DDF-B:1:08

DATA DOCUMENTATION FORM

TR 3880

NOAA FORM 24-13 (4-72)

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

FORM APPROVED O.M.B. No. 41-R2651

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

A. ORIGINATOR IDENTIFICATION

THIS SECTION MUST BE COMPLETED BY DONOR FOR ALL DATA TRANSMITTALS

1. NAME AND ADDRESS OF IN	ISTITUTION, LABOR	ATORY, OF	R ACTIVITY WIT	H WHICH SUBM	ITTED DATA AF	RE ASSOCIATED		
Dr. D.W.S. Westla Department of Mic University of Alb Edmonton, Alberta	robiology, erta,							
2. EXPEDITION, PROJECT, OR PROGRAM DURING WHICH 3. CRUISE NUMBER(S) USED BY ORIGINATOR TO IDENTIFY DATA IN THIS SHIPMENT								
Sixth Sampling Tr	ip			13 SHIFMEN				
Puget Sound, Wash beaches. (MESA)	nington, waters	and	TRIPO	6		:		
4. PLATFORM NAME(S)	5. PLATFORM TYPI	E(S)	6. PLATFORM A	NDOPERATOR	7. DA	TES		
	(E.G., SHIP, BUO	Y, ETC.)	NATIONALIT					
NA NA	l NA		PLATFORM	OPERATOR	FROM: MO,DAY,YR	TO: MO,DAY,YP		
		. •	NA	NA	8/13/78	8/14/78		
8. ARE DATA PROPRIETARY	<u>! </u>	11. PLEAS	SE DARKEN ALI	L MARSDEN SQI	JARES IN WHIC	H ANY DATA		
X NO YES		CONT	AINED IN YOUR	SUBMISSION WI	ERE COLLECTE	ED.		
IF YES, WHEN CAN TH FOR GENERAL USE?		GENERAL AREA						
9. ARE DATA DECLARED NATE PROGRAM (DNP)?	TIONAL	100" 120"	140. 180. 180. 180. 140	- 120° 100° 40° 80°	40° 20° 0° 20° 4	FD. 80. 80. 100.		
(I.E., SHOULD THEY BE IN		278	A-20 100	De la Constantina	333:55	25: 61 1/2/27		
TIONAL EXCHANGE?)		80.	237		217 83 / 2 1	7 242 10 242		
NO YES PART	T (SPECIFY BELOW)	208	4 - 1 - 1	101 7		212 20:		
1		40. 170	160	155 55		0.16 \$ 0 117:		
<u></u>		 	093 088	119 1114 C33 C78	(273,105)	104 00:		
10. PERSON TO WHOM INQUIRE	ES CONCERNING		057 052 021 016	011	DC:1036	02 07		
DATA SHOULD BE ADDRESS PHONE NUMBER (AND ADD		20 361	200 315 U 566 351	310 23	300:335	20°		
THAN IN ITEM-1)		77	1972 3327 423 423	382 377 415 (3	1 1574,441	1030		
Dr. Westlake		40*	U464 450	454		497 .475		
(403)432-3277		80- 505	500 495	490 KES	450 115	511 -55: 80		
		5017-1-4	530.	520 521	1510,554	12 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -		
		577 120° 1		. 150. 100. 60. 60.	40 29 . 0 20	.553 1 1 1573. Lg. 60. 60. 100		

		B. SCIENTIFIC C	CONTENT	_
NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF ODSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
salinity	parts per thousand	Yellow Springs SCT meter #33	not applicable	no processing
water temperature	°C	Yellow Spring SCT meter + #33	not applicable	no processing
acidity	pH (NBS)	Radiometer pH meter #29	not applicable	no processing
dissolved oxygen	parts per million	Yellow Springs Oxygen meter #57	not applicable	no processing
bacterial count	number/ml or number/g (dry weight)	not applicable	standard plate count procedure medium: (per litre distilled water) NaCl, 23.4g; KCl, 0.75g; MgSO4·7H ₂ O, 7.0g; Peptone, lg; Yeast extract, lg; Agar 2Og. Temperature of incubation is given in Data Record I. The time of incubation depends on the temperature and is summarized below: Temperature(°C) Time (Days) 8 21 or 28 14 21 20 or 30 7	
H ₂ S from SO ₄ [™]	O=absence l=present	Deposition of FeS on Iron nail in medium	Modified Butlin's medium (Fedorak, M.Sc. Thesis, University of Alberta). Incubation temperature:22°C Incubation time: 21 days	none
H ₂ S from SO ₃ ⁼ and/or SO ₄ ⁼	O=absence l=present	Deposition of FeS on Iron nail in medium	Modified Butlin's medium plus Na ₂ SO ₃ . Incubation temperature:22°C Incubation time: 21 days	none

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
Degradation of Prudhoe Bay oil	·	Varian aerograph gas chromatograph model 1740. 20 ft. x 1/8" stainless steel column, 3% SE30 Ultraphase on chromosorb W(AW-DMCS) 80/100 mesh. Carrier gas N ₂ at 15 ml/min. Program 50°C for 2 min, 50° to 300°C at 10°/min, held at 300° for 20 min.	Crude oil plus 200 ml sea water without and with lamg PO and 0.2g NH NO3 added. Crude oil plus log sand in 200 ml of solution containing (per litre), NaCl, 23.4g; KCl, 0.75g; MgSO4 · 7H2O, 7.0g (without or with PO4 and NH4NO3 added as above). Amount of oil, temperature and time of incubation are given in data records. Pentane extract injected in GLC column.	visual; loss of n-alkane peaks
Kjeldahl-N	μg/unit (see file 059 unit code)	not applicable	Methods of Soil Analysis Part 2 Chemicals and Micro- biological Properties. American Society of Agron- pmy (1965).	none
Available -P	µg/unit (see file 059 unit code)	not applicable	Extraction: Methods of Soil Analysis Part 2. Chemical and Micro- biological Properties. American Society of Agronomy (1965) Analysis: Standard Methods for the Examination of Water and Wastewater. 14th Ed. Amer. Public Health Assoc. (1976) Method 425F. min detectable limit 0.05 µg/g	None
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B. SCIENTIFIC THENT

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
Bacterial Taxonomy	NODC Taxonomy Code	Isolates were picked on the basis of colonial morphol- ogy on the plates used to determine the bacterial count.	Gram stain; microscope morphology; oxidase and catalase activity; glucose and lactose utilization (aerobically and anaerobic- ally); motility, by wet mount; spore test by heating	none
Suspended solids	mg/1	not applicable	Standard Methods for the Examination of Water and Wastewater. 14th Ed. American Public Health Assoc. (1976)	means of replicates
Mineralization rate with radio-active substrate		Searle 6881-C Mark III Analytic Scindulation Country	Replicate stoppered flasks contain 25 ml of sample (water column undiluted or 1:3 dilutions of sediment) were incubated (plus N and P with shaking at 8° in the presence of 14C-1-naphthalene or hexadecane) and Prudhoe Bay oil. At appropriate times a culture in one of these flasks was acidified to stop bacterial action and to release CO ₂ ; CO ₂ trapping agent was added and the agent counted in Monophase-40 fluor. Corrected using ESP method (external standardization). Blanks are identical to test flasks, but are poisoned with HgCl ₂ before incubation.	taking into account blanks, sample dilutions and specific activity of the labelled compound (diluted by cold substrate in crude oil).

				
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
Total organic-C	μg/unit (see file 059 unit code)	Beckman Model 915A Total organic carbon analyzer	Standard Methods for the Examination of Water and Wastewater, 14th Ed. APHA (1976) Method 505	mean of replicates
Ammonia-N	μg/unit (see file 059 unit code)	not applicable	Watersamples: Standard Methods for the Examination of Water and Wastewater. 14th Edition APHA. (1976). Methods 418A and 418B. Min detection level 100 µg/l. Solid samples (i.e. sand): (a) distillation using 2N KCl and MgO. Methods of Soil Analysis. Part 2. American Society of Agronomy (1965). (b) analysis, method 418B above, min detectable level. 3 µg/g	none
Nitrate -N	µg/unit (see file 059 unit code)	not applicable	Water samples: Standard Methods for the Examination of Water and Wastewater.14th Ed. APHA (1976) Method 419D. Solid samples: (a) extraction using 0.2% CaSO4. Methods of Soil Analysis. Part 2. American Society of Agronomy (1965). (b) Analysis Method 419D above.	none

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
Grease and Oil	µg/unit (see file 059 unit code)	not applicable	Standard Methods for the Examination of Water and Wastewater. 14 Ed. APHA (1976). Water samples - Method 502B. Solid samples - Method 502D.	None
Total Ortho	µg/unit (see file 059 unit code)	not applicable	Standard Methods for the Examination of Water and Wastewater. 14 Ed. APHA (1976). Method 425F.	None
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File 059 Mic	robiological Degradation	n Format
Only the fol Header, (c) Record IX.	lowing record types were Text Record, (d) Data Ro	e used: (a) File Header, (b) Station ecord 1, (e) Data Record II, (f) Data
GIVE BRIEF DESCRIF	PTION OF FILE ORGANIZATION	
File sorted sequence	by station number and s	equence number to obtain proper
punch cards as outline une	·	at NODE with tape characteristics below.
· · · · · · · · · · · · · · · · · · ·	PRESSED IN PL-1 X FORTRAN	LANGUAGE
. RESPONSIBLE COMPI	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed	lorak - 403-432-3670
. RESPONSIBLE COMPI NAME AND ADDRESS _ COMPLETE THIS	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed	LANGUAGE dorak - 403-432-3670 ogy, University of Alberta, Edmonton, Alber
. RESPONSIBLE COMPI NAME AND ADDRESS _ COMPLETE THIS	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol	LANGUAGE dorak - 403-432-3670 ogy, University of Alberta, Edmonton, Alber
RESPONSIBLE COMPI NAME AND ADDRESS _ COMPLETE THIS	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY	LANGUAGE dorak - 403-432-3670 logy, University of Alberta, Edmonton, Albertic tape 19. Length of Inter-
. RESPONSIBLE COMPI NAME AND ADDRESS _ COMPLETE THIS	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN	LANGUAGE dorak - 403-432-3670 logy, University of Alberta, Edmonton, Alberta in the second Gap (IF KNOWN) 3/4 INCH
COMPLETE THIS	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII EBCDIC	LANGUAGE dorak - 403-432-3670 logy, University of Alberta, Edmonton, Albertic tape 9. Length of Inter-RECORD GAP (IF KNOWN) 3/4 INCH
COMPLETE THIS	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII SECOIC S SEVEN	LANGUAGE dorak - 403-432-3670 logy, University of Alberta, Edmonton, Alberta in the second Gap (If Known) 3/4 Inch
. RESPONSIBLE COMPINAME AND ADDRESS _ COMPLETE THIS SOLUTION OF THE COMPINE OF TRACKS	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII EBCDIC	Iorak - 403-432-3670 logy, University of Alberta, Edmonton, Albertic tape 9. Length of Inter-Record Gap (IF KNOWN) 3/4 INCH 10. END OF FILE MARK 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER)
RESPONSIBLE COMPINAME AND ADDRESS _ COMPLETE THIS SERVICE THIS SERVICE THIS SERVICE THIS SERVICE THIS SERVICE THACKS (CHANNELS)	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII SECOIC S SEVEN	Identify of Alberta, Edmonton, Alberta, University of Alberta, Edmonton, Edmonto
. RESPONSIBLE COMPINAME AND ADDRESS _ COMPLETE THIS SERVICES. RECORDING MODE S. NUMBER OF TRACKS (CHANNELS)	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII SECOIC S SEVEN	Identify of Alberta, Edmonton, Alberta (Inches Processing of Alberta) (Inches Inches Processing of Alberta) (Inches Inches Inche
RESPONSIBLE COMPINAME AND ADDRESS _ COMPLETE THIS SO, RECORDING MODE NUMBER OF TRACKS (CHANNELS)	X FORTRAN UTER SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII SEBCDIC S SEVEN NINE	Identify of Alberta, Edmonton, Alberta (Inches Processing of Alberta) (Inches Inches Processing of Alberta) (Inches Inches Inche
RESPONSIBLE COMPINAME AND ADDRESS _ COMPLETE THIS SO, RECORDING MODE NUMBER OF TRACKS (CHANNELS)	Type of the second section if data are on magning ascii second se	Identify of Alberta, Edmonton, Alberta (Inches Processing of Alberta) (Inches Inches I
COMPLETE THIS SO. RECORDING MODE NUMBER OF TRACKS (CHANNELS)	TYPE SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII EBCDIC S SEVEN NINE 200 BPI 1600 BPI	Identify of Alberta, Edmonton, Alberta (Include originator name and some Lay specifications of Data type, volume number) Vol = Ser = 07750 (o/c for QUADI) Vol = Ser = 05405 (o/c for QUADI)
COMPLETE THIS SECOND MODE COMPLETE THIS SECONDING MODE NUMBER OF TRACKS (CHANNELS)	Type of the state	Identify of Alberta, Edmonton,
A. RESPONSIBLE COMPINAME AND ADDRESS _ COMPLETE THIS SECONDING MODE	TYPE SPECIALIST: PHONE NUMBER Phil Fed Department of Microbiol SECTION IF DATA ARE ON MAGN BCD BINARY ASCII EBCDIC S SEVEN NINE 200 BPI 1600 BPI	Iorak - 403-432-3670 logy, University of Alberta, Edmonton, Albertic tape 9. Length of Inter-Record Gap (If known) 3/4 Inch 10. END OF FILE MARK 11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) FTP *059 Vol = Ser = 07750 (0-ig.) Vol = Ser = 054-05 (0/c for QUADI)

RECORD FORMAT DESCRIPTION
RECORD NAME File Header - Microbiological Degradation Format

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes	16. LEN	GTH	17. ATTRIBUTES	18. USE AND MEANING
	IN Bytes (e.g., bits, bytes)	NUMBER	UNITS		
File Type	1	3	Bytes	А3	Always '059'
File Identifier	14	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	Il	Always 'l'
Sampling Interval	11	17	Bytes	12,5(A1,12)	xx/xx/xx - xx/xx/xx Beginning yr/mo/day; Ending yr./mo./day
Investigator/	28	53	Bytes	53A1	Left justified text
Institution					•
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RECORD FORMAT DESCRIPTION

RECORD NAME Station Header - Microbiological Degradation Format 12-16-77

14. FIELD NAME	15. POSITION FROM - 1 . MEASURED	16. LEN	GTH	17. ATTRIBUTES	18. USE AND MEANING
·	IN Bytes	NUMBER	STINU		
File Type	· 1	3	Bytes	A3	Always '059'
File Identifier	. 4	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10	ı	Bytes	11 .	Always '2'
Station Number	11	5	Bytes	A5	File 100 station code may be use
Sample Site Number	16	3	Bytes	A3	Originator's sample designator.
Date, (GMT)					•
Year	19	2	Bytes		00-99
Month	21	2	Bytes		01-12
.Day	23	2	Bytes	I2	01-31
Time, (GMT)	05	2	Bytes	12	00-23
Hours Minutes	25 27	2	Bytes		00–59
Latitude,					
Degrees	29	2	Bytes	12	
Minutes	31	2	Bytes		
Seconds	33	2	Bytes	1	·
Hemisphere	35	1	Bytes	f .	'N' or 'S'
Longitude,	·			·	
Degrees	36	3	Bytes		
Minutes	39	2	Bytes		
Seconds	41	2	Bytes	12	
Hemisphere	43	1	Bytes	Al	'E' or 'W'
Weather ·	ի ի	j	Bytes	Al	WMO Code 4501
, Wave Height	45 ,	1	Bytes	Al	WMO Code 1555
Water Temperature	46	3	Bytes	13	Degrees C. to tenths
Salinity	49	3	Bytes	13	Parts/thousand to tenths ·
рH	52	3	Bytes	13	pH units to tenths
рн Scale	55	1	Bytes	11	1 NBS
•-					2 Sorenson 3 Hansson
Dissolved Oxygen	56	3	Bytes	13	
Habitat Code	59	3	Bytes	3 A 1	Use file 100 Habitat Code

RECORD NAME Station Header - Microbiological Degradation Format (continued)

14. FIELD NAME 15. POSITION 16. LENGTH 17. ATTRIBUTES 18. USE AND MEANING FROM-1 MEASURED IN Bytes NUMBER UNITS (e.g., bite, bytes) Degrees C. to tenths 13 62 3 Bytes Beach Sample Temperature 65 15 Meters to tenths Water Depth 5 Bytes 8 8xBlank 70 Bytes Ascending numeric to order Sequence Number 78 3 Bytes 13 records within station

TOAL FORM 24-13

RECORD FORMAT DESCRIPTION

RECORD NAME Text Record - Microbiological Degradation Format

14. FIELD NAME	15. POSITION FROM-1 MEASURED IN BY TES	1	GTH	17. ATTRIBUTES	18. USE AND MEANING
	(e.g., bits, bytes)	NUMBER	UNITS		·
File Type	1	3	Bytes	А3	Always '059'
File Identifier	Ţŧ	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	11	Always '3'
Station Number	11	5	Bytes	A5	File 100 station code may be use
Sample Site Number	16	3	Bytes	A3	Originator's sample designator.
Text	19	59	Bytes	59A1	Descriptive information
Sequence Number	78	3 .	Bytes	13	Ascending numeric to order records within station
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14. FIELD NAME	15. POSITION FROM - 1 MEASURED		GTH	17. ATTRIBUTES	18. USE AND MEANING
	IN Bytes (e.g., blis, bytes)	NUMBER	UNITS		
File Type	1	3	Bytes	АЗ	Always '059'
File Identifier	Į,	6	Bytes	. A6	Unique cruise number or date (YYMMDD)
Record Type	10	1 .	Bytes	11	Always '4'
Station Number	11	5	Bytes	A5	File 100 station code may be use
Sample Site Number	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	
Treatment Code	20	1	Bytes	Αī	Use file 059 Treatment Code
Temperature of Incubation	21	3	Bytes	. 13	Degrees C. to tenths
Time of Incuba- tion	24	3	Bytes	. 13	Days to tenths
Ave. Bacterial Density	27	3	Bytes	13	Whole number (Per unit, byte 77)
Standard Devia- tion (For Plate Count)	30	3	Bytes	13	To tenths
Dilution Counted	33	2	Bytes	12	Always a minus sign in byte 33
Units	35	1	Bytes	Αī	Use File 059 Unit Code
Plate Count #1	. 36	3	Bytes	13	Whole numbers
Plate Count #2	39	3	Bytes	13	Whole numbers
Plate Count #3	42	3	Bytes	13	Whole numbers
Plate Count #.4	45	·3	Bytes	13	Whole numbers
Plate Count # 5	48	3	Bytes	13	Whole numbers
H ₂ S from SO ₄ =	51	ı	Bytes	Al	0 - absent
H ₂ S From SO _l = and/or SO ₃ =	52	1	Bytes	Al	1 - present 9 - sample not done
Kjeldahl - N	53	1 4	Bytes	ΙĻ	μg/unit (byte 35)
-CAA FORM 24-13	<u> </u>	L	L	L	<u> </u>

RECURD FURMAL DESCRIPTION SECORD NAME Data Record I - Microbiological Degradation Format (continued)

14. FIELD NAME	FROM-1	16. LEN	GTH	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED IN <u>Bytes</u> (e.g., bills, byles)	NUMBER	צדואט		
Total - P	57	4	Bytes	14	µg/unit (byte 35)
Total Organic -C	61	ц	Bytes	14 .	µg/unit (byte 35)
Suspended Solids	65	5	Bytes	A5	mg/l (three significant figures, sign for exponent, exponent - e.g. 123+2 = 12300)
Available - P	70	14	Bytes	Ιħ	µg/unit (byte 35)
Blank	714	3	Bytes	3x	
Unit for Average Bacterial Density (Bytes 27-29)	77	1	Bytes	Al	Use File 059 Unit Code
Sequence Number	78	3	Bytes	13	Ascending numeric to order records within station
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1. FIELD NAME	FROM-1	FROM - 1 MEASURED INDY CES		17. ATTRIBUTES	18. USE AND MEANING
	(e.g. bils, bylen)	NUMBER	UNITS		1
File Type	1	3	Bytes	А3	Always '059'
File Identifier	4	6	Bytes	. A 6	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	п	Always '5'
Station Number	11	5	Bytes	A5	File 100 station code may be used
Sample Site Number	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	
Treatment Code	20	1	Bytes	Al	Use File 059 Treatment Code
Temperature of Incubation	21	3	Bytes	13	Degrees C. to tenths
Time of Incuba- tion	24	3	Bytes	13	Days to tenths
Initial Oil Concentration	27	5	Bytes	15	mg/l to tenths
Degradation Code	32	ı	Bytes	Al	Use File 059 Degradation Code
Mineralization determined gravimetrically	33	4	Bytes	1 4	Percent weight loss to tenths (float sign if negative)
Rate	37	5	Bytes	I 5.	mg/week to hundredths
Nitrogen Supple- , ment	42	3	Bytes	13	To hundredths: Concentration of nutrient(s) as given in DDF
Phosphorous Supplement	le- 45	3	Bytes	13	is equal to concentration time this factor. Blank and 100 are equivalent and the factor equals 1.00 (000 means no supplement)
Incubation Temp- perature with Radioactive Substrate	48	3	Bytes	13	Degrees celsius to tenths
Mineralization Rate with Radio		5	Bytes	15	To thousandths: mg of selected compounds/unit (byte 56)/day
active bubsital	·	1			

. FIELD NAME	15. POSITION FROM - 1 MEASURED	l .	GTH	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED IN Bytes (e.g. bils, byles)	NUMBER	UNITS		!
Unit	56	1	Bytes	A1.	Use File 059 Unit Code
Radioactive Sub- strate	57	1	Bytes	Al	Use File 059 Substrate Code
Blank	58	20	Bytes	20x	
Sequence Number	78 ·	3	Bytes	13	Ascending numeric to order records
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14. FIELD NAME	15. POSITION FROM - 1	1	GTH	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED IN Bytes (c.g., bits, bytes)	NUMBER	UNITS		
·		,			
File Type	1	3	Bytes	· A3	Always '059'
File Identifier	14	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	11	Always '6'
Station Number	11	5	Bytes	A5	File 100 station code may be used
Sample Site Number	16	3	Bytes	АЗ	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	
Treatment Code	20	· 1	Bytes	Al ·	Use File 059 Treatment Code
Taxonomic Code	,21	10	Bytes	5A2	NODC Taxonomic Code
Number of Colonia types in this group	1 31	2	Bytes	12	Whole numbers
Percent of Average Density	33	2	Bytes	12	Whole numbers
Taxonomic Code	35	10	Bytes	5A2	NODC Taxonomic Code
Number of Colonia types in this group	11 45	2	Bytes	15	Whole numbers
Percent of Average Density	ge 47	2	Bytes	15	Whole numbers
Taxonomic Code	49 .	10	Bytes	5A2	NODC Taxonomic Code
Number of Colonia types in this group	1 59	2	Bytes	15	Whole numbers
Percent of Average Density	ge 61	2	Bytes	12	Whole numbers
Taxonomic Code	63	10	Bytes	5A2	NODC Taxonomic Code
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14. FIELD NAME	15. POSITION FROM - 1 MEASURED	٠ .	GTH	17. ATTRIBUTES	18. USE AND MEANING
	IN Bytes (e.g., bils, bylos)	NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '059'
File Identifier	ц	6 .	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	, II	Always '7'
Station Number	11	5	Bytes	A5	File 100 station code may be use
Sample Site Number	16	3	Bytes	АЗ.	Originator's sample designator.
Sample Type Code	19	1	Bytes	Al	·
Treatment Code	20	l	Bytes	Al	Use File 059 Treatment Code
Number of Colonia types which coul not be classifi	đ	2	Bytes	12	Whole numbers
Percent of Averag Density	e 23	2	Bytes	. I2	Whole numbers
Number of Colonia types which did not survive first transfer		2	Bytes	12	Whole numbers
Percent of Averag Density	e 27	2	Bytes	12	Whole numbers
Blank	29	49	Bytes	49x	
Sequence Number	78	3	Bytes	13	Ascending numeric to order records within station
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"CAA FORY 24-13				· ·	· · · · · · · · · · · · · · · · · · ·

RECORD FORMAT DESCRIPTION

RECORD NAME Data Record III - Microbiological Degradation Format (continued) /2-/6-7

14. FIELD NAME	15. POSITION FROM - 1 MEASURED	i	GTH	17, ATTRIBUTES	18. USE AND MEANING
	IN <u>Bytes</u> (e.g., bila, byler)	NUMBER	UNITS.		
Number of Colonia types in this group	1 73	2	Bytes	12	Whole numbers
Percent of Averag	e 75	2	Bytes	15	Whole numbers
Blank	77	ı	Bytes	lx	·
Sequence Number	78	3	Bytes	13	Ascending number to order records within station
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1:04 A FORM 24-13		<u></u>			

ECORD NAME Data Record V - Microbiological Degradation Format

4. FIELD NAME	15. POSITION FROM - 1 MEASURED			17. ATTRIBUTES	18. USE AND MEANING
	IN Bytes (c.g., bits, bytes)	NUMBER	UNITS	٠.	·
File Type	1	3	Bytes	13	Always '059'
File Identifier	ц	6 .	Bytes	A6	Unique cruise number or date (YYMMDD)
Record Type	10 .	1 .	Bytes	Il	Always '8'
Station Number	11 .	5	Bytes	A5	File 100 station code may be use
Sample Site Numbe	r 16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al .	
Treatment Code	20	1	Bytes	Al	Use file 059 Treatment Code
Sample Depth	21	5	Bytes	15	Meters to tenths
Sample Tempera- ture	26 ,	3	Bytes	13	Degrees C to tenths
рН	29	Ъ.	Bytes	14	pH units to hundredths
Eh	33 .	4	Bytes	14	Millivolts
°/ _o Moisture	37	3	Bytes	13	Percent to tenths; Sediment
ATP Concentration	40	6	Bytes	16·	Nanograms to tenths (per liter for water sample; per gram dry weight for sediment sample)
Glycolic Acid	46	Ц	Bytes	14	Micrograms to tenths (per liter for water sample; per gram dry weight for sediment sample)
Urea	50	5	Bytes	15	Micrograms to hundredths (per liter for water sample; per gram dry weight for sediment sample)
Core Length	55	3	Bytes	13	Centimeters to tenth (if sediment core taken)
Dry Weight Sedi- ment per ml Un- diluted Sea Wate	58 *	6	Bytes	16	Grams to ten thousandths
Elank	64	14	Bytes	14x	
Sequence Number	78	3	Bytes	13	Ascending numeric within station number

4-17-75

LCORD NAME Data Record VI - Microbiological Degradation Format

4. FIELD NAME	15. POSITION FROM - 1 MEASURED	16. LEN	<u>стн</u>	17. ATTRIBUTES	18. USE AND MEANING
	(c.4., bits, bytes)	NUMBER	UNITS		
File Type	1	3	Bytes	13	Always '059'
File Identifier	jt.	6	Bytes	A6	Unique cruise number or date (YYMMDD)
Record Type	10 .	1	Bytes	Il	Always '9'
Station Number	11	5	Bytes	A5	File 100 station code may be used
Sample Site Numbe	r 16	3	Bytes	А3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al -	
Treatment Code	20	1	Bytes	Al	Use file 059 treatment code
Sample Depth	21	5.	Bytes	15	Meters to tenths
Log of Direct Counts per ml Undiluted	26	8	Bytes	18	To millionths
°/o Cocci	34 .	3	Bytes	13	Percent to tenths
°/o Short Rods	37	3	Bytes	13	Percent to tenths
°/o Long Rods	40	3	Bytes	13	Percent to tenths
°/o Spirals	1 ¹ 3	3	Bytes	13	Percent to tenths
°/ _o Coccobacillar	y 46	3	Bytes	13	Percent to tenths
°/o Filaments	.49	3	Bytes	13	Percent to tenths
°/ _o Others	52	3 -	Bytes	13	Percent to tenths
Blank	55	23	Bytes	23x	
Sequence Number	78	3	Bytes	13	Ascending numeric within station number
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:. FIELD NAME	15. POSITION FROM - 1	16. LEN	ĞТН	17. ATTRIBLES	18. USE AND MEANING
	MEASURED IN Bytes (c.a., bils, bytes)	NUMBER	UNITS		
File Type	1	3	Bytes	13	Always '059'
File Identifier	14	6 .	Bytes	Аб	Unique cruise number or date (YYM:IDD)
Record Type	10	1	Bytes	n	Always 'A'
Station Number	11	5	Bytes	A5	File 100 station code may be used
Sample Site Num- ber	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	ΑI .	
Treatment Code	20 .	ı	Bytes	Al	Use file 059 treatment code
Sample Depth	21	5	Bytes	15	Meter to tenths
Hedium Code	26	2	Bytes	12	Use file 059 medium code
Incubation Type	28	1 .	Bytes	Il	0 = anaerobic, 1 = aerobic
Time of Incuba-	29 •	2	Bytes	. 12	Whole days
Temperature of Incubation	31	2	Bytes	12	Degrees Celsius
Average Log of Colony Forming Units per ml Undiluted	.33	6	Bytes	16	To ten thousandths
Average Log of Pigmented Colonies per ml Undiluted	39	6.	Bytes	-16	To ten thousandths
Average Log of Non-pigmented Colonies per ml Undiluted	45	6	Bytes	16	To ten thousandths
Average Log of Fungi per ml Undiluted	51	6	Bytes	· 16	To ten thousandths

*ECORD NAME Data Record VII - Microbiological Degradation Format (Con't)

4. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes		ўтн , _	17. ATTRIB'J (ES	18. USE AND MEANING
	(c.g., bits, bytes)	NUMBER	UNITS		
Average Log of Actinomycete- like per ml Undiluted	57	6 .	Bytes	16	To ten thousandths
Number of Repli- cates in Avera	63 . ge	2	Bytes	12	Whole number
Blank	65	13	Bytes	13x	
Sequence Number	78	3	Bytes	13 .	Ascending numeric within station number
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W FIELD NAME	15. POSITION FROM - 1	İ	<u> СТН</u>	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED	NUMBER	UNITS		·
File Type	(c.f., bits, bytes)	3	Bytes	13	Always '059'
File Identifier	14	6 .	Bytes	A6	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	Al	Always 'B'
Station Number	11	5	Bytes	A5	File 100 station code may be used.
Sample Site Num- ber	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al .	
Treatment Code	20	1	Bytes	Al	Use file 059 treatment code
Sample Depth	21	5	Bytes	15	Meters to tenths
Type of Kinetics	26	ı	Bytes	11	0 = Saturation, 1 = First Order
Medium	27	2 :	Bytes	12	Use file 059 medium code
Medium Concentra- tion	29 .	5	Bytes	15	Nanomoles to thousandths
Incubation Time	34	5	Bytes	15	Hours to thousandths (t)
t/f	39	6	Bytes	16.	Hours to thousandths (incubation time in hours/fraction of medium utilized)
Turnover Time	45	6	Bytes	16	Hours to hundredths
k _T + s _N	51 .	6.	Bytes	16	Nanomoles to hundredths (trans- port constant plus natural medium concentration)
V _{mex}	57	6	Bytes	16	Nanomoles/hour to hundredths (maximum medium consumption rate)
. s _N .	63	6.	Bytes	16	Nanomoles to hundredths (in situ natural medium (substrate) concentration)
· v _d	69 .	6.	Bytes	16	Nanomoles/hour to hundredths
Blanks Sequence Number	75 78	3	Bytes Bytes	3x 13	(uptake rate) Ascending numeric within Station
	<u></u>	<u></u>	1	l	

1. FIELD NAME	15. POSITION FROM - 1	16. LEN	STH	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED IN Bytes	NUMBER			
-	(n.g., blis, bytes)	NUMBER	UNITS	·	
ile Type	1	3	Bytes	А3	Always '059'
ile Identifier	4	6	Bytes	A6	Unique cruise number or date (YYMMDD)
decord Type	10	1	Bytes	· Al ·	Always 'C'
tation Number	11	5	Bytes	A5	File 100 Station Code may be used
Sample Site Number .	16	3	Bytes	. A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	
Treatment Code	20	1	Bytes	A1	Use File 059 Treatment Code
Temperature of Incubation	21	3	Bytes	13	Degrees C. to tenths
Time of Incuba- tion	24	3	Bytes	13	Days to tenths
Average Fungal Density	27	3	Bytes	13	Whole number (per unit, byte 77)
Standard Devia- tion (for Plate Count)	30	3	Bytes		To tenths
Dilution Count	33	2	Bytes	12	Always a minus sign in byte 33
Units	35	. 1	Bytes	Al	Use File 059 Unit Code
Plate Count #1	36	3	Bytes	13	Whole numbers
Plate Count #2	39 .	3	Bytes	13	Whole numbers
Plate Count #3	42	3	Bytes	13	Whole numbers
Plate Count #4	45	3	Bytes	13	Whole numbers
Plate Count #5	48	3	Bytes	13	Whole numbers
Ammonia - N	51	4	Bytes	. 14	µg/unit (byte 35)
Nitrate - N	55	4,	Bytes	14	ug/unit (byte 35)
Grease and Oil	59	4	Bytes	14	ug/unit (byte 35)
10AA FORM 24-13	<u> </u>	<u> </u>		1	

RECORD FORMAT DESCRIPTION

ECORD NAME Data Record IX - Microbiological Degradation Format (con't) 11-27-78

FIELD NAME	FROM - 1 MEASURED		GTH	17. ATTRIBUTES	18. USE AND MEANING
	(e.a., bits, bytes)	NUMBER	UNITS		
Total Ortho PO ₄ -P	63	4	Bytes	14	µg/unit (bytes 35)
3lank	67	10	Bytes	. 10x	
Unit for Average Fungal Density (Bytes 27-29)	77	1.	Bytes	A1	Use File 059 Unit Code
Sequence Number	78	3	Bytes	13	Ascending numeric to order records within station
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					•
			:		

Code A Weather Code

blank - no information

- 0 clear (no cloud at any level)
- 1 partly cloudy (scattered or broken)
- 2 continuous layer(s) of cloud(s)
- 3 sandstorm, duststorm, or blowing snow
- 4 fog, thick dust or haze
- 5 drizzle
- 6 rain
- 7 snow or rain and snow mixed
- 8 shower(s)
- 9 thunderstorm(s)

Code B Wave Height - WMD code 1555

- 0 less than 1/4 m (1 ft)
- 1 1/2 m (1 1/2 ft)
- 2 1 m (3 ft)
- $\frac{1}{3} \frac{1}{1/2} \text{ m (5 ft)}$
- 4 2 m (6 1/2 ft)
- 5 2 1/2 m (8 ft)
- 6 3 m (9 1/2 ft)
- $7 3 \frac{1}{2} m (11 ft)$
- 8 4 m (13 ft)
- $9 4 \frac{1}{2} m \left(\frac{14}{14} \text{ ft} \right)$
- x Height not determined

Code C Sample Type

- 0 water, surface
- 1 beach, sand
- 2 beach, shell
- 3 beach, mud
- 4 sediment, sand
- 5 sediment, shell
- 6 sediment, mud
- 7 algae
- 8 sea weed

Code D Degradation Code

- N No evidence of biodegradation
- S Selective biodegradation low molecular weight n-alkanes (up to \sim C₁₉) are selectively utilized with little or no apparent changes in higher molecular weight n-alkanes or isoprenoids.

9 - intertidal sediment

- P Partial biodegradation Pristane and phytane are typically the major peaks remaining, but reduced n-alkane peaks are also present
- I Incomplete biodegradation Pristane and phytane remain as well as a few other small peaks but there is no pattern of remaining alkanes.
- C "Complete Biodegradation" Only the envelope remains with very small or no peaks remaining.
- X Not done
- Y No sample

Code E Sample Treatment

- 1 Microbiological examination
- 2 Enrichment with crude oil
- 3 Enrichment with crude oil and N and P
- 4 Microbial counts after enrichment with N, P and varying concentrations of crude oil
- 5 Microbial counts dilutions and plating done at the sampling site
- 6 Examination of samples after cold storage

Code F Habitat Code

The Habitat Code consists of three digits - a combination of three different parameter codes.

Digit 1 - wave energy/beach gradient

- 1 low wave energy, low beach gradient (slope less than 15%)
- 2 low wave energy, moderate beach gradient (30%>slope>15%)
- 3 low wave energy, high beach gradient (slope greater than 30%)
- 4 moderate wave energy, low beach gradient
- 5 moderate wave energy, moderate beach gradient
- 6 moderate wave energy, high beach gradient
- 7 high wave energy, low beach gradient
- 8 high wave energy, moderate beach gradient
- 9 high wave energy, high beach gradient

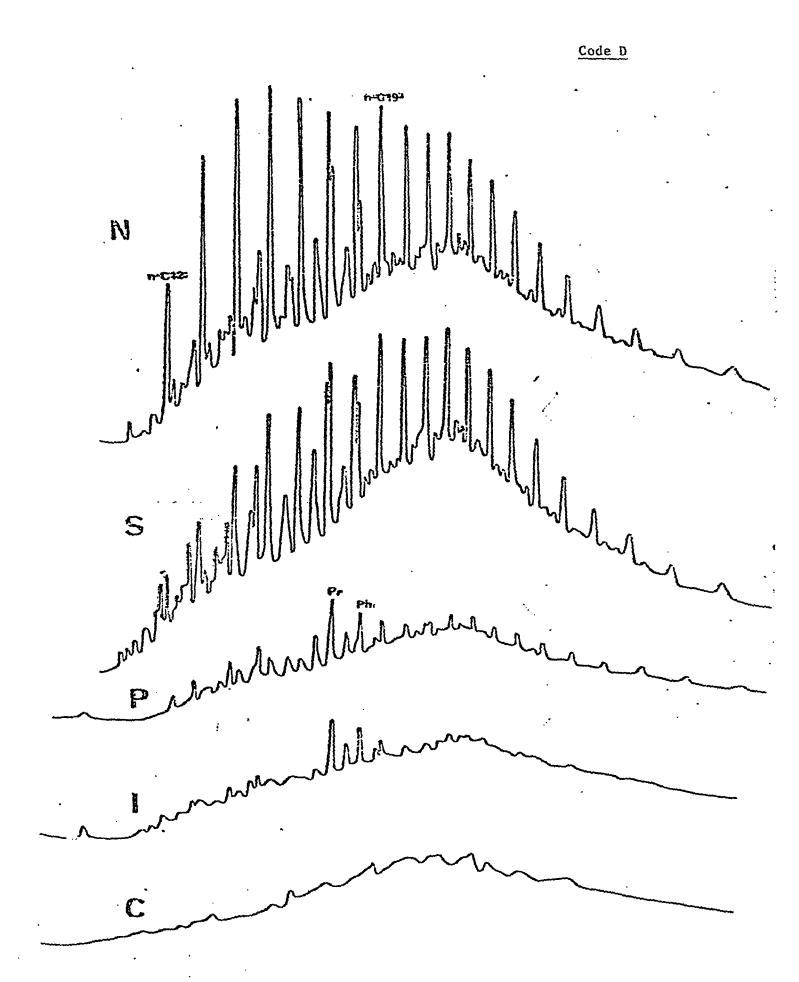
<u>Digit 2</u> - sediment size

- 0 rock, continuous strata
- 1 boulder (greater than 256mm)
- 2 cobble (64mm to 256mm)
- 3 gravel (4mm to 64mm)
- 4 coarse sand (.5mm to 4mm)
- 5 medium sand (.06mm to .25mm)
- 6 fine sand (.06mm to .25mm)
- 7 silt (.004mm to .06mm)
- 8 clay (less than .004mm)
- A mixture of boulders and cobbles
- B mixture of cobbles and gravel
- C mixture of gravel and sand
- D mixture of sand and silt
- E mixture of silt and clay
- F artificial substrate vertical piling

Digit 3 - surface characterization (organics)

- 1 chiefly shell fragments
- 2 detrious accumulated wood, sticks and undecayed coarse organics
- 3 fibrous peat
- 4 pulpy peat
- 5 muck completely decomposed organic materials
- 6 eelgrass
- 7 kelp
- 8 periphyton
- 9 no organic material evident
- A fouling organisms

MESA Puget Sound Intertidal/Subtidal Format "100" Page 11, Rev. 3 15 May, 1976



Radioactive substrates Code G

H - n-[1-14C] - Hexadecane

0 - n - [1-14C] - Octadecane N - [1-14C] - Naphthalene

File 059 Unit Code

U = microgram⁻¹ (dry weight)

G = gram⁻¹ (dry weight)

H = hectogram⁻¹ (dry weight)

K = kilogram⁻¹ (dry weight)

M = milliliter⁻¹

 $L = liter^{-1}$

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 ("\(\subseteq \cdot '' \)) the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE (MFR., MODEL NO.)	DATE OF LACT	INSTRUMENT WAS CALIBRATED BY		CHECK ONE: INSTRUMENT IS CALIBRATED				INSTRU- MENT IS	
	DATE OF LAST CALIBRATION	YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (\(\(\(\) \))	ONLY AFTER REPAIR (V)	(V) WHEN WHEN	NOT CALI- BRATED (√)
Dissolved ozygen meter (Yellow Springs # 57)	Nov. 1978	x				×	- · ·		
Salinity-temperature meter (Yellow Springs SCT meter #33)		х				x			
Analytic 81 liquid Scintillation Counter (Searle Analytical)	July, 1978		Searle Analytical		х				
									
								 	
110 AA TOUM 24-13								USCOV	W-DC 44291

DATA DOCUMENTATION FORM 7900064

NOAA 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-R2651

F059

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

Dr. D.W.S. Westlake Department of Microbiol University of Alberta, Edmonton, Alberta T6G 2E9		OR ACTIVITY WIT	TH WHICH SUBM	NTTED DATA A	RE ASSOCIATED
2. EXPEDITION, PROJECT, OR PROGREDATA WERE COLLECTED Seventh Sampling Trip Puget Sound, Washington, and beaches . (MESA)		TRIF	HIS SHIPMENT		R TO IDENTIFY
	SHIP, BUOY, ETC.)	NATIONALIT			
NA	NA	PLATFORM	OPERATOR	FROM: MO,DAY,Y	TO: MC, DAY, YR
		NA	NA	10/1/78	10/3/78
IF YES, WHEN CAN THEY BE REFORGENERAL USE? YEAR 9. ARE DATA DECLARED NATIONAL PROGRAM (DNP)? (I.E., SHOULD THEY BE INCLUDED DATA CENTERS HOLDINGS FOR INTIONAL EXCHANGE?) NO YES PART (SPECIFORM) 10. PERSON TO WHOM INQUIRIES CONCURTED AND ADDRESS IF THAN IN ITEM-I) Dr. Westlake (403) 432-3277	ILEASED 100° 120° 120° 120° 120° 120° 120° 120°	ASE DARKEN ALTAINED IN YOUR 140° 180° 180° 160° 14 223	GENERAL A	40° 20° 0° 20° 253,235 217,253 4 197,722 3 30,335 4 197,722 3 30,335 4 197,722 4 197,722 5 103,002 6 133,007 7 372,407 3 408,443 8 443,479 5 480,515	
NOAA FORM 24-13	100 120	140 160 160 160 160	- 120 100 00 00	116.6	40° 60° 80° 100°

NAME OF DATA FIELD	REPORTING UNITS OR CODE	METHODS OF ODSERVATION AND INSTRUMENTS USED (SPECIFY TYPE AND MODEL)	ANALYTICAL METHODS (INCLUDING MODIFICATIONS) AND LABORATORY PROCEDURES	DATA PROCESSING TECHNIQUES WITH FILTERING AND AVERAGING
salinity	parts per thousand	Yellow Springs SCT meter #33	not applicable	no processing
water temperature	°C	Yellow Spring SCT meter #33	not applicable	no processing
acidity	pH (NBS)	Radiometer pH meter #29	not applicable	no processing
dissolved oxygen	parts per million	Yellow Springs Oxygen meter #57	not applicable	no processing
bacterial count	number/ml or number/g (dry weight)	not applicable	standard plate count procedure medium: (per litre distilled water) NaCl, 23.4g; KCl, 0.75g; MgSO4·7H ₂ O, 7.0g; Peptone, lg; Yeast extract, lg; Agar 20g. Temperature of incubation is given in Data Record I. The time of incubation depends on the temperature and is summarized below: Temperature(°C) Time (Days) 8 21 or 28 14 21 20 or 30 7	·
H ₂ S from SO ₄ ¯	O=absence l=present	Deposition of FeS on Iron nail in medium	Modified Butlin's medium (Fedorak, M.Sc. Thesis, University of Alberta). Incubation temperature:22°C Incubation time: 21 days	none
H ₂ S from SO ₃ and/or SO ₄	O=absence l=present	Deposition of FeS on Iron nail in medium	Modified Butlin's medium plus Na ₂ SO ₃ . Incubation temperature:22°C Incubation time: 21 days	none

B. SCIENT 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
Degradation of Prudhoe Bay oil		Varian aerograph gas chrom- atograph model 1740. 20 ft.		visual; loss of n-alkane peaks
kioldohl N		x 1/8" stainless steel column, 3% SE30 Ultraphase on chromosorb W(AW-DMCS) 80/100 mesh. Carrier gas N ₂ at 15 ml/min. Program 50°C for 2 min, 50° to 300°C at 10°/min, held at 300° for 20 min.	118mg PO ₄ and 0.2g NH ₄ NO ₃ added. Crude oil plus 10g sand in 200 ml of solution containing (per litre), NaCl, 23.4g; KCl, 0.75g; M _g SO ₄ · ⁷ H ₂ O ₅ 7.0g (without or with PO ₄ and NH ₄ NO ₃ added as above). Amount of oil, temperature and time of incubation are given in data records. Pentane extract injected in GLC column.	
Kjeldahl-N	μg/unit (see file 059 unit code)	not applicable	Methods of Soil Analysis Part 2 Chemicals and Micro- biological Properties. American Society of Agron- omy (1965).	none
Available -P	ug/unit (see file 059 unit code)	not applicable	Extraction: Methods of Soil Analysis Part 2. Chemical and Micro- biological Properties. American Society of Agronomy (1965) Analysis: Standard Methods for the Examination of Water and Wastewater. 14th Ed. Amer. Public Health Assoc. (1976) Method 425F. min detectable limit 0.05 µg/g	·
NO A A FORM 24-18 (3-72)				USCOMM-DC 44289-P7

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
Bacterial Taxonomy	NODC Taxonomy Code	Isolates were picked on the basis of colonial morphol- ogy on the plates used to determine the bacterial count.	Gram stain; microscope morphology; oxidase and catalase activity; glucose and lactose utilization (aerobically and anaerobically); motility, by wet mount; spore test by heating	none
Suspended solids	mg/1	not applicable	Standard Methods for the Examination of Water and Wastewater. 14th Ed. American Public Health Assoc. (1976)	means of replicates
Mineralization rate with radio- active substrate		·	Replicate stoppered flasks contain 25 ml of sample (water column undiluted or l:3 dilutions of sediment) were incubated (plus N and P with shaking at 8° in the presence of l4C-l-naphthakene or hexadecane) and Prudhoe Bay oil. At appropriate times a culture in one of these flasks was acidified to stop bacterial action and to release CO ₂ ; CO ₂ trapping agent was added and the agent counted in Monophase-40 fluor. Corrected using ESP method (external standardization). Blanks are identical to test flasks, but are poisoned with HgCl ₂ before incubation.	taking into account blanks, sample dilutions and specific activity of the labelled compound (diluted by cold substrate in crude oil).

B. SCIENTS 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
Total organic-C	μg/unit (see file 059 unit code)	Beckman Model 915A Total organic carbon analyzer	Standard Methods for the Examination of Water and Wastewater, 14th Ed. APHA (1976) Method 505	mean of replicates
Ammonia-N	μg/unit (see file 059 unit code)	not applicable	Watersamples: Standard Methods for the Examination of Water and Wastewater. 14th Edition APHA. (1976). Methods 418A and 418B. Min detection level 100 µg/l Solid samples (i.e. sand): (a) distillation using 2N KCl and MgO. Methods of Soil Analysis. Part 2. American Society of Agronomy (1965). (b) analysis, method 418B above, min detectable level 3 µg/g	none
Nitrate -N	ug/unit (see file 059 unit code)	not applicable	Water samples: Standard Methods for the Examination of Water and Wastewater.14th Ed. APHA (1976) Method 419D. Solid samples: (a) extraction using 0.2% CaSO4. Methods of Soil Analysis. Part 2. American Society of Agronomy (1965). (b) Analysis Method 419D above.	none

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
Grease and Oil	µg/unit (see file 059 unit code)	not applicable	Standard Methods for the Examination of Water and Wastewater. 14 Ed. APHA (1976). Water samples - Method 502B. Solid samples - Method 502D.	None
Total Ortho PO ₄ -P	µg/unit (see file 059 unit code)	not applicable	Standard Methods for the Examination of Water and Wastewater. 14 Ed. APHA (1976). Method 425F.	None
				· · :
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	S CONTAINED IN THE TRANSMIT ENTIFYING EACH RECORD TYPE	
Only the fol Header, (c)	Text Record, (d) Data Re	n Format e used: (a) File Header, (b) Station ecord I, (e) Data Record II, d IV, (h) Data Record IX.
2. GIVE BRIEF DESCRI	PTION OF FILE ORGANIZATION	
File sorted	by station number and so	equence number to obtain proper sequence
Punch car as outlined	under blocks *5→	pe at NODE with tape characteristics #13 below.
	PHONE NUMBER Phil Fedor	rak, 403-432-3670 ogy, University of Alberta, Edmonton, Albert
COMPLETE THIS	SECTION IF DATA ARE ON MAGN	9. LENGTH OF INTER- RECORD GAP (IF KNOWN) 3/4 INCH
	ASCII X EBCDIC	10. END OF FILE MARK
6. NUMBER OF TRACK (CHANNELS)	S SEVEN	11. PASTE-ON-PAPER LABEL DESCRIPTION (INCLUDE
	X NINE	ORIGINATOR NAME AND SOME LAY SPECIFICATIONS OF DATA TYPE, VOLUME NUMBER) FTP*059
7. PARITY	∠ 000	Vol= Ser= 07750 (orig.)
8. DENSITY	EVEN	Vol = Se-=05405(0/c for QUADI)
	556 BPI	12. PHYSICAL BLOCK LENGTH IN BYTES
	800 BPI	13. LENGTH OF BYTES IN BITS
NOAA FORM 24-13		USCOMM-DC 44289-P7

RECORD FORMAT DESCRIPTION
RECORD NAME File Header - Microbiological Degradation Format

14. FIELD NAME	15. POSITION FROM - 1 MEASURED	16. LEN	GTH	17. ATTRIBUTES	18. USE AND MEANING
	IN Bytes (e.g., bits, bytes)	NUMBER	UNITS:		
File Type	1	3	Bytes	A3	Always '059'
File Identifier	Ц	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10	ı	Bytes	Il	Always 'l'
Sampling Interval	11	17	Bytes	12,5(Al,12)	xx/xx/xx - xx/xx/xx Beginning yr/mo/day; Ending yr./mo./day
Investigator/	28	53	Bytes	53A1	Left justified text
Institution					•
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RECORD FORMAT DESCRIPTION

RECORD NAME Station Header - Microbiological Degradation Format 12-16-77

FROM.		SURED		17. ATTRIBUTES	18. USE AND MEANING	
	IN Bytes (e.g., bila, bytea)	NUMBER	UNITS			
File Type	· 1	3	Bytes	A3	Always '059'	
File Identifier	14	6	Bytes	A 6	Unique cruise number or date (YYMMDD)	
Record Type	10 .	1	Bytes	n	Always '2'	
Station Number	п	. 5	Bytes	A5	File 100 station code may be us	
Sample Site Number	16	3	Bytes	A3	Originator's sample designator	
Date, (GMT)						
Year	19	2	Bytes	I2	00-99	
Month	21	2	Bytes	12	01-12	
Day	23	2	Bytes	I2	01-31	
Time, (GMT)	05	2	Bytes	12	00–23	
Hours	25			•	00-59	
Minutes	27	2 .	Bytes] I2	00=39 -	
Latitude,		<i>'</i>	ļ		}	
Degrees	29	2	Bytes	I2		
Minutes	31	2	Bytes	I2 ·		
Seconds	33	2	Bytes	12		
Hemisphere	35	1	Bytes	Al.	'N' or 'S'	
Longitude,				·		
Degrees	36	3	Bytes	13		
Minutes	39	2	Bytes	12		
Seconds	41	2	Bytes	12	1	
Hemisphere	43	1	Bytes	AI ·	'E' or 'W'	
Weather ·	1414	1	Bytes	YJ.	WMO Code 4501	
, Wave Height	45 .	1	Bytes	Al	WMO Code 1555	
Water Temperature	46	3	Bytes	13	Degrees C. to tenths	
Salinity	49 .	3	Bytes	13	Parts/thousand to tenths	
Нq	52	3	Bytes	13	pH units to tenths	
מיני לימין	cc	1	Bytes	II.	1 NBS	
pH Scale	55	1	Dy ces	11	2 Sorenson	
٠.					3 Hansson	
Diagolysed Owner	56	3	Bytes	13	() ()	
Dissolved Oxygen	90	٦	73,062			
Habitat Code	59	3	Bytes	3 A 1	Use file 100 Habitat Code	

FROM-1		GTH	17. ATTRIBUTES	18. USE AND MEANING
IN Bytes (e.g., blis, bytes)		UNITS		
1	3	Bytes	A3	Always '059'
Ц.	6	Bytes	. A6	Unique cruise number or date (YYMMDD)
10	1	Bytes	Il	Always '4'
11 .	5	Bytes	A5	File 100 station code may be used
16	3	Bytes	EA	Originator's sample designator
19	1	Bytes	Al	
20	1	Bytes	Al	Use file 059 Treatment Code
21	3	Bytes	. 13	Degrees C. to tenths
24	3 .	Bytes	. 13	Days to tenths
27	3	Bytes	13	Whole number (Per unit, byte 77)
30	3	Bytes	13	To tenths
33	2	Bytes	, IS	Always a minus sign in byte 33
35	1	Bytes	Al	Use File 059 Unit Code
. 36	3	Bytes	13	Whole numbers
39	3	Bytes	13	Whole numbers
42	3 .	Bytes	13	Whole numbers
45	·3	Bytes	13	Whole numbers
48	3	Bytes	13	Whole numbers
51	1	Bytes	WJ .	0 - absent
52	i	Bytes	Al	l - present 9 - sample not done
53	4	Bytes	I4	μg/unit (byte 35)
	FROM-1 MEASUREDS (e.g. bits, byten) 1 1 10 11 16 19 20 21 24 27 30 33 35 36 39 42 45 48 51 52	FROM-1 MEAGURED IN Bytes (e.g. bits, bytes) (e.g. b	MEAGURED NUMBER UNITS	New Hytes Number Units

RECORD NAME Text Record - Microbiological Degradation Format

14. FIELD NAME	15. POSITION FROM-1 MEASURED INBY tes	1		17. ATTRIBUTES	18. USE AND MEANING
	IN Bytes (e.g., bila, byles)	NUMBER	UNITS		•
File Type	1	3	Bytes	АЗ .	Always '059'
File Identifier	14	6	Bytes	A6	Unique cruise number or date (YYMMDD)
Record Type	10	1.	Bytes	11	Always '3'
Station Number	11	5	Bytes	A5	File 100 station code may be us
Sample Site Number	16	3	Bytes	A3	Originator's sample designator
Text	19	59	Bytes	59A1	Descriptive information
Sequence Number	78	3 .	Bytes	13	Ascending numeric to order records within station
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RECORD NAME Station Header - Microbiological Degradation Format (continued)

14. FIELD NAME	15. POSITION FROM - 1 MEASURED IN Bytes (c.g., bits, bytes)	16. LEN	GТH	17. ATTRIBUTES	18. USE AND MEANING
	(e.g., bits, bytes)	NUMBER	UNITS		
Beach Sample Temperature	62	3.	Bytes	13	Degrees C. to tenths
			ļ . 1	·	
			!		
Water Depth	65	5	Bytes	15	Meters to tenths
Blank	70	8	Bytes	. 8x	•
Sequence Number	78	3	Bytes	13	Ascending numeric to order records within station
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TRECORD FURMAL DESCRIPTION

RECORD NAME Data Record I - Microbiological Degradation Format (continued)

14. FIELD NAME	15. POSITION FROM - 1 MEASURED	16. LEN	GTH	17. ATTRIBUTES	18. USE AND MEANING
	INBytes	HUMBER	UNITS.		
Total - P	57	4	Bytes	I4	µg/unit (byte 35) ~4'
Total Organic -C	61	4	Bytes	14	μg/unit (byte 35)
Suspended Solids	65	5	Bytes	A5	mg/l (three significant figures, sign for exponent, exponent - e.g. 123+2 = 12300)
Available - P	70	4	Bytes	I4	µg/unit (byte 35)
Blank	74	3	Bytes	3x	
Unit for Average Bacterial Density (Bytes 27-29)	77	1	Bytes	Al	Use File 059 Unit Code
Sequence Number	78	3	Bytes	13	Ascending numeric to order records within station
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COAA FORM 24-13	. •				•

I. FIELD NAME	FROM - 1	16. LEN	СТН	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED INDY LES (e.g., bits, bytes)	NUMBER	UNITS		1
File Type	1	3	Bytes	А3	Always '059'
File Identifier	4	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10	ı	Bytes	n	Always '5'
Station Number	11 :	5	Bytes	A 5	File 100 station code may be used
Sample Site Number	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	
Treatment Code	20	1	Bytes	Al	Use File 059 Treatment Code
Temperature of Incubation	21	3	Bytes	13	Degrees C. to tenths
Time of Incuba- tion	24	3	Bytes	13	Days to tenths
Initial Oil Concentration	27	5	Bytes	15	mg/l to tenths
Degradation Code	32 .	ı	Bytes	Al ·	Use File 059 Degradation Code
Mineralization determined gravimetrically	33	4	Bytes	Ĭ4	Percent weight loss to tenths (float sign if negative)
Rate	37	5	Bytes	I5.	mg/week to hundredths
Nitrogen Supple-	42	3	Bytes	13	To hundredths: Concentration of nutrient(s) as given in DDF
Phosphorous Suppl ment	e- 45	3	Bytes	I3 .	is equal to concentration times this factor. Blank and 100 are equivalent and the factor equals 1.00 (000 means no supplement)
Incubation Temp- perature with Radioactive Substrate	48	3	Bytes	I3	Degrees celsius to tenths
Mineralization Rate with Radio active Substrat		5	Bytes	15	To thousandths: mg of selected compounds/unit (byte 56)/day

CORD NAME	Data	Record	II -	Microbiological	Degradation	Format	(con't)	_

. FIELD NAME	FROM - 1 MEASURED IN Bytes		GТН	17. ATTRIBUTES	18. USE AND MEANING
	IN Bytes (e.g., bits, bytes)	NUMBER	UNITS		
Unit	56	1	Bytes	Al	Use File 059 Unit Code
Radioactive Sub- strate	57	1	Bytes	Al	Use File 059 Substrate Code
Blank	58	20	Bytes	20x	
Sequence Number	78	3	Bytes	I 3	Ascending numeric to order records
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RECORD FORMAT DESCRIPTION
RECORD NAME Data Record III - Microbiological Degradation Format

14. FIELD NAME	FROM - 1 MEASURED IN BYTES	-1		17. ATTRIBUTES	18. USE AND MEANING
	(e.g., bila, byles)	NUMBER	UNITS		
File Type	1	3	Bytes	A3	Always '059'
File Identifier	14	6	Bytes	A6	Unique cruise number or date (YYMMDD)
Record Type	10	1.	Bytes	. 11	Always '6'
Station Number	11	5	Bytes	A5 .	File 100 station code may be use
Sample Site Number	16	3	Bytes	EA	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	·
Treatment Code	20	-1	Bytes	Al ·	Use File 059 Treatment Code
Taxonomic Code	21	10	Bytes	5A2	NODC Taxonomic Code
Number of Colonia types in this group	1 31	2	Bytes	I2	Whole numbers
Percent of Average Density	33	2	Bytes	12	Whole numbers
Taxonomic Code	35	10	Bytes	. 5A2	NODC Taxonomic Code
Number of Colonia types in this group	1 45	2	Bytes	12	Whole numbers
Percent of Average Density	se 47	2	Bytes	12	Whole numbers
, Taxonomic Code	49 .	10	Bytes	5A2	NODC Taxonomic Code
Number of Colonia types in this group	1 59	2	Bytes	12	Whole numbers
Percent of Average Density	ge 61	2	Bytes	12	Whole numbers
Taxonomic Code	63	10	Bytes	5A2	NODC Taxonomic Code
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1744 FOPM 24-13

RECORD FORMAT DESCRIPTION

RECORD NAME Data Record III - Microbiological Degradation Format (continued) 12-16-77

FIELD NAME 15. POSITION FROM-1 MEASURED			17. ATTRIBUTES	IB. USE AND MEANING	
(e.g., bits, bytes)	NUMBER	UNITS			
1 73	2	Bytes	. I2	Whole numbers	
e 75	2	Bytes	12	Whole numbers	
77	ı	Bytes	lx		
78	3	Bytes	13	Ascending number to order records within station	
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	MEASURED IN Bytes (e.g., bila, bytes) 1 73 2e 75	MEASURED NBytes NUMBER N	MEASURED NUMBER UNITS (e.g., bita, bytes) 2 Bytes 2 Bytes 77 1 Bytes	FROM-1 MEASURED INBytes (e.g., bils, bytes) 1 73 2 Bytes I2 2e 75 2 Bytes I2 77 1 Bytes 1x	

1044 FORM 24-13

14. FIELD NAME	15. POSITION	16. LEN	GTH .	17. ATTRIBUTES	18. USE AND MEANING
	FROM-1 MEASURED INBYTES				
	(e.g., bils, byles)	NUMBER	UNITS		
File Type	ı	3	Bytes	. A3	Always '059'
File Identifier	1 4	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	10.	ı	Bytes	· II	Always '7'
Station Number	IJ.	5	Bytes	A5	File 100 station code may be used
Sample Site Number	16	3	Bytes	АЗ.	Originator's sample designator.
Sample Type Code	19	ı	Bytes	Al	•
Treatment Code	20	1	Bytes	Al	Use File 059 Treatment Code
Number of Colonia types which coul not be classifi	đ	2	Bytes	12	Whole numbers
Percent of Average Density	e 23	2	Bytes	12	Whole numbers
Number of Colonia types which did not survive first transfer		2	Bytes	12	Whole numbers
Percent of Average Density	e 27	2	Bytes	12	Whole numbers
Blank	29	49	Bytes	49x	
Sequence Number	78	3	Bytes	13	Ascending numeric to order records within station
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ECORD NAME Data Record V - Microbiological Degradation Format

17. ATTRIBUTES 18. USE AND MEANING S. FIELD NAME 15. POSITION 16. LENGTH FROM-1 MEASURED IN Bytes NUMBER UNITS (c.g., bits, bytes) File Type 13 Always '059' **Bytes** File Identifier h 6 · Bytes A6 Unique cruise number or date (YYMMDD) Record Type 10 Always '8' 1 Bytes Ιl Station Number 11 A5 File 100 station code may be used Bytes Sample Site Number 16 3 Bytes Α3 Originator's sample designator Sample Type Code 19 1. Bytes LΑ Treatment Code 20 1 Bytes Al Use file 059 Treatment Code Sample Depth 21 Bytes 5 **I**5 Meters to tenths Sample Tempera-26 13 3 Bytes Degrees C to tenths. ture рΗ 29 4 **I**4 Bytes pH units to hundredths Eh 1 33 Bytes 14 Millivolts o/o Moisture 37 3 Bytes 13 Percent to tenths; Sediment. samples only 6 ATP Concentration 40 Bytes 16 Nanograms to tenths (per liter for water sample; per gram dry weight for sediment sample) 46 L Glycolic Acid Bytes Ι4 Micrograms to tenths (per liter for water sample; per gram dry weight for sediment sample) Urea 50 5 Bytes **I**5 Micrograms to hundredths (per liter for water sample; per gram dry weight for sediment sample) Core Length 55 3 Bytes **I**3 Centimeters to tenth (if sediment core taken) 6 Dry Weight Sedi-58 Bytes т6 Grams to ten thousandths ment per ml Undiluted Sea Water 64 Blank 14 14x Bytes Sequence Number 78 3 Bytes 13 Ascending numeric within station number

ECORD NAME Data Record VI - Microbiological Degradation Format

4. FIELD NAME	15. PC SITION FFOM - 1		GTH	17. ATTRIBUTES	18. USE AND MEANING
	MEASURED IN Bytes			•	
	(c.g., b to, bytes)	NUMBER	UNITS	· .	:
File Type	1	3	Bytes	13	Always '059'
File Identifier	Ц	6	Bytes	А6	Unique cruise number or date (YYMMDD)
Record Type	ıc.	1	Bytes	Il	Always '9'
Station Number	11	5	Bytes	A5	File 100 station code may be used
Sample Site Numbe	r 16	3	Bytes	A3	Originator's sample designator
Sample Type Code	ıçı	ı	Bytes	Al .	
Treatment Code	2(1	1	Bytes	Al	Use file 059 treatment code
Sample Depth	2].	5 .	Bytes	15	Meters to tenths
Log of Direct Counts per ml Undiluted	26	8	Bytes	18	To millionths
°/o Cocci	31.	3	Bytes	13	Percent to tenths
°/o Short Rods	3''	3	Bytes	13	Percent to tenths
°/o Long Rods	4()	3	Bytes	13	Percent to tenths
°/o Spirals	.43	- 3	Bytes	13	Percent to tenths
°/o Coccobacillar	y 46	3	Bytes	13	Percent to tenths
°/o Filaments	.49	3	Bytes	13	Percent to tenths
°/ _o Others	5:2	3 -	Bytes	13	Percent to tenths
Blank	55 .	23	Bytes	23x	
Sequence Number	7 3	3	Bytes	13	Ascending numeric within station number
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		L	ــــــــــــــــــــــــــــــــــــــ		

1.244 FORM 24-13

I. FIELD NAME	15. PCISITION FF:OM - 1 MEASURED	16. LEN	GTH	17. ATTRIB J ES	18. USE AND MEANING
	IN Burtos	NUMBER	UNITS		
File Type	1	3	Bytes	13	Always '059'
File Identifier		6 .	Bytes	Аб	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	Il	Always 'A'
Station Number	11	5	Bytes	A5	File 100 station code may be used
Sample Site Num- ber	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	15 .	1	Bytes	Al .	
Treatment Code	20	ı	Bytes	Al	Use file 059 treatment code
Sample Depth	23.	5	Bytes	15	Meter to tenths
liedium Code	26	2	Bytes	12	Use file 059 medium code
Incubation Type	28	1 .	Bytes	l II	0 = anaerobic, 1 = aerobic
Time of Incuba-	20 •	2	Bytes	12	Whole days
Temperature of Incubation	3:.	2	Bytes	12	Degrees Celsius
Average Log of Colony Forming Units per ml Undiluted	3:3	6	Bytes	16	To ten thousandths
Average Log of Pigmented Colonies per ml Undiluted	39	6.	Bytes	16	To ten thousandths
Average Log of Non-pigmented Colonies per ml Undiluted	4:5	6	Bytes	16	To ten thousandths
Average Log of Fungi per ml Undiluted	5:L	6	Bytes	16	To ten thousandths

ECORD NAME Data Record VII - Microbiological Degradation Format (Con't)

4. FIELD NAME	15. POSITION FROM - 1 MEASURED IN BYCES		G ТН	17. ATTRIBUTES	IR. USE AND MEANING
	IN Bytes (c.g., bits, bytes)	NUMBER	UNITS		
Average Log of Actinomycete- like per ml Undiluted	57	6	Bytes	16	To ten thousandths
Number of Repli- cates in Avera	: 63 . ge	2	Bytes	12	Whole number
Blank	65	13	Bytes	13x	·
Sequence Number	78	3	Bytes	13 .	Ascending numeric within station number
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T. FIELD NAME	15. POSITION FROM - 1 MEASURED	16. LEN	<u> СТН</u>	17. ATTRIBUTES	18. USE AND MEANING
1	(c.g., bits, bytes)	NUMBER	צדואט		
File Type	1	3	Bytes	13	Always '059'
File Identifier	ц	6	Bytes	. A6	Unique cruise number or date (YYMMDD)
Record Type	10	1	Bytes	Al	Always 'B'
Station Number	11	5	Bytes	. A5	File 100 station code may be used
Sample Site Num- ber	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	·
Treatment Code	20	ı	Bytes	Al	Use file 059 treatment code
Sample Depth	21	5	Bytes	15	Meters to tenths
Type of Kinetics	26	ı	Bytes	· Il	0 = Saturation, 1 = First Order
Medium	27	2	Bytes	12	Use file 059 medium code
Medium Concentra- tion	29 :	5	Bytes	15	Nanomoles to thousandths
Incubation Time	34	5	Bytes	15	Hours to thousandths (t)
t /f	39	6	Bytes	16 [.]	Hours to thousandths (incubation time in hours/fraction of medium utilized)
Turnover Time	45	6	Bytes	16	Hours to hundredths
E _T + s _N	51	6.	Bytes	16	Nanomoles to hundredths (trans- port constant plus natural medium concentration)
V _{max}	57	6	Bytes	16	Nanomoles/hour to hundredths (maximum medium consumption rate)
· e ^M ·	63	6.	Bytes	16	Nanomoles to hundredths (in situ natural medium (substrate) concentration)
у _d	69	6.	Bytes	. 16	Nanomoles/hour to hundredths
Elanks Sequence Number	75 78	3 3	Bytes Bytes	3x I3	(uptake rate) Ascending numeric within Station

10AA FORM 24-13

I. FIELO NAME	15. POSITION FROM - 1			T. ATTRIBUTES	18. USE AND MEANING
		NUMBER	UNITS		
ile Type	(1.4., bits, bytes)	3	Bytes	A3	Always '059'
	_			_	
ile Identifier	4	6	Bytes	A6	Unique cruise number or date (YYYMDD)
ecord Type	10	1	Bytes	· A1 ·	Always 'C'
itation Number	11	5	Bytes	A5	File 100 Station Code may be used
Sample Site Number	16	3	Bytes	A3	Originator's sample designator
Sample Type Code	19	1	Bytes	Al	
Freatment Code	20	1	Bytes	Al	Use File 059 Treatment Code
Temperature of Incubation	21	3	Bytes	. 13	Degrees C. to tenths
Time of Incuba- tion	24	3	Bytes	13	Days to tenths
Average Fungal Density	27	3	Bytes	. 13	Whole number (per unit, byte 77)
Standard Devia- tion (for Plate Count)	30	3	Bytes	13	To tenths
Dilution Count	33	2	Bytes	12	Always a minus sign in byte 33
Units	35	. 1	Bytes	Al	Use File 059 Unit Code
Plate Count #1	36	3	Bytes	13	Whole numbers
Plate Count #2	39 .	3	Bytes	13	Whole numbers
Plate Count #3	42	3	Bytes	13	Whole numbers
Plate Count #4	45	3	Bytes	13	Whole numbers
Plate Count #5	48	3	Bytes		Whole numbers
Ammonia - N	51	4	Bytes		ug/unit (byte 35)
Nitrate - N	55		Bytes		ug/unit (byte 35)
Grease and Oil	59	4	Bytes	14	ug/unit (byte 35)

RECORD FORMAL DESCRIPTION

ECORD NAME Data Record IX - Microbiological Degradation Format . (con't) 11-27-78

A. FIELD NAME	15. POSITION FROM - 1 MEASURED	1		17. ATTRIBUTES	18. USE AND MEANING
	MEASURED IN <u>Bytes</u> (e.a., bits, bytes)	NUMBER	UNITS		
Total Ortho	63	4	Bytes	14	μg/unit (bytes 35)
3lank	67	10	Bytes	. 10x	
Unit for Average Fungal Density (Bytes 27-29)	77	1.	Bytes	Al	Use File 059 Unit Code
Sequence Number	78	3	Bytes	13	Ascending numeric to order records within station
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Code A Weather Code

blank - no information

0 - clear (no cloud at any level)

1 - partly cloudy (scattered or broken)

2 - continuous layer(s) of cloud(s)

3 - sandstorm, duststorm, or blowing snow

4 - fog, thick dust or haze

5 - drizzle

6 - rain

7 - snow or rain and snow mixed

8 - shower(s)

9 - thunderstorm(s)

Code B Wave Height - WMD code 1555

0 - less than 1/4 m (1 ft)

1 - 1/2 m (1 1/2 ft)

2 - 1 m (3 ft)

3 - 1 1/2 m (5 ft)

4 - 2 m (6 1/2 ft)

5 - 2 1/2 m (8 ft)

6 - 3 m (9 1/2 ft)

 $7 - 3 \frac{1}{2} m (11 ft)$

8 - 4 m (13 ft)

 $9 - 4 \frac{1}{2} m (14 ft)$

x - Height not determined

Code C Sample Type

0 - water, surface

9 - intertidal sediment

1 - beach, sand

2 - beach, shell

3 - beach, mud

4 - sediment, sand

5 - sediment, shell

6 - sediment, mud

7 - algae

8 - sea weed

Code D Degradation Code

N - No evidence of biodegradation

S - Selective biodegradation - low molecular weight n-alkanes (up to ∿ C₁₉) are selectively utilized with little or no apparent changes in higher molecular weight n-alkanes or isoprenoids.

P - Partial biodegradation - Pristane and phytane are typically the major peaks remaining, but reduced n-alkane peaks are also present

I - Incomplete biodegradation - Pristane and phytane remain as well as a few other small peaks but there is no pattern of remaining alkanes.

C - "Complete Biodegradation" - Only the envelope remains with very small or no peaks remaining.

X - Not done

Y - No sample

Code E Sample Treatment

- 1 Microbiological examination
- 2 Enrichment with crude oil
- 3 Enrichment with crude oil and N and P
- 4 Microbial counts after enrichment with N, P and varying concentrations of crude oil
- 5 Microbial counts dilutions and plating done at the sampling site
- 6 Examination of samples after cold storage

Code F Habitat Code

The Habitat Code consists of three digits - a combination of three different parameter codes.

Digit 1 - wave energy/beach gradient

- 1 low wave energy, low beach gradient (slope less than 15%)
- 2 low wave energy, moderate beach gradient (30%>slope>15%)
- 3 low wave energy, high beach gradient (slope greater than 30%)
- 4 moderate wave energy, low beach gradient
- 5 moderate wave energy, moderate beach gradient
- 6 moderate wave energy, high beach gradient
- 7 high wave energy, low beach gradient
- 8 high wave energy, moderate beach gradient
- 9 high wave energy, high beach gradient

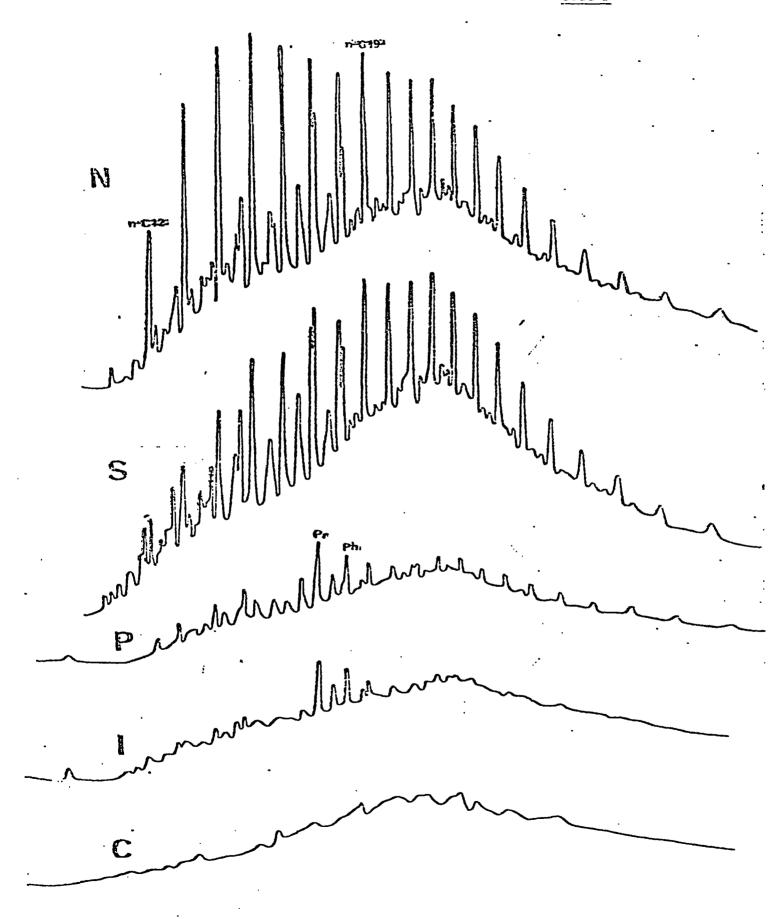
Digit 2 - sediment size

- 0 rock, continuous strata
- 1 boulder (greater than 256mm)
- 2 cobble (64mm to 256mm)
- 3 gravel (4mm to 64mm)
- 4 coarse sand (.5mm to 4mm)
- 5 medium sand (.06mm to ..25mm)
- 6 fine sand (.06mm to .25mm)
- 7 silt (.004mm to .06mm)
- 8 clay (less than .004mm)
- A mixture of boulders and cobbles
- B mixture of cobbles and gravel
- C mixture of gravel and sand
- D mixture of sand and silt
- E mixture of silt and clay
- F artificial substrate vertical piling

Digit 3 - surface characterization (organics)

- 1 chiefly shell fragments
- 2 detrious accumulated wood, sticks and undecayed coarse organics
- 3 fibrous peat
- 4 pulpy peat
- 5 muck completely decomposed organic materials
- 6 eelgrass
- 7 kelp
- 8 periphyton
- 9 no organic material evident
- A fouling organisms

MESA Puget Sound Intertidal/Subtidal Format "100" Page 11, Rev. 3 15 May, 1976



Code G Radioactive substrates

H - n-[1-14C] - Hexadecane

0 - n - [1 - 14C] - Octadecane N - [1 - 14C] - Naphthalene

File 059 Unit Code

U = microgram⁻¹ (dry weight)

G = gram⁻¹ (dry weight)

H = hectogram⁻¹ (dry weight)

K = kilogram⁻¹ (dry weight)

M = milliliter⁻¹

L = liter⁻¹

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 ("\sum'") the appropriate spaces. Add the interval time (i.e., 3 months, 6 months, 9 months, etc.) if the fixed interval calibration cycle is checked.

INSTRUMENT TYPE DATE OF LAST (MFR., MODEL NO.) CALIBRATION		INSTRUMENT WAS	CALIBRATED BY	CHECK ONE: INSTRUMENT IS CALIBRATED					
	YOUR ORGANIZATION (√)	OTHER ORGANIZATION (GIVE NAME)	AT FIXED INTERVALS (√)	BEFORE OR AFTER USE (√)	BEFORE AND AFTER USE (√.)	ONLY AFTER REPAIR (√)	ONLY WHEN NEW	IS NOT CALI- BRATED	
Dissolved oxygen meter (Yellow Springs #57)	January,1979	x				x			
alinity-temperature eter (Yellow Springs CT_meter #33)	Janaury, 1979	X				×			
nalytic 81 liquid cintillation Counter Searle Analytical)	December,1978	x				×			



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration ENVIRONMENTAL DATA SERVICE NATIONAL OCEANOGRAPHIC DATA CENTER

20235

July 11, 1979

Washington, DC

D751/EVC

To: OA/D781 - James B. Ridlon

From: OA/D751 - Elaine V. Collins

Subj: File Type 059 Data from Dr. D. W. S. Westlake

In TRIPØ6, Accession No. 79-0064, TR3881, station 02083 includes the unknown taxonomy code 02050302. Could you please find out what it should be? I plan to finalize the data now and make this single correction later.

valid as Aeromonas





TAPE ASSIGNMENT SHEET (MRL) 11/6/78 ACCESSION NO: 79-0064 FT \$59 TYPE OF TAPE NUMBER LABEL LRECL BIKSIZE RECFM REMARKS TAPE FB 4800 NL 80 ORIGINATOR 07750 DuPLICATE 05405 NL FB 4800 80 REFORMATTED TIRST USER FINAL 52 006143 DSA=7/23690 4000 80 FB USER CARRECTED 012950 5L DSN=7R3880 FB 4000 80 (BK4P)

RECORD FORMAT DESCRIPTION

79-0064 TR3880-1 Fl059) 15. POSITION 16. LENGTH FROM - 1 MEASURED IELD NAME NUMBER UNITS (e.g., bits, bytes) CHANGES CITED ON ENCLOSED LEHER (1) DATED 5/29/19 HAVE BEEN MADE.

USCOMM-DC 44289-P72

NOAA FORM 24-13



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration

National Oceanographic Data Center 2001 Wisconsin Ave., N.W. Washington, D.C. 20235

May 29, 1979

D781/JBR

TO:

OA/D781 - Sid Stillwaugh

FROM:

OA/D781 - James Ridlon



SUBJ:

Corrections Required for File Type #059 Data Set

The following are required corrections to the Accession #79-0064 (Track #TR3880-1, File Type #059) data set from Westlake:

(1) Missing taxonomic codes in the record type "6"s of:

File ID	Track No.	Station No.	Sample Site No.		No.
TRIPO67	TR3881	02083	23 -	• ;	21
TRIPO# 7	TR3881	02084	24	. :	20

(2) Invalid Habitat Code; a zero used as the first diget (column 59) in this field of columns 59-61 of the following record type "2" (requires a 1 to 9 digit):

File ID	Track No.	Station No.	Sample Site No.
TRIPO d 7	TR3881	02095	34

cc: J. Anderson, D7514



	<u> </u>
10AA FORM 24-5 3-73)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
	AND RECEIPT RECORD arbon copy acknowledging receips)
O: NOAA/EDIS/NODC 2001 Wisconsin Ave. N.W.	ATTENTION The large B. Didler MESA Data Goodington
	Dr. James B. Ridlon, MESA Data Coordinator ERTIFIED GOVERNMENT BY HAND OTHER t. no. 523070
lease find enclosed the following items	:
there are no additions to the taxonom - Habitat Code byte 59-61 rt. 6, sample	ad Beach Temp. code corrections for TRIPO7, nic codes, the blanks were intentional. e site no. 34, seq. no. 1 should be 102. ample site no. 34, seq. no. 1 should be 210.
that contains the missing record type	-
of corrections for Simenstad data s Acc. # 78-0857.	sets Acc.# 78-0023, Acc.# 79-0109, and
disciplinary study (field period 4-16	o's central and south Puget Sound multi-
	•
	·

ROED BY (Signature) .	TITLE	DATE FORWARDED
Sid Stillwaugh	Seattle L.O.	6-7-79
RECEIVED BY (Signature)	TITLE	DATE PECEIVED
	1	



ED STATES DEPARTMENT OF COMMERCE **National Oceanic and Atmospheric Administration**

National Oceanographic Data Center 2001 Wisconsin Ave., N.W. Washington, D.C. 20235

May 29, 1979

D781/JBR

TO:

OA/D781 - Sid Stillwaugh

FROM:

OA/D781 - James Ridlon

SUBJ:

Corrections Required for File Type #059 Data Set

The following are required corrections to the Accession #79-0064 (Track #TR3880-1, File Type #059) data set from Westlake:

(1) Missing taxonomic codes in the record type "6"s of:

File ID	Track No.	Station No.	Sample Site No.
TRIPO6	TR3881	02083	23 no data entered,
TRIPO6	TR3881	02084	24 so no taxonomic codes

(2) Invalid Habitat Code; a zero used as the first diget (column 59) in this field of columns 59-61 of the following record type "2" (requires a 1 to 9 digit):

	File ID	Track No.	Station No.	Sample Site No.	
	TRIP06	TR3881	02095	34 (read "102"; also,	
cc:	J. Anderson	, D7514		the " 110" heach	
				temperature) should be shifted to columns	
				be shifted to come	
				#62-64	

* Info. received by phone from 5.5. on 6/6/79. We mo plus print-out will follow by mail.





THE UNIVERSITY OF ALBERTA EDMONTON, CANADA **T6G 2E9**

. January 9, 1979.

Mr. Sid Stillwaugh, U.S. Department of Commerce, NOAA. Environmental Research Laboratories, MESA Puget Sound Project, 7600 Sand Point Way, N.E., Seattle, Washington. U.S.A. 98115

Dear Sid:

Enclosed are:

1. the data decks for TRIP06 and TRIP07 TRIP07 2. a listing of these decks
3. the corresponding

In cases where the concentration of a component is below the detection limit of the analysis, the data field has been left blank (as per our telephone conversations), and a text record has been added (at the end of each station number) to state this situation. The detection limits are given in the "scientific content" of the DDF's.

Within a few months these desks will be replaced by new decks which will include the fungal taxonomy data that is not yet completed. This will require another data record, but at this point, we have no proposed format.

For Trips 6 and 7, we have added another radioactive substrate code:

 $N = 1^{-14}C$ - Naphthalene, and for Trip 8, we will need another sample type code: A = cobbles.

Would you get NODC's approval for this latter code and notify me on their decision. Once I hear from you, we will be ready to submit the data deck for frip 8.

Thanks.

Yours sincerely,

Phil Fedorak,

Faculty Service Officer.

PF/hg.

red to in telesom between Ild I. and R. Stein (0752) -in the format.

2	TRANSMITI (Please sign and refe		RECEIPT RI						
TO:	NOA 4/EDIS/NODC		REFER TO						
	2001 Wisconsin Ave. N.W. Washington D.C. 20235		ATTENTION Dr. James	B• F		, ⊿ESA Da	ta Coordinator		
THE	ITEM.S: LISTED BELOW WERE FORWARDED TO YOU	BY	·	-		<u></u>			
		Excention Mail		/ERNME	ENT	BY HAND	OTHER		
	Enclosed, find punch, cards and ass	sociate	d document	ation	o for:				
	Westlake/Univ. of Alberta - FT 059 File 1	9 data, I.D. TR	field per IPO6	iod 8	3/13/	to 8/14/7	8		
	Westlake/Univ. of Alberta - FT 059	9 data, L.D. TR	field per IPO7	iod I	10/1 t	o 10/3/78	,		
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	Stillwough	TITLE	le L.O.				DATE FORWARDED		
	idney D. Stillwaugh /	TITLE	<u>17€</u> ∏•Ω•			 _	DATE RESEIVEDIO		

NOAA FORM 24-5 (8-73)

¹15 °58€ °579

Data Set Route Sheet

Λccession #							
			· .				
	Step	Completion Dat	e/Init.	Tape #,	# of Files	BLKSIZE,	LRECL
1.	Originator Tape #	1/24/79	A REPORTED	07750	1	4800	80
2.	QuADI Duplicate Tape #	1/26/79	AND	05405	1	4800	80
3.	DDF Evaluation						ļ
4.	Quality Review						
5.	Preliminary Data Sort						
6.	Preliminary Check	·					
7.	First User Tape #	·					
8.	Final User Tape #						
9.	Final Check					·	,
_10	NAPIS Inventory					 	+
11.	DIP Inventory				·		-
12.	Data Set 'Finalized'					1	-

DATE:						
TO:						
FROM:						
S UBJECT:	Error Co	orrection in	Processing o	f Data Set -	Accession #_7	19-006
•	1) 2) 3)			t Sound/Ps 80-1	 EERP 	
I. Erro	r Correct:	ions as repo	rted to Princ	cipal Investig	ator:	
	Error			Correct	ion Completed	l (Check)
II. Add	itional e	rror correct	ions:			
	Error	·		Correc	ction Complete	ed (Check)

III. Processor Name:

a 4 1		13
FILTYDE O	59	· 1
SDF1 001073		
SDF2 020079	·	
ANSI 020647		,
TR 2033, 2034, 3026 - 302	28 (3880, 3881) 4115, 4325,	
	The state of the s	4278

Accession No. 79-0064

I D.: Puget Sound/PSERP

Password:

accNo	fleA	refNo	proj	inst	ship	startDate	cruise	catId
7900064	F059	TR3880	0082	1822	1899	1978/08/13	TRIP06	308909
7900064	F059	TR3881	0082	1822	1899	1978/10/01	TRIP07	308910

(2 rows affected)

Password:

accNo	fleA	refNo	ship	staCnt	recCnt	startDate	endDate
7900064	F059	TR3880	1899	3	56	78/08/13	78/08/14
7900064	F059	TR3881	1899	13	195	78/10/01	78/10/03

(2 rows affected)