inst. CTD MK III	July, 1976	✓			✓				
Beckman Minds D. O. Sensor	July, 1976	✓			✓				
Beckman Inductive Salinometer RS 7B	Dec. 1975	✓		* ✓ Annually					

ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: F081
- 2) Project Ident.: VIMS-OCS
- 3) Track Nos.: TR1348

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

II. Additional error corrections:

Error

Correction Completed (Check)

III. Processor Name: _____

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TR1348

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM194	SL	80	80	9- h 1600 BPI EBCDIC	
Duplicate	W10202	SL	80	4000	9- h 1600 BPI ASCII	
Reformatted						
First User						
Final User						

ACCESSION/TRACK # 7700446/TR1348

<u>Step</u>	<u>Completion Date/Init.</u>		<u>Tape # or DSN</u>	<u># of Files</u>	<u>BLKSIZE</u>	<u>LRECL</u>	<u># RECORDS</u>
ORIGINATOR TAPE	3/21/83	STAR	VCMI94	3	80	80	
QUADI/SCAN TAPE	3/21/83	STAR	W10202	3	4000	80	
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FINAL USER TAPE							
<input type="radio"/> IAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

ERROR CORRECTION DOCUMENTATION FORM

Old ref. # (FT081)

TR 1340-1348

DATE:

TO:

FROM:

SUBJECT: Error Correction in Processing of Data Set - Accession # 7700446

- 1) File Type: 144
- 2) Project Ident.: _____
- 3) Track Nos.: TT3042-3048, 3055-3056

I. Error Corrections as reported to Principal Investigator:

Error

Correction Completed (Check)

Converted from Fo 81 to Fi 44
see attached for conversion
etc.

II. Additional error corrections:

Error

Correction Completed (Check)

See attached

III. Processor Name: _____

5.2.1. F81T0144

APPROPRIATE CHANGES MUST BE MADE TO THE INPUT REEL NUMBER.
AN OUTPUT TAPE MUST BE RESERVED BEFORE EACH RUN.

UNIT 8 IS THE INPUT F081 TAPE OR DISC UNIT.

UNIT 9 IS THE OUTPUT F144 TAPE OR DISC UNIT.

5.3. DATA SETS USED

SMC*F081T0144. CONTAINS THE PROGRAM SOURCE, DOCUMENTATION,
AND THE COMPILE, MAP AND START ELEMENTS.

5.4. ECL EXAMPLE RUNSTREAM FOR F81T0144

```
@RUN      (MODIFIED FOR APPROPRIATE CPU)
@PHASE 02
@SYM PRINT$,,PR5
@CHAR,D F08144,BIN16,STEIN
@ASG,AX FILE081.
@USE 8.,FILE081.
@MSG,W RING IN REELNO, PLEASE
@ASG,T F144.,U9V,REELNO
@USE 9.,F144.
@XQT SMC*F081T0144.F81T0144
3042
@FIN
```

5.5. OPERATION INSTRUCTIONS (CALCOMP PLOTTER, TTY, ETC)

```
@AUD SMC*F081T0144.XQT/PROD8144
```

NON-STANDARD EXEC-8 SITES HAVE DIFFERENT PROCEDURES FOR
JOB SUBMISSIONS. @CHAR AND TAPE ASSIGN CHANGES

8144.F01T0144

JOB TOTALS: INPUT=65744	OUTPUT=52721
TYPE 1= 22	TYPE A= 22
TYPE 2= 1975	TYPE C= 1975
TYPE 3= 1975	TYPE D= 1975
TYPE 4=61772	TYPE E= 3692
ERRORS= 0	TYPE F=21431
	TYPE T=23626

ERRORS= 0

BLANKS= 1315

CONCENTRATION=22366

END OF JOB

OC1
- Jim Audet

Using this check run summary, the conversion
from 051 to 144 looks OK. (CAS codes, Taxonomy, etc)

Several edits to the data were noted, although I'm
not sure how you can obtain correct edits since these
data are somewhat 'aged'

- TT 3043 ✓ - Bottom depths = 00 for stations 92-95
- 3047 ✓ - Wave Period = 99 some stations ^{deleted} (OK?) ✓
- 3048 ✓ - Lat/Long = 0000 - Stations 157-164
- 3051 ✓ - 60 seconds/coded in Lat - Stations 29-32
- 3055 - Lat/Long = 0000 - station 14
✓ Wind dir code wrong & 60 sec in Lat - several sta.
- 3056 - Lat/Long = 0000 - Station 1
- 3063 ✓ - Several wind dir. codes wrong.

My note of 6/27 (to Bob Stein) can't be checked
against this F144 Check run, but Mary C. and I had
reviewed earlier conversion work which looked OK.

F

To: Bob S.

From: Jim A.

Based on a quick review of the FT081 data listings, I recommend the following:

- ✓ • Do not interpret concentrations where imbedded blanks occur - delete record for conversion to FT004.
(e.g. - 770405 / STA B4002)
- ✓ • Concentrations with 9999 - - - should be converted to a code 'N' (the closest code we have to explain high variability & S.D. of replicates)
- ✓ • Right-justify all non-blank imbedded values - I believe you have already done this in the specs (e.g. 770509 / Sta B100)
- ✓ • Convert values preceded by '<' to a code 'L' with the reported value entered in the concentration field (e.g. - 770405 / Sta E4007).
- ✗ ✓ • Skip records during conversion with concentration values and S.D. of '0' (e.g. - 770509 / Sta A1001)
(interior DOF)
- Add text record to any track where reported values have been deleted or moved (probably all tracks!) Text should indicate that some reported concentrations have been deleted during final processing because of imbedded blanks and other coding problems. Original data submissions including S.D. and other information are stored as a 'Level 1' data set at NODC.

As noted above, I also recommend that this entire data submission be preserved as a Level 1 data set with no edits made to the original submission.

NOTE:

Stations without positions -
The positions were taken from
previous station (degrees only).
as per conversation with Bob Stein.

M. Lewis

~~1~~

TAX codes + CAS Codes

See ~~T~~ 4863

DATA SET ROUTE SHEET

old ref. # (FT081)

TR 1340-1348

ACCESSION/TRACK # 7700446 / 773042-3048

773055-3056

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE							
QUADI/SCAN TAPE							
ASSIGNED FOR PROCESS.							
DDF EVALUATION							
QUALITY REVIEW							
PRELIMINARY DATA SORT							
PRELIMINARY MULCHEK							
FIRST USER TAPE							
WORK DISK FILE							
FIN USER TAPE							
FINAL MULCHEK							
EDITED DISK FILE							
DATA SET "FINALIZED"							

old ref. #. (FT081.)
TR 1340-1348

TAPE ASSIGNMENT SHEET

ACCESSION NO.: 7700446

TRACK NO(s): TT3042-3048
773055-3056

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator						
Duplicate						
Reformatted						
First User						
Final User						

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
7700446	F144	TT3042	0084	3128	32CW	1976/08/23	BLM04T	327048
7700446	F144	TT3043	0084	3128	31GI	1976/06/15	BLM03B	327049
7700446	F144	TT3044	0084	3128	32IC	1975/10/28	BLM01B	327050
7700446	F144	TT3045	0084	3128	31PP	1975/10/23	BLM01W	327051
7700446	F144	TT3046	0084	3128	31PP	1976/02/05	BLM02W	327052
7700446	F144	TT3047	0084	3128	31PP	1976/02/20	BLM02B	327053
7700446	F144	TT3048	0084	3128	31PP	1976/08/15	BLM04B	327054
7700446	F144	TT3055	0084	3128	32VS	1976/06/08	BLM03W	327055
7700446	F144	TT3056	0084	3128	32VS	1976/08/31	BLM04W	327056

(9 rows affected)

Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
7700446	F144	TT3042	32CW	8	1914	76/08/23	76/08/25
7700446	F144	TT3043	31GI	26	5242	76/06/15	76/06/23
7700446	F144	TT3044	32IC	27	6890	75/10/28	75/11/05
7700446	F144	TT3045	31PP	7	739	75/10/23	75/10/29
7700446	F144	TT3046	31PP	11	2474	76/02/05	76/02/15
7700446	F144	TT3047	31PP	54	8123	76/02/20	76/03/23
7700446	F144	TT3048	31PP	49	8274	76/08/15	76/09/01
7700446	F144	TT3055	32VS	15	921	76/06/08	76/06/16
7700446	F144	TT3056	32VS	6	733	76/08/31	76/09/08

(9 rows affected)