

VCM583

ACCESSION  
NUMBER

78-0386

## DATA DOCUMENTATION FORM

WPHYS. 014. BLM08B

VIMS  
NOAA FORM 24-13

51778

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-R2611

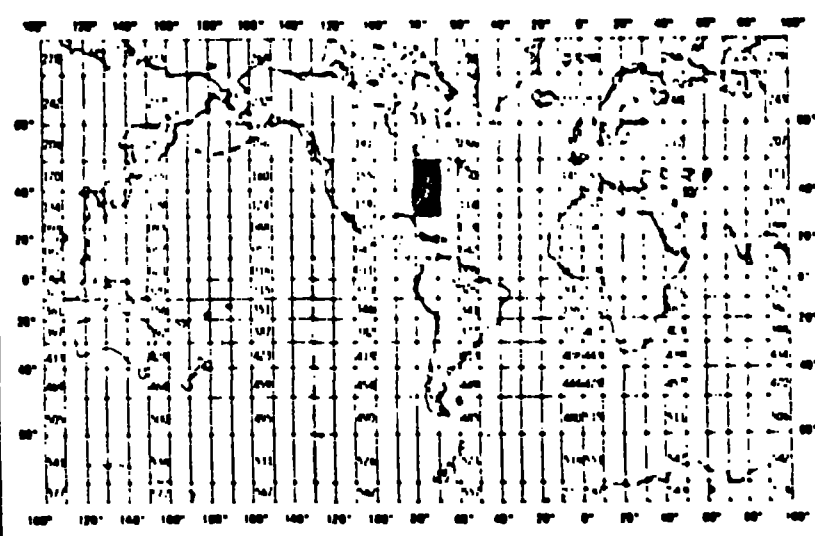
TR3035

FO14

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			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM		BLM08B	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
H.J.W. Fay	Ship	PLATFORM OPERATOR	FROM: MO/DAY/YR TO: MO/DAY/YR
		H.J.W. Fay Tracor Marine	08/03/77 08/17/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR MONTH		9. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
		GENERAL AREA	
10. ARE DATA RELEASED NATIONAL PROGRAM (UNIT)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNA- TIONAL EXCHANGE?) <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)			
11. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELE- PHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1) Dr. Gerald L. Engel Va. Institute of Marine Science Gloucester Pt., 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 hr.	Wrist Watch checked daily with WWV		
Water depth	to nearest tenth of a meter	EDO Model 55A Recorder EDO Model 444 Tranceiver		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Sediment temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	Millibars, tens to tenths	Danforth Aneroid Barometer Model 310		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Ship's Annemometer Bendix Model 120/135		
Wind direction	Tens of degrees WMO Code 0877	Ship's Annemometer Bendix Model 120/135		
Wind Speed	Knots	Ship's compass		
Wave direction	Tens of degrees WMO Code 0877	Visual estimate		
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 4877	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 observation		
Visibility	WMO Code 4300	Visual observation		
Wave period	Seconds	Wrist watch - visual observation		
Swell period	Seconds	Wrist watch - visual observation		
Salinity	Parts per thousand to 0.01%	Niskin bottles on rosette	Guildline Auto sac Model 8400	N/A
	Parts per thousands to 0.001ppt	Neil Brown CTD model MK III	N/A	Values averaged over .5 meter intervals
Dissolved Oxygen	Milligrams per liter	Niskin bottles on rosette Beckman minos D.O. Sensor	Azide Modification to Winkler Titration Corrected to computed D.O. Winkler Titrations	N/A Values averaged over .5 depth intervals
Water temperature	°C to .001 °C to 0.1	Neil Brown CTD MK III XBT	N/A N/A	Values averaged over .5m Depth and temp at local max, min, inflection points
NO <sub>2</sub>	u gm. atoms/liter	Niskin bottles on rosette	Technicon industrial method #158-71W AAII	N/A
NO <sub>3</sub>	u gm. atoms/liter	Niskin bottles on rosette	Technicon industrial method #158-71W AAII	N/A
Dissolved organic phosphate	u gm. atoms/liter	Niskin bottles on rosette	Technicon industrial method #155-71W AAII	N/A

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, "998" in positions 11-13
8. File Terminator Positions 1-10 identical to last data record, "998" 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>VCM583</p> <p>Virginia Institute of Marine Science</p> <p>Water Physics &amp; Chemistry</p> <p>File Label = 'WPHYSC.014.BLM08B'</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 FILES (e.g., b/m, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"014" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigators & Institution
Investigator	64	17	Chars	16A1	Responsible for data.

# RECORD FORMAT DESCRIPTION

RECORD NAME SAMPLE HEADER 1

FIELD NAME	15. POSITION FROM -1 MEASURED IN Bytes (e.g., 50m, bytes)	16. LENGTH		17. ATTRIBUTES  FORTRAN	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"014" file type
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Chars	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
Latitude	19	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	25	1	Char	A1	Hemisphere "N" or "S"
Longitude	26	7	Bytes	I3,2I2	Degrees, minutes, seconds
Lon hem	33	1	Char	A1	Hemisphere "E" or "W"
Time	34	3	Byte	F3.1*	Sample time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
WDepth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	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
Method	52	1	Bytes	I1	Sampling method: 1=CTD 2=XBT 3=Water bottles 4=CTD & water bottles 5=CTD, water bottles, & XBT 6=GRAB 7=Meteorological
Blank	53	28	Bytes	28X	Blank

\*Decimal place is implied: "period" is not present

## RECORD FORMAT DESCRIPTION

## RECORD NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN BITS (No. of bits, 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	67 X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"014" (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	WMO code 0877; tens of degrees
Wind Speed	32	2	Bytes	I2	Knots
Wave Direction	34	2	Bytes	I2	WMO code 0877; 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513, 0515, 0509
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	25 X	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., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<b>Record Type "3" Terminator</b>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Sample Header Record 2
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	Bytes	67X	Blank
<b>Data Record</b>					
File Type	1	3	Chars	A3	"014" (constant)
File Date	4	6	Bytes	3I2	year, month, day of file generation
Record Type	10	1	Chars	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of rec. type w/in sample
Sample	14	5	Chars	5A1	Sample identifier
Depth	19	4	Bytes	I4	Sample depth (meters)
Pressure	23	5	Bytes	F5.1*	Pressure (decibars)
Conduct	28	5	Bytes	F5.3*	Conductivity (mmho/cm)
Temp.	33	5	Bytes	F5.3*	Water Temperature (°C)
Salin	38	4	Bytes	F4.2*	Salinity (PPT)
D.O.	42	4	Bytes	F4.2*	Dissolved Oxygen (MG/L)
NO <sub>2</sub>	46	4	Bytes	F4.2*	Nitrite (microgram - atom/L)
NO <sub>3</sub>	50	4	Bytes	F4.2*	Nitrate (microgram - atom/L)
NH <sub>4</sub>	54	4	Bytes	F4.3*	Amonia (ppm)
O-PO <sub>4</sub>	58	4	Bytes	F4.2*	Ontho-Phosphate (microgram - atom/L)
DOC	62	4	Bytes	F4.2*	Dissolved organic carbom (mg/L)
POC	66	4	Bytes	F4.2*	Particulate organic carbon(mg/L)
CSALI:	70	5	Bytes	F5.3*	Calculated salinity (ppt to nearest 0.003)**
C.D.O:	75	4	Bytes	F4.2*	Calculated dissolved oxygen (mg/L)**
Blank	79	2	Bytes	2X	Blank
<b>Data Record Terminator</b>					
Ident	1	10	Bytes	A3,3I2,A1	Same as data record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	Bytes	67X	Blank
<b>File Terminator</b>					
Ident	1	10	Bytes	A3,3I2,A1	Same as data record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	Bytes	67X	Blank
*Decimal place is IMPLIED: "period" is not present					
**99.0 indicates a bad reading					



#### 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

## 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.

BLM08B, BLM08W

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 NEE (✓)	
Neil Brown Inst. CTD MK III	July, 1977	✓			✓				
Beckman Minds D.O. Sensor	July, 1977	✓			✓				
Guildline Autosac MOD8400	Jul, , 1977	✓			✓				

VCM584

ACCESSION  
NUMBER

78-0386

VIMS DDF A:3:07

## DATA DOCUMENTATION FORM

WPNYS.014. BLM08W

NOAA FORM 24-13  
(4-77)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

5/17/78

TR 3036

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2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM		BLM08W	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
H.J.W. Fay	Ship	PLATFORM OPERATOR	FROM: MO, DAY, YR TO: MO, DAY, YR
		H.J.W. Fay Tracor Marine	08/19/77 08/31/77
8. ARE DATA PROPRIETARY? <input 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)? (E.G., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNA- TIONAL 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 TELE- PHONE NUMBER (AND ADDRESS IF OTHER THAN IN ITEM-1) Dr. Gerald L. Engel Va. Institute of Marine Science Gloucester Pt., Va. 23062 804-(42-2111			

## 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 hr.	Wrist watch checked daily with WWV		
Water depth	to nearest tenth of a meter	EDO Model 55A Recorder EDO Model 444 Tranceiver		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	Millibars, tens to tenths	Danforth Aneroid Barometer Model 310		
Dry-bulb air temperature	to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	Tens of degrees IMO Code 2877	Ship's Anemometer Bendix Model 120/135		
Wind Speed	knots	Ship's Anemometer Bendix Model 128/135		
Wave direction	Tens of degrees IMO Code 2877	Ship's compass		
Wave height	1/2 meters IMO Code 1555	Visual estimate		
Swell direction	Tens of degrees IMO Code 2877	Ship's compass		
Swell height	1/2 meters IMO Code 1555	Visual estimate		
Weather	IMO Code 4077	Visual estimate		
Cloud type	IMO 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 observation		
Visibility	WMO Code 4300	Visual observation		
Wave period	Seconds	Wrist watch - visual observation		
Swell period	Seconds	Wrist watch - visual observation		
Salinity	Parts per thousand to 0.01%	Niskin bottles on rosette	Guildline Auto sac Model 8400	N/A
	Parts per thousands to 0.001ppt	Neil Brown CTD model MK III	N/A	Values averaged over .5 meter intervals
Dissolved Oxygen	Milligrams per liter	Niskin bottles on rosette	Azide Modification to Winkler Titration	N/A
		Beckman minos D.O. Sensor	Corrected to computed D.O. Winkler Titrations	Values averaged over .5 depth intervals
Water temperature	°C to .001	Neil Brown CTD MK III	N/A	Values averaged over .5m
	°C to 0.1	XBT	N/A	Depth and temp at local max, min, inflection points
CO <sub>2</sub>	u gm. atoms/liter	Niskin bottles on rosette	Technicon industrial method #158-71W AAII	N/A
CO <sub>3</sub>	u gm. atoms/liter	Niskin bottles on rosette	Technicon industrial method #158-71W AAII	N/A
Dissolved organic phosphate	u gm. atoms/liter	Niskin bottles on rosette	Technicon industrial method #155-71W AAII	N/A

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 "999" in positions 11-13.
6. Data Record "4" in position 10
7. Terminator for data for Positions 1-10 identical to last data record, "998" in positions 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 LABEL TYPE, VOLUME NUMBER)</p> <p>VCM584</p> <p>Virginia Institute of Marine Science</p> <p>Water Physics &amp; Chemistry</p> <p>File Label = 'WPHYSC.014.BLM08W'</p>
<p>8. DENSITY</p> <p><input type="checkbox"/> 200 BPI <input checked="" type="checkbox"/> 1600 BPI</p> <p><input type="checkbox"/> 336 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 INITIALS (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"014" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigator's & Institution
Investigator	64	17	Chars	16A1	Responsible for data.

# RECORD FORMAT DESCRIPTION

RECORD NAME SAMPLE HEADER 1

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES FORTRAN	18. USE AND MEANING
		NUMBER	UNITS		
File Type	1	3	Chars	A3	"014" file type
File date	4	6	Bytes	3I2	Year, month, day of file generation
Record type	10	1	Chars	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
Latitude	19	6	Bytes	3I2	Degrees, minutes, seconds
Lat hem	25	1	Char	A1	hemisphere "N" or "S"
Longitude	26	7	Bytes	I3,2I2	Degrees, minutes, seconds
Lon hem	33	1	Char	A1	Hemisphere "E" or "W"
Time	34	3	Byte	F3.1*	Sample time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
WDepth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	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
Method	52	1	Bytes	I1	Sampling method: 1=CTD 2=XBT 3=Water bottles 4=CTD & water bottles 5=CTD, water bottles, & XBT 6=GRAB 7=Meteorological
Blank	53	28	Bytes	28X	Blank

\*Decimal place is implied: "period" is not present



# RECORD FORMAT DESCRIPTION

## RECORD NAME

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN FIELDS (e.g., bits, 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	67 X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"014" (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
Air Bulb	22	4	Bytes	F4.1*	Air temperature; degrees Celsius
Sea 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 0877; 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513,0515,0509
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	25 X	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., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>Record Type "3"</u>	Terminator				
Ident	1	10	Bytes	A3,3I2,A1	Same as Sample Header Record 2
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	Bytes	67X	Blank
<u>Data Record</u>					
File Type	1	3	Chars	A3	"014" (constant)
File Date	4	6	Bytes	3I2	year, month, day of file generation
Record Type	10	1	Chars	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of rec. type w/in sample
Sample	14	5	Chars	5A1	Sample identifier
Depth	19	4	Bytes	I4	Sample depth (meters)
Pressure	23	5	Bytes	F5.1*	Pressure (decibars)
Conduct	28	5	Bytes	F5.3*	Conductivity (mmho/cm)
Temp.	33	5	Bytes	F5.3*	Water Temperature (°C)
Salin	38	4	Bytes	F4.2*	Salinity (PPT)
D.O.	42	4	Bytes	F4.2*	Dissolved Oxygen (MG/L)
N <sub>2</sub>	46	4	Bytes	F4.2*	Nitrite (microgram - atom/L)
N <sub>3</sub>	50	4	Bytes	F4.2*	Nitrate (microgram - atom/L)
NH <sub>4</sub>	54	4	Bytes	F4.3*	Amonia (ppm)
O-PO <sub>4</sub>	58	4	Bytes	F4.2*	Ontho-Phosphate (microgram - atom/L)
DOC	62	4	Bytes	F4.2*	Dissolved organic carbom (mg/L)
POC	66	4	Bytes	F4.2*	Particulate organic carbon(mg/L)
CSALI:	70	5	Bytes	F5.3*	Calculated salinity (ppt to nearest 0.003)**
C.D.O:	75	4	Bytes	F4.2*	Calculated dissolved oxygen (mg/L)**
Blank	79	2	Bytes	2X	Blank
<u>Data Record Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as data record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	Bytes	67X	Blank
<u>File Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as data record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	67	Bytes	67X	Blank
*Decimal place is IMPLIED: "period" is not present					
**99.0 indicates a bad reading					

#### 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

## 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 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.

BLM08B, BLM08W

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, 1977	✓			✓				
Beckman Minds D.O. Sensor	July, 1977	✓			✓				
Guildline Autosac MOD8400	July, 1977	✓			✓				

VAN 343

ACCESSION  
NUMBER

78-0386

VIAS

## DATA DOCUMENTATION FORM

HYDRES-010-BLM07B

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-R2651

5/1/78

TR3037

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 P.O. Box 3 Gloucester Point, Virginia 23062			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM		BLM07B	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
H.L.W. Bay	Ship	PLATFORM OPERATOR	FROM MO/DAY/YR TO MO/DAY/YR
		H.L.W. Bay Tracor Marine	05/30/77 06/05/77
8. ARE DATA PROPRIETARY? <input type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR MONTH		11. PLEASE DARKEN ALL MARSHALL SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
9. ARE DATA RELEASED NATIONAL PROGRAM (NP)? ALL SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE? <input type="checkbox"/> NO <input type="checkbox"/> YES <input type="checkbox"/> PART (SPECIFY BELOW)		GENERAL AREA	
PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER AND ADDRESS IF OTHER THAN INSTITUTION			
Dr. L. E. Page Virginia Institute of Marine Science Gloucester Pt., 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 hr.	Wrist Watch checked daily with WWV		
Water depth	to nearest tenth of a meter	EPC Model 4600 Recorder ORE 12KH <sub>2</sub> Tranceiver		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Sediment temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	Millibars, tens to tenths	Danforth Aneroid Barometer Model 310		
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 Model 120/135		
Wind Speed	Knots	Ship's Anemometer Bendix 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
Ice cover	WHO Code 2777	Visual observation		
Ice mobility	WHO Code 4377	Visual observation		
Ice period	Seconds	Wrist watch - visual observation		
Ice period	Seconds	Wrist watch - visual observation		
Salinity	Parts per thousand to 0.01%	Niskin bottles on rosette	Guildline Auto sac Model 8400	N/A
Dissolved oxygen	Milligrams per liter	Niskin bottles on rosette	Azide modification to Winkler Titration	N/A
Water temperature	°C to 0.1	XBT	N/A	Depth and temp at local max, min, inflection points

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>VCM343 Virginia Institute of Marine Science Hydrocarbon File Label = 'HYDRCB.010.BLM07B'</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 113</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 BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES  (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigators & Institution
Investigator	64	16	Chars	16A1	Responsible for data.
Blank	80	34	Bytes	34X	Blank

# RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1

13. FIELD NAME	14. POSITION FROM -1 MEASURED IN (e.g., 000, bytes)	15. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" File-type
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.)
Latitude	19	6	Bytes	3I2	Latitude (degrees, minutes, seconds)
Lathem	25	1	Char	A1	Hemisphere (-N or S)
Longitude	26	7	Bytes	I3, 2I2	Longitude (degrees, minutes, seconds)
Lonhem	33	1	Char	A1	Hemisphere (-E or W)
Time	34	3	Bytes	F3.1*	Station time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
Depth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	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
Sample code	52	1	Byte	I1	Sample type code: 1=Sediment 7=Neuston 2=Benthic 8=Dissolved Oxygen 3=Zooplankton bottom 4=Dissolved oxygen, surface 5=Particulate, <sup>surface</sup> 6=Surface film 9=Particulate, bottom
Replicate	53	2	Chars	A2	Replicate number (sediment only)
Znumb	55	4	Bytes	I4	Zooplankton collection number
Species	59	10	Chars	10A1	Species code (NODC code)
Pris/Phy	69	5	Bytes	E5.2*	Pristane/phytane ratio (E notation 9.99+9)
Phy/C18	74	5	Bytes	E5.2*	Phytane/C18 ratio (E notation 9.99+9)
Pris/C17	79	5	Bytes	E5.2*	Pristane/C17 ratio (E notation 9.99+9)
Total extract	84	6	Bytes	E6.3*	Total extract weight** (E notation 9.999+9)
CPI	90	6	Bytes	E6.3*	(E notation 9.999+9) (C23+C25+C27+C29)/ (C24+C26+C28+C30)

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

\*\*Units are defined by sample type code 1, 2, 3, & 7 in µgm/gm; 4, 5, & 8 in µgm/liter; 6 in µgm/m<sup>2</sup>

# RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1 (continued)

12. FIELD NAME	13. POSITION FROM -1 MEASURED IN (e.g., bits, bytes)	14. LENGTH		15. ATTRIBUTES (FORTRAN)	16. USE AND MEANING
		NUMBER	UNITS		
Blank	96	6	Bytes	6X	Blank
GC aliph	102	6	Bytes	E6.3*	Total GC aliphatic** (E notation 9 <sup>999</sup> +9)
GC arom	108	6	Bytes	E6.3*	Total GC aromatic** (E notation 9 <sup>999</sup> +9)

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

\*\*Units are defined by sample type code: 1, 2, 3 & 7 in ugm/gm  
4, 5 & 8 in ugm/liter  
6 in ugm/m<sup>2</sup>

# RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN BITS (e.g., bits, 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	100	Bytes	100X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"(1)" (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 0877; tens of degrees
Wave Height	36	1	Byte	I1	WMO code 1555
Sea 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513,0515,0509
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	58	Bytes	58X	Blank

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

# RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., 800, bytes)	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
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
<u>Data Record</u>					
File type	1	3	Chars	A3	"010" (constant)
File date	4	6	Bytes	3I2	year, month, day of file generation
Record type	10	1	Char	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of this record type within sample
Sample	14	5	Chars	SA1	Sample identifier (14-15 station code)
No.	19	2	Bytes	I2	Number of concentrations in this record (up to 10)
Extract	21	1	Char	A1	Extract Code H=Aliphatic B=Aromatic
Retention	22	4	Bytes	I4	Retention index**
Concentration	26	5	Bytes	E5.2*	Concentration (E notation 9 <sup>99</sup> 9)
Retention	31	4	Bytes	I4	Retention index**
Concentration	35	5	Bytes	E5.2*	Concentration
Retention	40	4	Bytes	I4	Retention index**
Concentration	44	5	Bytes	E5.2*	Concentration
Retention	49	4	Bytes	I4	Retention index**
Concentration	53	5	Bytes	E5.2*	Concentration
Retention	58	4	Bytes	I4	Retention index**
Concentration	62	5	Bytes	E5.2*	Concentration
Retention	67	4	Bytes	I4	Retention index**
Concentration	71	5	Bytes	E5.2*	Concentration
Retention	76	4	Bytes	I4	Retention index**
Concentration	80	5	Bytes	E5.2*	Concentration
Retention	85	4	Bytes	I4	Retention index**
Concentration	89	5	Bytes	E5.2*	Concentration
Retention	94	4	Bytes	I4	Retention index**
Concentration	98	5	Bytes	E5.2*	Concentration
Retention	103	4	Bytes	I4	Retention index**
Concentration	107	5	Bytes	E5.2*	Concentration
Blank	112	2	Bytes	2X	Blank

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

\*\*Analytical Chemistry, Vol. 36, No. 8, July, 1964, pp 31A-41A.

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>Data Record Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
<u>File Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	100	Bytes	100X	Blank
					*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.
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- 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

## 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.

BLM07B, BLM07W

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	May, 1977	✓			✓				
Beckman Minds D.O. Sensor	May, 1977	✓			✓				
Guildline Autosac MOD 8400	May, 1977	✓			✓				



VCM 344

ACCESSION

NUMBER

78-0386

VIMS

## DATA DOCUMENTATION FORM

HYDRCD.010.BLM07T

OAA FORM 24-13

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
ROCKVILLE, MARYLAND 20852

FORM APPROVED  
O.M.B. No. 41-R2051

slmh8

TR 3038

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			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM		BLM07T	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
Cape Henlopen	Ship	PLATFORM OPERATOR	FROM: MO/DAY/YR TO: MO/DAY/YR
		Cape Henlopen Univ. of Delaware	05/16/77 05/21/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR MONTH		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
9. ARE DATA CLEARLY NATIONAL PROGRAM (ONPI)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTER'S DEALINGS FOR INTERNATIONAL EXCHANGE?) <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES (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 VI. Institute of Marine Science Gloucester Pt., Va. 23062 FO4-442-2111			

## 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 hr.	Wrist Watch checked daily with WWV		
Water depth	to nearest tenth of a meter	Fathometer		
Water sample depth	to nearest meter	G. M. Meter Wheel		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	Millibars, tens to tenths	Danforth Aneroid Barometer Model 310		
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 Model 120/135		
Wind Speed	Knots	Ship's Anemometer Bendix 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 0177	Visual estimate		
Cloud type	WMO Codes 0513, 0515, 0509	Visual estimate		

## B. SCIENTIFIC CONTENT

NAM. 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
Soil cover	KM Code 2700	Visual observation		
Salinity	KM Code 4700	Visual observation		
Swell period	Seconds	Wrist watch - Visual observation		
Swell period	Seconds	Wrist watch - Visual observation		
Salinity	Parts per thousand to 0.01%	Niskin bottles on rosette	Guildline Auto sac Model 8400	N/A
Dissolved oxygen	Milligrams per liter	Niskin bottles on rosette	Azide modification to Winkler Titration	N/A
Water temperature	°C to 0.1	XBT	N/A	Depth and temp at local max., min, inflection points

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 LABEL SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) VCM344 Virginia Institute of Marine Science Hydrocarbon File Label = 'HYDRCB.010.BLM07T'
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 113
		13. LENGTH OF BYTES IN BITS 8

# RECORD FORMAT DESCRIPTION

RECORD NAME FILE HEADER

FIELD NAME	15. POSITION FROM -1 MEASURED IN BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES  (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigators & Institution
Investigator	64	16	Chars	16A1	Responsible for data.
Blank	80	34	Bytes	34X	Blank

# RECORD FORMAT DESCRIPTION

RECORD NAME

Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., line, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" File-type
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.)
Latitude	19	6	Bytes	3I2	Latitude (degrees, minutes, seconds)
Lat hem	25	1	Char	A1	Hemisphere (-N or S)
Longitude	26	7	Bytes	I3, 2I2	Longitude (degrees, minutes, seconds)
Lon hem	33	1	Char	A1	Hemisphere (-E or W)
Time	34	3	Bytes	F3.1*	Station time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
Depth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	Navigation: 01=Loran (mixed or unspecified) 02=Fidlar 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
Sample code	52	1	Byte	I1	Sample type code: 1=Sediment 7=Neuston 2=Benthic 8=Dissolved Oxygen 3=Zooplankton bottom 4=Dissolved oxygen, surface 5=Particulate, surface 6=Surface film 7=Particulate, bottom
Replicate	53	2	Chars	A2	Replicate number (sediment only)
Znumb	55	4	Bytes	I4	Zooplankton collection number
Species	59	10	Chars	10A1	Species code (NODC code)
Pris/Phy	69	5	Bytes	E5.2*	Pristane/phytane ratio (E notation 9.99+9)
Phy/C18	74	5	Bytes	E5.2*	Phytane/C18 ratio (E notation 9.99+9)
Pris/C17	79	5	Bytes	E5.2*	Pristane/C17 ratio (E notation 9.99+9)
Total extract	84	6	Bytes	E6.3*	Total extract weight** (E notation 9.999+9)
CPI	90	6	Bytes	E6.3*	(E notation 9.999+9) (C23+C25+C27+C29)/ (C24+C26+C28+C30)

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

\*\*Units are defined by sample type code 1, 2, 3, & 7 in µgm/gm; 4, 5, & 8 in µgm/liter; 6 in µgm/m<sup>2</sup>

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

Sample Header (1 to end line 1)

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., 100, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
Blank	96	6	Bytes	6X	Blank
GC aliph	102	6	Bytes	E6.3*	Total GC aliphatic** (E notation 9 <sup>999</sup> +9)
GC arom	108	6	Bytes	E6.3*	Total GC aromatic** (E notation 9 <sup>999</sup> +9)
<p>*Decimal place is implied; "period" is not present</p> <p>**Units are defined by sample type code: 1, 2, 3 &amp; 7 in ugm/gm 4, 5 &amp; 8 in ugm/liter 6 in ugm/m<sup>2</sup></p>					

# RECORD FORMAT DESCRIPTION

REC NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN DITTS  (e.g., bits, 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	100	Bytes	100X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"(1)" (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 0877; 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513,0515,0509
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	58	Bytes	58X	Blank

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



# RECORD FORMAT DESCRIPTION

## RECORD NAME

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g. Min, bytes)	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
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
Data Record					
File type	1	3	Chars	A3	"010" (constant)
File date	4	6	Bytes	3I2	year, month, day of file generation
Record type	10	1	Char	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of this record type within sample
Sample	14	5	Chars	5A1	Sample identifier (14-15 station code)
No.	19	2	Bytes	I2	Number of concentrations in this record (up to 10)
Extract	21	1	Char	A1	Extract Code H=Aliphatic B=Aromatic
Retention	22	4	Bytes	I4	Retention index**
Concentration	26	5	Bytes	E5.2*	Concentration (E notation 9.99-9)
Retention	31	4	Bytes	I4	Retention index**
Concentration	35	5	Bytes	E5.2*	Concentration
Retention	40	4	Bytes	I4	Retention index**
Concentration	44	5	Bytes	E5.2*	Concentration
Retention	49	4	Bytes	I4	Retention index**
Concentration	53	5	Bytes	E5.2*	Concentration
Retention	58	4	Bytes	I4	Retention index**
Concentration	62	5	Bytes	E5.2*	Concentration
Retention	67	4	Bytes	I4	Retention index**
Concentration	71	5	Bytes	E5.2*	Concentration
Retention	76	4	Bytes	I4	Retention index**
Concentration	80	5	Bytes	E5.2*	Concentration
Retention	85	4	Bytes	I4	Retention index**
Concentration	89	5	Bytes	E5.2*	Concentration
Retention	94	4	Bytes	I4	Retention index**
Concentration	98	5	Bytes	E5.2*	Concentration
Retention	103	4	Bytes	I4	Retention index**
Concentration	107	5	Bytes	E5.2*	Concentration
Blank	112	2	Bytes	2X	Blank

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

\*\*Analytical Chemistry, Vol. 36, No. 8, July, 1964, pp 31A-41A.

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>Data Record Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
<u>File Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	100	Bytes	100X	Blank
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BLM07T

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 (✓)	
Guildline Autocac MOD8400	May, 1977	✓			✓				

DDF A: 3:07

VCM 345

ACCESSION  
NUMBER

78-0386

VIMS

## DATA DOCUMENTATION FORM

HYDRCB. 010. BLM07W

NOAA FORM 24-13  
(4-77)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

5/17/78

TR3039

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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Virginia Institute of Marine Science  
Gloucester Point, Virginia 23062

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

VIM

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

BLM07W

4. PLATFORM NAME(S)

H.J.W. Fay

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

Ship

6. PLATFORM AND OPERATOR  
NATIONALITY(IES)H.J.W.  
Fay

7. DATES

PLATFORM OPERATOR FROM: MO/DAY/YR TO: MO/DAY/YR

Tracor  
Marine

05/17/77

05/28/77

8. ARE DATA PROPRIETARY?

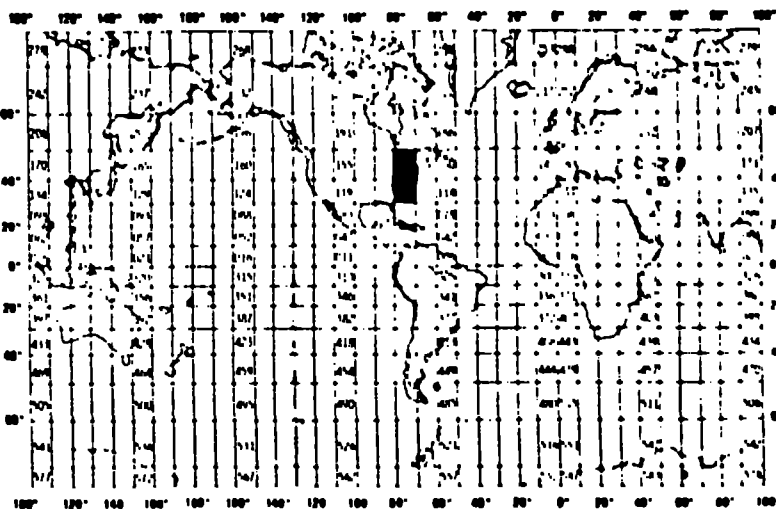
☒ NO ☐ YESIF YES, WHEN CAN THEY BE RELEASED  
FOR GENERAL USE? YEAR MONTH11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA  
CONTAINED IN YOUR SUBMISSION WERE COLLECTED.

GENERAL AREA

9. ARE DATA DECLARED NATIONAL  
PROGRAM (DNP)?(I.E., SHOULD THEY BE INCLUDED IN WORLD  
DATA CENTERS HOLDINGS FOR INTERNA-  
TIONAL EXCHANGE?)☒ NO ☐ YES ☐ PART (SPECIFY BELOW)10. PERSON TO WHOM INQUIRIES CONCERNING  
DATA SHOULD BE ADDRESSED WITH TELE-  
PHONE NUMBER (AND ADDRESS IF OTHER  
THAN IN ITEM-1)

Dr. Gerald L. Engel  
Va. Institute of Marine Science  
Gloucester Pt., Va. 23062

404-42-2111



## 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 SEMRAD 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 hr.	Wrist Watch checked daily with WWV		
Water depth	to nearest tenth of a meter	EPC Model 4600 Recorder ORE 12 KHz Tranceiver		
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, tens to tenths	Danforth Aneroid Barometer Model 310		
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 Model 120/135		
Wind Speed	Knots	Ship's Anemometer Bendix 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		

SECRET

[illegible]

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. "998" 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"/> 1/4 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 KEY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p> <p>VCM345</p> <p>Virginia Institute of Marine Science</p> <p>Hydrocarbon</p> <p>File Label = 'HYDRCB.010.BLM07W'</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>113</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  (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigators & Institution Responsible for data.
Investigator	64	16	Chars	16A1	
Blank	80	34	Bytes	34X	Blank

# 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	"010" File-type
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.)
Latitude	19	6	Bytes	3I2	Latitude (degrees, minutes, seconds)
Lathem	25	1	Char	A1	Hemisphere (-N or S)
Longitude	26	7	Bytes	I3, 2I2	Longitude (degrees, minutes, seconds)
Lonhem	33	1	Char	A1	Hemisphere (-E or W)
Time	34	3	Bytes	F3.1*	Station time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
Depth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	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 Sample type code: 1=Sediment 7=Neuston 2=Benthic 8=Dissolved Oxygen 3=Zooplankton bottom 4=Dissolved oxygen, surface 5=Particulate, surface 6=Surface film 9=Particulate, bottom
Sample code	52	1	Byte	I1	Replicate number (sediment only)
Replicate	53	2	Chars	A2	Zooplankton collection number
Znumb	55	4	Bytes	I4	Species code (NODC code)
Species	59	10	Chars	10A1	Pristane/phytane ratio (E notation 9.99+9)
Pris/Phy	69	5	Bytes	E5.2*	Phytane/C18 ratio (E notation 9.99+9)
Phy/C18	74	5	Bytes	E5.2*	Pristane/C17 ratio (E notation 9.99+9)
Pris/C17	79	5	Bytes	E5.2*	Total extract weight** (E notation 9.999+9)
Total extract	84	6	Bytes	E6.3*	(E notation 9 999+9) (C23+C25+C27+C29)/ (C24+C26+C28+C30)
CPI	90	6	Bytes	E6.3*	

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

\*\*Units are defined by sample type code 1, 2, 3, & 7 in µgm/gm; 4, 5, & 8 in µgm/liter; 6 in µgm/m<sup>2</sup>

# RECORD FORMAT DESCRIPTION

RECORD NAME

Sample Header 1 (continued)

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (No., Mn, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
Blank	96	6	Bytes	6X	Blank
GC aliph	102	6	Bytes	E6.3*	Total GC aliphatic** (E notation 9 <sup>999</sup> +9)
GC arom	108	6	Bytes	E6.3*	Total GC aromatic** (E notation 9 <sup>999</sup> +9)
<p>*Decimal place is implied; "period" is not present</p> <p>**Units are defined by sample type code: 1, 2, 3 &amp; 7 in ugm/gm 4, 5 &amp; 8 in ugm/liter 6 in ugm/m<sup>2</sup></p>					

# RECORD FORMAT DESCRIPTION

RECORD NAME

FIELD NAME	15. POSITION FROM - 1 MEASURED IN UNITS (e.g., bits, 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	100	Bytes	100X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"(1)" (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 0877; 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513,0515,0509
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	58	Bytes	58X	Blank

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

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	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
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
Data Record					
File type	1	3	Chars	A3	"010" (constant)
File date	4	6	Bytes	3I2	year, month, day of file generation
Record type	10	1	Char	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of this record type within sample
Sample	14	5	Chars	SA1	Sample identifier (14-15 station code)
No.	19	2	Bytes	I2	Number of concentrations in this record (up to 10)
Extract	21	1	Char	A1	Extract Code H=Aliphatic B=Aromatic
Retention	22	4	Bytes	I4	Retention index**
Concentration	26	5	Bytes	E5.2*	Concentration (E notation 9 <sup>99</sup> 9)
Retention	31	4	Bytes	I4	Retention index**
Concentration	35	5	Bytes	E5.2*	Concentration
Retention	40	4	Bytes	I4	Retention index**
Concentration	44	5	Bytes	E5.2*	Concentration
Retention	49	4	Bytes	I4	Retention index**
Concentration	53	5	Bytes	E5.2*	Concentration
Retention	58	4	Bytes	I4	Retention index**
Concentration	62	5	Bytes	E5.2*	Concentration
Retention	67	4	Bytes	I4	Retention index**
Concentration	71	5	Bytes	E5.2*	Concentration
Retention	76	4	Bytes	I4	Retention index**
Concentration	80	5	Bytes	E5.2*	Concentration
Retention	85	4	Bytes	I4	Retention index**
Concentration	89	5	Bytes	E5.2*	Concentration
Retention	94	4	Bytes	I4	Retention index**
Concentration	98	5	Bytes	E5.2*	Concentration
Retention	103	4	Bytes	I4	Retention index**
Concentration	107	5	Bytes	E5.2*	Concentration
Blank	112	2	Bytes	2X	Blank

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

\*\*Analytical Chemistry, Vol. 36, No. 8, July, 1964, pp 31A-41A.

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>Data Record Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
<u>File Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	100	Bytes	100X	Blank
					*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

## 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.

ELM07B, BLM07W

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. STD WK III	May, 1977	✓			✓				
Beckman Minds D.O. Sensor	May, 1977	✓			✓				
Guildline Autosac MOD 8400	May, 1977	✓			✓				



ERROR CORRECTION DOCUMENTATION FORM

DATE:

TO: OC12

FROM: OC13

SUBJECT: Error Correction in Processing of Data Set - Accession # 7800386

- 1) File Type: FO10
- 2) Project Ident.: VIMS-OC5
- 3) Track Nos.: TR 3039

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 # 7800386/ TR3039

Step	Completion Date/Init.		Tape # or DSN	# of Files	BLKSIZE	LRECL	# RECORDS
ORIGINATOR TAPE	5/23/83	<del>880</del>	VC M345	3	113	113	783
QUADI/SCAN TAPE	5/23/83	<del>880</del>	W12395	3	4520	113	783
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.: 7800386

TRACK NO(s): TR3039

Type of Tape	Tape Number	Label	LRECL	BLKSIZE	RECFM	Remarks
Originator	VCM345	SL	113	113	9-tu 1600BPI EBCDIC	
Duplicate	W12395	SL	113	4520	9-tu 1600 BPI ASCII	
Reformatted						
First User						
Final User						

VCM346

ACCESSION  
NUMBER

78-0386

VIMS

## DATA DOCUMENTATION FORM

HYDREC. 010. BLM08B

NOAA FORM 24-13  
(4-77)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

5/17/78

TR3040

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			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM		BLM08B	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	
H.J.W. Fay	Ship	PLATFORM OPERATOR	
		H.J.W. Fay	Tracor Marine
		7. DATES	
		FROM: MO/DAY/YR TO: MO/DAY/YR	
		08/03/77 08/17/77	
8. ARE DATA PROPRIETARY?		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES		GENERAL AREA	
IF YES, WHEN CAN THEY BE RELEASED FO: _____ YR: _____ USEY: _____ YEAR: _____ MONTH: _____			
9. DATA: <input type="checkbox"/> NATIONAL <input type="checkbox"/> INTERNATIONAL			
10. SHOULD THEY BE INCLUDED IN WORLD <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> PART (SPECIFY BELOW)			
12. PERSON TO WHOM INQUIRIES CONCERNING DATA SHOULD BE ADDRESSED WITH TELEPHONE NUMBER (AND ADDRESS IF OTHER THAN INTENDED)			
Robert L. Engel Institute of Marine Science Gloucester Pt., Va. 23062			
PHONE: 804-681-1111			

## 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 SIMPAD Model LL 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 hr.	Wrist Watch checked daily with WWV		
Water depth	to nearest tenth of a meter	EDO Model 55A Recorder EDO Model 44A Tranceiver		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Sediment temperature	°C to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	Millibars, tens to tenths	Danforth Aneroid Barometer Model 310		
Dry-bulb air temperature	°C to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	°C to nearest tenth	Ship's Anemometer Bendix Model 120/135		
Wind direction	Tens of degrees WMO Code 0877	Ship's Anemometer Bendix Model 120/135		
Wind Speed	Knots	Ship's compass		
Wave direction	Tens of degrees WMO Code 0877	Visual estimate		
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		
Seacher	WMO Code 0877	Visual estimate		
Cloud type	WMO Codes 0513, 0515, 0509	Visual estimate		

## 2

2025-04-13 (3:21)

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 KEY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p> <p>VCM346 Virginia Institute of Marine Science Hydrocarbon File Label = 'HYDRCB.010.BLM08B'</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 113</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 BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigators & Institution
Investigator	64	16	Chars	16A1	Responsible for data.
Blank	80	34	Bytes	34X	Blank



RECORD NAME Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (No. bits, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" File-type
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.)
Latitude	19	6	Bytes	3I2	Latitude (degrees, minutes, seconds)
Lathem	25	1	Char	A1	Hemisphere (-N or S)
Longitude	26	7	Bytes	I3, 2I2	Longitude (degrees, minutes, seconds)
Lonhem	33	1	Char	A1	Hemisphere (-E or W)
Time	34	3	Bytes	F3.1*	Station time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
Depth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	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
Sample code	52	1	Byte	I1	Sample type code: 1 Sediment 7=Neuston 2 Benthic 8=Dissolved Oxygen 3 Zooplankton bottom 4 Dissolved oxygen, surface 5 Particulate, surface 6=Surface film 9=Particulate, bottom
Replicate	53	2	Chars	A2	Replicate number (sediment only)
Znumb	55	4	Bytes	I4	Zooplankton collection number
Species	59	10	Chars	10A1	Species code (NODC code)
Pris/Phy	69	5	Bytes	E5.2*	Pristane/phytane ratio (E notation 9 999+9)
Phy/C18	74	5	Bytes	E5.2*	Phytane/C18 ratio (E notation 9 999+9)
Pris/C17	79	5	Bytes	E5.2*	Pristane/C17 ratio (E notation 9 999+9)
Total extract	84	6	Bytes	E6.3*	Total extract weight** (E notation 9 999+9)
CPI	90	6	Bytes	E6.3*	(E notation 9 999+9) (C23+C25+C27+C29)/ (C24+C26+C28+C30)

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

\*\*Units are defined by sample type code 1, 2, 3, & 7 in  $\mu\text{gm/gm}$ ; 4, 5, & 8 in  $\mu\text{gm/liter}$ ; 6 in  $\mu\text{gm/m}^2$

# RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1 (Continued)

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., 000, 0000)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
Blank	96	6	Bytes	6X	Blank
GC aliph	102	6	Bytes	E6.3*	Total GC aliphatic** (E notation 9 <sup>999</sup> +9)
GC arom	108	6	Bytes	E6.3*	Total GC aromatic** (E notation 9 <sup>999</sup> +9)

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

\*\*Units are defined by sample type code: 1, 2, 3 & 7 in ugm/gm  
4, 5 & 8 in ugm/liter  
6 in ugm/m<sup>2</sup>

# RECORD FORMAT DESCRIPTION

REC NAME

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN FIELD  (e.g., bits, 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	100	Bytes	100X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"(13" (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	WMO code 0877; tens of degrees
Wind Speed	32	2	Bytes	I2	Knots
Wave Direction	34	2	Bytes	I2	WMO code 0877; 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513,0515,0509
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	58	Bytes	58X	Blank

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

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	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
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
Data Record					
File type	1	3	Chars	A3	"010" (constant)
File date	4	6	Bytes	3I2	year, month, day of file generation
Record type	10	1	Char	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of this record type within sample
Sample	14	5	Chars	5A1	Sample identifier (14-15 station code)
No.	19	2	Bytes	I2	Number of concentrations in this record (up to 10)
Extract	21	1	Char	A1	Extract Code H=Aliphatic B=Aromatic
Retention	22	4	Bytes	I4	Retention index**
Concentration	26	5	Bytes	E5.2*	Concentration (E notation 9.99-9)
Retention	31	4	Bytes	I4	Retention index**
Concentration	35	5	Bytes	E5.2*	Concentration
Retention	40	4	Bytes	I4	Retention index**
Concentration	44	5	Bytes	E5.2*	Concentration
Retention	49	4	Bytes	I4	Retention index**
Concentration	53	5	Bytes	E5.2*	Concentration
Retention	58	4	Bytes	I4	Retention index**
Concentration	62	5	Bytes	E5.2*	Concentration
Retention	67	4	Bytes	I4	Retention index**
Concentration	71	5	Bytes	E5.2*	Concentration
Retention	76	4	Bytes	I4	Retention index**
Concentration	80	5	Bytes	E5.2*	Concentration
Retention	85	4	Bytes	I4	Retention index**
Concentration	89	5	Bytes	E5.2*	Concentration
Retention	94	4	Bytes	I4	Retention index**
Concentration	98	5	Bytes	E5.2*	Concentration
Retention	103	4	Bytes	I4	Retention index**
Concentration	107	5	Bytes	E5.2*	Concentration
Blank	112	2	Bytes	2X	Blank

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

\*\*Analytical Chemistry, Vol. 36, No. 8, July, 1964, pp 31A-41A.

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>Data Record Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
<u>File Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	100	Bytes	100X	Blank
					*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
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#### 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

## 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.

BLM08B, BLM08W

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 NEED (✓)	
Neil Brown Inst. CTD MK III	July, 1977	✓			✓				
Beckman Minds D.O. Sensor	July, 1977	✓			✓				
Guildline Autosac MOD8400	July, 1977	✓			✓				

VIMS

## DATA DOCUMENTATION FORM

HYDREB.010.BLM-08T

NOAA FORM 24-13

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-7651

5/17/78

TR

1

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.

TR 3041

## 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			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
		BLM08T	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
Cape Henlopen	Ship	PLATFORM OPERATOR	FROM: MO/DAY/YR TO: MO/DAY/YR
		Cape Henlopen Univ. of Delaware	09/07/77 09/15/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR _____ MONTH _____		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.	
9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?) <input 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) Mr. Gerald L. Engel VIMS Institute of Marine Science Gloucester Pt., 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 hr.	Wrist Watch checked daily with WWV		
Water depth	to nearest tenth of a meter	Fathometer		
Water sample depth	to nearest meter	G. M. Meter Wheel		
Surface water temperature	to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	Millibars, tens to tenths	Danforth Aneroid Barometer Model 310		
Dry-bulb air temperature	to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	Tens of degrees WMO Code 0877	Ship's Anemometer Bendix Model 120/135		
Wind Speed	Knots	Ship's Anemometer Bendix 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		



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>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>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 KEY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p> <p>VCM347 Virginia Institute of Marine Science Hydrocarbon File Label = 'HYDRCB.010.BLM08T'</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>12. PHYSICAL BLOCK LENGTH IN BYTES 113</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 BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES  (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigators & Institution
Investigator	64	16	Chars	16A1	Responsible for data.
Blank	80	34	Bytes	34X	Blank

# RECORD FORMAT DESCRIPTION

RECORD NAME

Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., 100, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" File-type
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.)
Latitude	19	6	Bytes	3I2	Latitude (degrees, minutes, seconds)
Lathem	25	1	Char	A1	Hemisphere (-N or S)
Longitude	26	7	Bytes	I3, 2I2	Longitude (degrees, minutes, seconds)
Lonhem	33	1	Char	A1	Hemisphere (-E or W)
Time	34	3	Bytes	F3.1*	Station time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
Depth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	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 Sample type code: 1=Sediment 7=Neuston 2=Benthic 8=Dissolved Oxygen 3=Zooplankton bottom 4=Dissolved oxygen, surface 5=Particulate, surface 6=Surface film 9=Particulate, bottom
Sample code	52	1	Byte	I1	Sample type code: 1=Sediment 7=Neuston 2=Benthic 8=Dissolved Oxygen 3=Zooplankton bottom 4=Dissolved oxygen, surface 5=Particulate, surface 6=Surface film 9=Particulate, bottom
Replicate	53	2	Chars	A2	Replicate number (sediment only)
Znumb	55	4	Bytes	I4	Zooplankton collection number
Species	59	10	Chars	10A1	Species code (NODC code)
Pris/Phy	69	5	Bytes	E5.2*	Pristane/phytane ratio (E notation 9.99+9)
Phy/C18	74	5	Bytes	E5.2*	Phytane/C18 ratio (E notation 9.99+9)
Pris/C17	79	5	Bytes	E5.2*	Pristane/C17 ratio (E notation 9.99+9)
Total extract	84	6	Bytes	E6.3*	Total extract weight** (E notation 9.999+9)
CPI	90	6	Bytes	E6.3*	(E notation 9.999+9) (C23+C25+C27+C29)/ (C24+C26+C28+C30)

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

\*\*Units are defined by sample type code 1, 2, 3, & 7 in µgm/gm; 4, 5, & 8 in µgm/liter; 6 in µgm/m<sup>2</sup>

# RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1 (Cont Inset)

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., 100, bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
Blank	96	6	Bytes	6X	Blank
GC aliph	102	6	Bytes	E6.3*	Total GC aliphatic** (E notation 9 <sup>999</sup> +9)
GC arom	108	6	Bytes	E6.3*	Total GC aromatic** (E notation 9 <sup>999</sup> +9)
<p>*Decimal place is implied; "period" is not present</p> <p>**Units are defined by sample type code: 1, 2, 3 &amp; 7 in ugm/gm 4, 5 &amp; 8 in ugm/liter 6 in ugm/m<sup>2</sup></p>					

# RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN BYTES  (e.g., bits, 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	100	Bytes	100X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"(1)" (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 0877; 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513,0515,0509
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	58	Bytes	58X	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 (e.g., bits, bytes)	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
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
Data Record					
File type	1	3	Chars	A3	"010" (constant)
File date	4	6	Bytes	3I2	year, month, day of file generation
Record type	10	1	Char	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of this record type within sample
Sample	14	5	Chars	5A1	Sample identifier (14-15 station code)
No.	19	2	Bytes	I2	Number of concentrations in this record (up to 10)
Extract	21	1	Char	A1	Extract Code H=Aliphatic B=Aromatic
Retention	22	4	Bytes	I4	Retention index**
Concentration	26	5	Bytes	E5.2*	Concentration (E notation 9.99-9)
Retention	31	4	Bytes	I4	Retention index**
Concentration	35	5	Bytes	E5.2*	Concentration
Retention	40	4	Bytes	I4	Retention index**
Concentration	44	5	Bytes	E5.2*	Concentration
Retention	49	4	Bytes	I4	Retention index**
Concentration	53	5	Bytes	E5.2*	Concentration
Retention	58	4	Bytes	I4	Retention index**
Concentration	62	5	Bytes	E5.2*	Concentration
Retention	67	4	Bytes	I4	Retention index**
Concentration	71	5	Bytes	E5.2*	Concentration
Retention	76	4	Bytes	I4	Retention index**
Concentration	80	5	Bytes	E5.2*	Concentration
Retention	85	4	Bytes	I4	Retention index**
Concentration	89	5	Bytes	E5.2*	Concentration
Retention	94	4	Bytes	I4	Retention index**
Concentration	98	5	Bytes	E5.2*	Concentration
Retention	103	4	Bytes	I4	Retention index**
Concentration	107	5	Bytes	E5.2*	Concentration
Blank	112	2	Bytes	2X	Blank

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

\*\*Analytical Chemistry Vol. 36, No. 8, July, 1964, pp 31A-41A.



# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>Data Record Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
<u>File Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	100	Bytes	100X	Blank
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BLM08T

INSTRUMENT TYPE (SER., 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 (✓)	
Guildline Autosac MCD8400	July, 1977	✓			✓				

VCM 349

VIMS

ACCESSION  
NUMBER

78-0386

5/17/78

## DATA DOCUMENTATION FORM

HYDREC.010.BLM08W

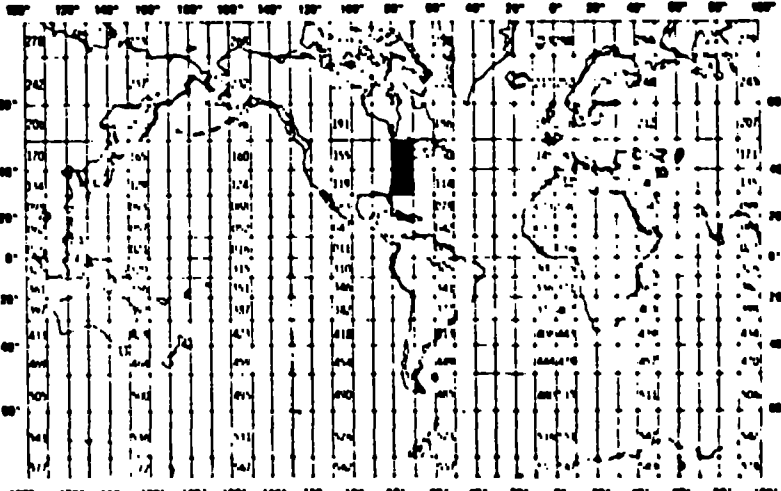
NOAA FORM 24-13  
(4-72)U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEANOGRAPHIC DATA CENTER  
RECORDS SECTION  
ROCKVILLE, MARYLAND 20852FORM APPROVED  
O.M.B. No. 41-R2051

TR3042

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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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			
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH DATA WERE COLLECTED		3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT	
BLM		BLM08W	
4. PLATFORM NAME(S)	5. PLATFORM TYPE(S) (E.G., SHIP, BUOY, ETC.)	6. PLATFORM AND OPERATOR NATIONALITY(IES)	7. DATES
H.J.W. Fay	Ship	PLATFORM OPERATOR	FROM: MO/DAY/YR TO: MO/DAY/YR
		H.J.W. Fay Tracor Marine	08/19/77 08/31/77
8. ARE DATA PROPRIETARY? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES IF YES, WHEN CAN THEY BE RELEASED FOR GENERAL USE? YEAR _____ MONTH _____		11. PLEASE DARKEN ALL MARSDEN SQUARES IN WHICH ANY DATA CONTAINED IN YOUR SUBMISSION WERE COLLECTED.  GENERAL AREA	
9. ARE DATA DECLARED NATIONAL PROGRAM (ONP)? (I.E., SHOULD THEY BE INCLUDED IN WORLD DATA CENTERS HOLDINGS FOR INTERNATIONAL EXCHANGE?) <input 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 Va. Institute of Marine Science Gloucester Pt., 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 hr.	Wrist watch checked daily with WWV		
Water depth	to nearest tenth of a meter	EDO Model 551 Recorder EDO Model 444 Transceiver		
Water sample depth	to nearest meter	CTD Neil Brown MK III		
Surface water temperature	to nearest tenth	Mercury in glass stem thermometer		
Barometric pressure	Millibars, tens to tenths	Danforth Aneroid Barometer Model 310		
Dry-bulb air temperature	to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wet-bulb air temperature	to nearest tenth	Aspirated Psychrometer Bendix Model 566		
Wind direction	Tens of degrees IMO Code 0877	Ship's Anemometer Bendix Model 120/135		
Wind Speed	knots	Ship's Anemometer Bendix Model 128/135		
Wave direction	Tens of degrees IMO Code 0877	Ship's compass		
Wave height	1-2 meters IMO Code 1555	Visual estimate		
Swell direction	Tens of degrees IMO Code 0877	Ship's compass		
Swell height	1-2 meters IMO Code 1555	Visual estimate		
Seastrer	IMO Code 4000	Visual estimate		
Cloud type	IMO Codes 0513, 0515, 0509	Visual estimate		

## B. SCIENTIFIC CONTENT

[illegible]

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 KEY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)</p> <p>VCM349 Virginia Institute of Marine Science Hydrocarbon File Label = 'HYDRCB.010.BLM08W'</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 113</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 BYTES (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES  (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" file type
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 identify (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 (left-justified)
Senior scientist	45	19	Chars	19A1	Investigators & Institution
Investigator	64	16	Chars	16A1	Responsible for data.
Blank	80	34	Bytes	34X	Blank



# RECORD FORMAT DESCRIPTION

RECORD NAME

Sample Header 1

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (e.g., 000, 000, 000)	16. LENGTH		17. AYYNIBOYES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
File type	1	3	Chars	A3	"010" File-type
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.)
Latitude	19	6	Bytes	3I2	Latitude (degrees, minutes, seconds)
Lathem	25	1	Char	A1	Hemisphere (-N or S)
Longitude	26	7	Bytes	I3, 2I2	Longitude (degrees, minutes, seconds)
Lonhem	33	1	Char	A1	Hemisphere (-E or W)
Time	34	3	Bytes	F3.1*	Station time (GMT to nearest tenth of an hour)
Date	37	8	Bytes	2(I2,A1)I2	Sample date in form xx/xx/xx (year, month, day)
Depth	45	5	Bytes	F5.1*	Water depth (to nearest tenth of a meter)
Navigation	50	2	Bytes	I2	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 Sample type code: 1=Sediment 7=Neuston 2=Benthic 8=Dissolved Oxygen 3=Zooplankton bottom 4=Dissolved oxygen, surface 5=Particulate, surface 6=Surface film 9=Particulate, bottom
Sample code	52	1	Byte	I1	Replicate number (sediment only)
Replicate	53	2	Chars	A2	Zooplankton collection number
Znumb	55	4	Bytes	I4	Species code (NODC code)
Species	59	10	Chars	10A1	Pristane/phytane ratio (E notation 9.99+9)
Pris/Phy	69	5	Bytes	E5.2*	Phytane/C18 ratio (E notation 9.99+9)
Phy/C18	74	5	Bytes	E5.2*	Pristane/C17 ratio (E notation 9.99+9)
Pris/C17	79	5	Bytes	E5.2*	Total extract weight** (E notation 9.999+9)
Total extract	84	6	Bytes	E6.3*	(E notation 9.999+9) (C23+C25+C27+C29)/ (C24+C26+C28+C30)
CPI	90	6	Bytes	E6.3*	

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

\*\*Units are defined by sample type code 1, 2, 3, & 7 in µgm/gm; 4, 5, & 8 in µgm/liter; 6 in µgm/m<sup>2</sup>

# RECORD FORMAT DESCRIPTION

RECORD NAME Sample Header 1 (continued)

14. FIELD NAME	15. POSITION FROM -1 MEASURED IN (No. 000, Bytes)	16. LENGTH		17. ATTRIBUTES (FORTRAN)	18. USE AND MEANING
		NUMBER	UNITS		
Blank	96	6	Bytes	6X	Blank
GC aliph	102	6	Bytes	E6.3*	Total GC aliphatic** (E notation 9 <sup>999</sup> +9)
GC arom	108	6	Bytes	E6.3*	Total GC aromatic** (E notation 9 <sup>999</sup> +9)
<p>*Decimal place is implied; "period" is not present</p> <p>**Units are defined by sample type code: 1, 2, 3 &amp; 7 in ugm/gm 4, 5 &amp; 8 in ugm/liter 6 in ugm/m<sup>2</sup></p>					

# RECORD FORMAT DESCRIPTION

RECORD NAME

14. FIELD NAME	15. POSITION	16. LENGTH		17. ATTRIBUTES  (FORTRAN)	18. USE AND MEANING
	FROM -1	NUMBER	UNITS		
	MEASURED IN BYTES  (e.g., bit, bytes)				
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	100	Bytes	100X	Blank
Sample Header Record 2					
File type	1	3	Chars	A3	"(1)" (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 0877; 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 4677
Cloud type	42	3	Bytes	I3	WMO codes 0513,0515,0509
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	58	Bytes	58X	Blank

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

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN (e.g., bits, bytes)	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
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
Data Record					
File type	1	3	Chars	A3	"010" (constant)
File date	4	6	Bytes	3I2	year, month, day of file generation
Record type	10	1	Char	A1	"4" (data record)
Sequence	11	3	Bytes	I3	Sequence of this record type within sample
Sample	14	5	Chars	5A1	Sample identifier (14-15 station code)
No.	19	2	Bytes	I2	Number of concentrations in this record (up to 10)
Extract	21	1	Char	A1	Extract Code H=Aliphatic B=Aromatic
Retention	22	4	Bytes	I4	Retention index**
Concentration	26	5	Bytes	E5.2*	Concentration (E notation 9 <sup>99</sup> 9
Retention	31	4	Bytes	I4	Retention index**
Concentration	35	5	Bytes	E5.2*	Concentration
Retention	40	4	Bytes	I4	Retention index**
Concentration	44	5	Bytes	E5.2*	Concentration
Retention	49	4	Bytes	I4	Retention index**
Concentration	53	5	Bytes	E5.2*	Concentration
Retention	58	4	Bytes	I4	Retention index**
Concentration	62	5	Bytes	E5.2*	Concentration
Retention	67	4	Bytes	I4	Retention index**
Concentration	71	5	Bytes	E5.2*	Concentration
Retention	76	4	Bytes	I4	Retention index**
Concentration	80	5	Bytes	E5.2*	Concentration
Retention	85	4	Bytes	I4	Retention index**
Concentration	89	5	Bytes	E5.2*	Concentration
Retention	94	4	Bytes	I4	Retention index**
Concentration	98	5	Bytes	E5.2*	Concentration
Retention	103	4	Bytes	I4	Retention index**
Concentration	107	5	Bytes	E5.2*	Concentration
Blank	112	2	Bytes	2X	Blank

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

\*\*Analytical Chemistry Vol. 36, No. 8, July, 1964, pp 31A-41A.

# RECORD FORMAT DESCRIPTION

RECORD NAME \_\_\_\_\_

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN _____ (e.g., bits, bytes)	16. LENGTH		17. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
<u>Data Record Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"998" (constant)
Blank	14	100	Bytes	100X	Blank
<u>File Terminator</u>					
Ident	1	10	Bytes	A3,3I2,A1	Same as Data Record
Sequence	11	3	Chars	A3	"999" (constant)
Blank	14	100	Bytes	100X	Blank
					*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

## 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 IPE (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.

BLM08B, BLM08W

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, 1977	✓			✓				
Beckman Minds D.O. Sensor	July, 1977	✓			✓				
Guildline Autosac MOD8400	July, 1977	✓			✓				

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
7800386	F004	TR3033	0084	3128	31FY	1977/05/30	BLM07B	306991
7800386	F004	TR3034	0084	3128	31FY	1977/05/17	BLM07W	306992
7800386	F004	TR3035	0084	3128	31FY	1977/08/03	BLM08B	306993
7800386	F004	TR3036	0084	3128	31FY	1977/08/19	BLM08W	306994
7800386	F144	TR3037	0084	3128	31FY	1977/05/30	BLM07B	306995
7800386	F144	TR3038	0084	3128	32CW	1977/05/16	BLM07T	306996
7800386	F144	TR3039	0084	3128	31FY	1977/05/17	BLM07W	306997
7800386	F144	TR3040	0084	3128	31FY	1977/08/03	BLM08B	306998
7800386	F144	TR3041	0084	3128	32CW	1977/09/07	BLM08T	306999
7800386	F144	TR3042	0084	3128	31FY	1977/08/19	BLM08W	307000

(10 rows affected)



Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
-----	-----	-----	-----	-----	-----	-----	-----
7800386	F004	TR3033	31FY	112	0	77/05/30	77/06/05
7800386	F004	TR3034	31FY	111	0	77/05/17	77/05/28
7800386	F004	TR3035	31FY	147	0	77/08/03	77/08/17
7800386	F004	TR3036	31FY	95	0	77/08/19	77/08/31
7800386	F144	TR3037	31FY	16	0	77/05/30	77/06/05
7800386	F144	TR3038	32CW	9	0	77/05/16	77/05/21
7800386	F144	TR3039	31FY	13	0	77/05/17	77/05/28
7800386	F144	TR3040	31FY	16	0	77/08/03	77/08/17
7800386	F144	TR3041	32CW	9	0	77/09/07	77/09/15
7800386	F144	TR3042	31FY	13	0	77/08/19	77/08/31

(10 rows affected)