

DAILY SCIENCE LOG BOOK

MISSION
NUMBER

IOS 2021-049
(SOG 2021-02)

DATE:

From: **2021-09-18**

To: **2021-09-30**

VESSEL:

Nordic Pearl

PROJECT(S):

SCG Juvenile Salmon

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division
North Saanich, BC, Canada

WaterProperties.ca

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. *Any mid-cruise changes to be noted by watch leader in the notes.*

Data logging computer: _____

Data acquisition program: _____

CTD deck unit make: _____ model: _____ serial number: _____

Primary CTD

Make: Seabird model: 25 serial number: 456

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Secondary CTD

Make: _____ model: _____ serial number: _____

Primary temperature serial number: _____

Primary conductivity serial number: _____

Secondary temperature serial number: _____

Secondary conductivity serial number: _____

Transmissometer: _____ Model: _____ s/n: _____

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: _____ Model: _____ s/n: _____ P, S or NO pump?

PAR sensor: _____ Model: _____ s/n: _____ Surface PAR? Y / N

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

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CTD calibration bottle location (height above CTD in metres): _____

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)

DAILY SCIENCE LOG

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Month <u>September</u>			Year <u>2021</u>			Vessel <u>Nordic Pearl</u>			Cruise ID <u>2021-049 (SOG2021-02)</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
001	1	18	15:06	BE	SET		49°00.009	123°29.489	375	0	-			☐ ☐	TEMPERATURE 11.3C
001	1	18	15:36	EN	SET		48°59.884	123°26.136	237	0	-			☐ ☐	SPEED 4.8 kn
002	1	18	16:12	BE	CTD		48°59.673	123°25.605	249		-		YJ	☐ ☒	vmain = 12.0
002	1	18	16:18	BO	CTD		48°59.745	123°25.625	252	240	-			☐ ☐	
002	1	18	16:24	EN	CTD		48°59.810	123°25.625	252		-			☐ ☐	
003	1	18	16:39	BE	NET		48°59.709	123°25.510	260		-			☐ ☐	FM 43160
003	1	18	16:45	BO	NET		48°59.723	123°25.572	255	250	-			☐ ☐	
003	1	18	16:51	EN	NET		48°59.730	123°25.598	254		-		↓	☐ ☐	FM 44860
004	2	18	17:36	BE	SET		48°59.686	123°22.016	230	30	-			☐ ☐	T 10.4 S 4.4
004	2	18	18:06	EN	SET		48°57.610	123°21.918	-	30	-			☐ ☐	
005	3	18	19:03	BE	SET		49°00.106	123°22.159	235	0	-			☐ ☐	T 13.9 S 4.4
005	3	18	19:33	EN	SET		48°58.136	123°21.283	208	0	-			☐ ☐	
006	3	18	21:47	BE	CTD		49°01.691	123°15.335	84		-		YJ	☐ ☒	
006	3	18	21:51	BO	CTD		49°01.808	123°15.491	82	75	-			☐ ☐	
006	3	18	21:54	EN	CTD		49°01.869	123°15.570	82		-			☐ ☐	
007	3	18	22:02	BE	NET		49°01.695	123°15.324	84		-			☐ ☐	FM 44860
007	3	18	22:05	BO	NET		49°01.737	123°15.407	84	75	-			☐ ☐	
007	3	18	22:06	EN	NET		49°01.787	123°15.472	83		-		↓	☐ ☐	FM 45300
008	4	18	22:52	BE	SET		49°02.831	123°17.242	81	15	-			☐ ☐	T 10.9 S 5.8

Event Type:

BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
=

Bottle Firing Method:

US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:

BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

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							Latitude	Longitude							
008	4	18	23:22	EN	SET		49°04.190	123°19.093	99	15	-			☐	
009	5	19	00:54	BE	SET		49°04.700	123°19.500	102	0	-			☐	T13.6
009	5	19	01:24	EN	SET		49° - . -	123°18.470	-	0	-			☐	END OF DAY
010	6	19	14:47	BE	SET		49°09.408	123°24.375	214	0	-			☐	T10.5 S 4.4
010	6	19	15:07	EN	SET		49°10.893	123°23.723	259	0	-			☐	
011	7	19	16:00	BE	SET		49°11.380	123°23.560	261	30	-			☐	T10.0
011	7	19	16:29	EN	SET		49°13.320	123°22.780	255	30	-			☐	
012	7	19	16:59	BE	CTD		49°13.705	123°22.710	239		-		yj	☒	
012	7	19	17:05	BO	CTD		49°13.725	123°22.698	238	230	-			☐	
012	7	19	17:08	EN	CTD		49°13.737	123°22.695	239		-			☐	
013	7	19	17:11	BE	NET		49°13.745	123°22.690	239		-			☐	FM45300
013	7	19	17:16	BO	NET		49°13.762	123°22.679	239	230	-			☐	
013	7	19	17:20	EN	NET		49°13.773	123°22.671	239		-			☐	FM46550
014	8	19	19:07	BE	SET		49°13.840	123°22.760	240	15	-			☐	T13.8
014	8	19	19:29	EN	SET		49°15.350	123°22.230	241	15	-			☐	
015	9	19	20:26	BE	SET		49°17.761	123°26.619	184	0	-			☐	
015	9	19	20:56	EN	SET		49°16.895	123°29.784	202	0	-			☐	
016	10	19	21:45	BE	SET		49°15.840	123°29.330	313	45	-			☐	
016	10	19	22:15	EN	SET		49°14.930	123°32.120	347	45	-			☐	

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							Latitude	Longitude							
017	10	19	22:36	BE	CTD		49° 15.019	123° 33.130	349		-		YJ	☐ ☒	
017	10	19	22:42	BO	CTD		49° 15.127	123° 33.219	350	250	-			☐ ☐	
017	10	19	22:47	EN	CTD		49° 15.216	123° 33.264	350		-			☐ ☐	
018	10	19	22:52	BE	NET		49° 15.298	123° 33.318	349		-			☐ ☐	FM 46550
018	10	19	22:57	BO	NET		49° 15.438	123° 33.317	346	250	-			☐ ☐	
018	10	19	23:02	EN	NET		49° 15.552	123° 33.327	346		-			☐ ☐	FM 48625
019	11	19	23:34	BE	SET		49° 14.516	123° 31.701	342	15	-			☐ ☐	T 9.9
019	11	20	00:04	EN	SET		49° 13.606	123° 34.592	363	15	-			☐ ☐	
020	11	20	00:38	BE	CTD		49° 12.964	123° 39.028	379		-		YJ	☐ ☒	
020	11	20	00:40	BO	CTD		49° 13.027	123° 38.955	379	250	-			☐ ☐	
020	11	20	00:48	EN	CTD		49° 13.049	123° 38.936	379		-			☐ ☐	
021	11	20	00:53	BE	NET		49° 13.055	123° 38.932	379		-			☐ ☐	FM 48625
021	11	20	00:58	BO	NET		49° 13.067	123° 38.913	379	250	-			☐ ☐	
021	11	20	01:03	EN	NET		49° 13.077	123° 38.903	379		-			☐ ☐	FM 49960 END OF DAY
022	12	20	14:34	BE	SET		49° 06.721	123° 36.710	-	0	-			☐ ☐	SOUNDER OFF T 7.9
022	12	20	15:04	EN	SET		49° 04.841	123° 35.312	-	0	-			☐ ☐	
023	13	20	16:53	BE	SET		49° 05.640	123° 35.100	223	45	-			☐ ☐	T 10.2
023	13	20	17:23	EN	SET		49° 03.930	123° 32.890	253	45	-			☐ ☐	
024	13	20	17:45	BE	CTD		49° 03.753	123° 31.936	269		-		YJ	☐ ☒	

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Month <u>SEPTEMBER</u>				Year <u>2021</u>		Vessel <u>Nordic Pearl</u>			Cruise ID <u>2021-049</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
024	13	20	17:54	BO	CTD		49°03.781	123°31.937	271	250	-		YJ	☐ ☐	
024	13	20	17:59	EN	CTD		49°03.806	123°31.951	270		-			☐ ☐	
025	13	20	18:01	BE	NET		49°03.814	123°31.956	270		-			☐ ☐	FM49960
025	13	20	18:05	BO	NET		49°03.842	123°31.968	269	250	-			☐ ☐	
025	13	20	18:11	EN	NET		49°03.863	123°31.974	269		-			☐ ☐	FM51375
026	14	20	18:43	BE	SET		49°03.479	123°34.444	192	15	-			☐ ☐	T11.3
026	14	20	19:13	EN	SET		49°05.503	123°35.678	212	15	-			☐ ☐	
027	15	20	19:54	BE	SET		49°07.320	123°35.170	229	15	-			☐ ☐	T10.7
027	15	20	20:22	EN	SET		49°07.070	123°31.960	380	15	-			☐ ☐	
028	16	20	21:21	BE	SET		49°06.590	123°27.260	293	60	-			☐ ☐	T10.7
028	16	20	21:51	EN	SET		49°06.930	123°30.303	—	60	-			☐ ☐	
029	16	20	22:14	BE	CTD		49°07.793	123°31.015	358		-		YJ	☐ ☐	
029	16	20	22:21	BO	CTD		49°07.912	123°31.087	359	250	-			☐ ☐	
029	16	20	22:25	EN	CTD		49°07.980	123°31.131	359		-			☐ ☐	
030	16	20	22:27	BE	NET		49°07.008	123°31.152	359		-			☐ ☐	FM51375
030	16	20	22:32	BO	NET		49°07.106	123°31.209	362	250	-			☐ ☐	
030	16	20	22:37	EN	NET		49°07.207	123°31.276	362		-			☐ ☐	FM53150
031	17	21	23:36	BE	SET		49°04.333	123°27.963	320	15	-			☐ ☐	T11.8
031	17	22	00:06	EN	SET		49°06.440	123°28.800	337	15	-			☐ ☐	END OF DAY

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Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
032	18	21	14:48	BE	SET		48°59.982	123°28.384	192	0	-			☐ ☐	T13.8
032	18	21	15:08	EN	SET		48°58.921	123°26.622	146	0	-			☐ ☐	
033	19	21	16:18	BE	SET		48°56.140	123°20.120	187	30	-			☐ ☐	T10.2
033	19	21	16:48	EN	SET		48°57.227	123°22.340	203	30	-			☐ ☐	
034	19	21	17:12	BE	CTD		48°57.381	123°22.669	204		-		YJ	☐ ☒	
034	19	21	17:16	BO	CTD		48°57.329	123°22.612	204	200	-			☐ ☐	
034	19	21	17:20	EN	CTD		48°57.297	123°22.559	203		-			☐ ☐	
035	19	21	17:22	BE	NET		48°57.278	123°22.516	203		-			☐ ☐	FM53150
035	19	21	17:26	BO	NET		48°57.238	123°22.440	203	190	-			☐ ☐	
035	19	21	17:30	EN	NET		48°57.207	123°22.385	203		-		↓	☐ ☐	FM54180
036	20	21	18:28	BE	SET		48°52.619	123°13.520	190	15	-			☐ ☐	T11.7
036	20	21	18:58	EN	SET		48°51.045	123°10.333	197	15	-			☐ ☐	
037	21	21	19:58	BE	SET		48°49.551	123°06.103	187	0	-			☐ ☐	T12.3
037	21	21	20:28	EN	SET		48°50.820	123°08.815	221	0	-			☐ ☐	
038	22	21	21:10	BE	CTD		48°50.408	123°05.705	195		-		YJ	☐ ☒	
038	22	21	21:15	BO	CTD		48°50.468	123°05.739	194	185	-			☐ ☐	
038	22	21	21:19	EN	CTD		48°50.499	123°05.745	194		-			☐ ☐	
039	22	21	21:21	BE	NET		48°50.511	123°05.747	194		-			☐ ☐	FM54180
039	22	21	21:25	BO	NET		48°50.539	123°05.752	194	185	-		↓	☐ ☐	

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							Latitude	Longitude							
039	22	21	21:28	EN	NET		48°50.547	123°05.753	193		-		YJ	☐ ☐	FM 55272
040	22	21	21:52	BE	SET		48°50.280	123°05.340	195	0	-			☐ ☐	T 11.6
040	22	21	22:12	EN	SET		48°51.410	123°06.980	151	0	-			☐ ☐	
041	23	21	23:02	BE	SET		48°52.044	123°07.944	139	30	-			☐ ☐	T 10.3
041	23	21	23:22	EN	SET		48°53.628	123°10.728	130	30	-			☐ ☐	
042	23	21	23:55	BE	CTD		48°53.880	123°11.560	131		-		YJ	☐ ☒	
042	23	21	23:59	BO	CTD		48°53.913	123°11.602	131	120	-			☐ ☐	
042	23	22	00:03	EN	CTD		48°53.926	123°11.616	131		-			☐ ☐	
043	23	22	00:04	BE	NET		48°53.933	123°11.616	131		-			☐ ☐	FM 55272
043	23	22	00:07	BO	NET		48°53.942	123°11.639	131	120	-			☐ ☐	
043	23	22	00:11	EN	NET		48°53.950	123°11.655	131		-			☐ ☐	FM 56180
044	24	22	14:25	BE	SET		49°10.641	123°41.354	188	30	-			☐ ☐	T 10.4
044	24	22	14:55	EN	SET		49°11.312	123°44.478	172	30	-			☐ ☐	
045	24	22	15:23	BE	CTD		49°10.972	123°44.444	121		-		YJ	☐ ☒	
045	24	22	15:28	BO	CTD		49°10.978	123°44.295	121	110	-			☐ ☐	
045	24	22	15:30	EN	CTD		49°10.831	123°44.240	120		-			☐ ☐	
046	24	22	15:31	BE	NET		49°10.809	123°44.208	120		-			☐ ☐	FM 56180
046	24	22	15:34	BO	NET		49°10.763	123°44.147	119	110	-			☐ ☐	
046	24	22	15:37	EN	NET		49°10.722	123°44.095	121		-			☐ ☐	FM 57010

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							Latitude	Longitude							
047	25	22	16:12	BE	SET		49°11.695	123°45.882	183	0	-			☐ ☐	T 13.6
047	25	22	16:42	EN	SET		49°10.524	123°42.516	151	0	-			☐ ☐	
048	26	22	18:04	BE	SET		49°14.720	123°48.940	352	15	-			☐ ☐	T 13.2
048	26	22	18:34	EN	SET		49°16.320	123°46.488	402	15	-			☐ ☐	
049	27	22	19:46	BE	SET		49°18.256	123°37.335	215	60	-			☐ ☐	T 9.6
049	27	22	20:16	EN	SET		49°18.474	123°34.012	-	60	-			☐ ☐	
050	27	22	20:40	BE	CTD		49°18.559	123°33.173	183		-		YJ	☐ ☒	
050	27	22	20:46	BO	CTD		49°18.546	123°33.128	178	170	-			☐ ☐	
050	27	22	20:49	EN	CTD		49°18.529	123°33.076	178		-			☐ ☐	VMAIN = 11.7 DOWNLOADED
051	27	22	20:50	BE	NET		49°18.506	123°33.056	178		-			☐ ☐	FM 57010 Strong wind 17 kt
051	27	22	20:56	BO	NET		49°18.464	123°33.014	180	170	-			☐ ☐	
051	27	22	21:00	EN	NET		49°18.429	123°33.969	180		-			☐ ☐	FM 58290
052	28	22	21:40	BE	SET		49°20.440	123°30.212	182	0	-			☐ ☐	T 14.1
052	28	22	22:10	EN	SET		49°19.303	123°27.283	201	0	-			☐ ☐	END OF DAY
053	29	23	14:13	BE	SET		49°26.511	123°54.885	122	0	-			☐ ☐	T 14.0
053	29	23	14:43	EN	SET		49°24.477	123°54.842	287	0	-			☐ ☐	
054	30	23	15:38	BE	SET		49°23.880	123°56.480	339	60	-			☐ ☐	T 9.9
054	30	23	16:08	EN	SET		49°53.410	123°53.481	342	60	-			☐ ☐	
055	30	23	16:32	BE	CTD		49°23.204	123°52.244	300		-		YJ	☐ ☒	

Event Type:

BOT = Bottle cast (no CTD)
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ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop

MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
=

Bottle Firing Method:

US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Notes:

Time Code:

BE = Beginning Time of Cast
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EN = End Time of Cast

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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Month <u>September</u>			Year <u>2021</u>			Vessel <u>Nordic Pearl</u>			Cruise ID <u>2021-049</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
055	30	23	16:39	BO	CTD		49°23.223	123°52.159	292	250	-		YJ	☐ ☐	
055	30	23	16:43	EN	CTD		49°23.226	123°52.098	280		-			☐ ☐	
056	30	23	16:45	BE	NET		49°23.229	123°52.040	280		-			☐ ☐	FW 58290
056	30	23	16:50	BO	NET		49°23.232	123°51.989	280	250	-			☐ ☐	
056	30	23	16:54	EN	NET		49°23.236	123°51.914	280		-		↓	☐ ☐	FW 59792
057	31	23	17:23	BE	SET		49°22.467	123°51.440	384	30	-			☐ ☐	T 11.6
057	31	23	17:53	EN	SET		49°24.477	123°50.655	152	30	-			☐ ☐	
058	32	23	18:42	BE	SET		49°24.985	123°45.768	160	15	-			☐ ☐	T 13.5
058	32	23	19:22	EN	SET		49°23.920	123°42.250	172	15	-			☐ ☐	
059	33	23	20:07	BE	SET		49°23.497	123°41.754	168	0	-			☐ ☐	T 14.1
059	33	23	20:37	EN	SET		49°22.930	123°38.370	173	0	-			☐ ☐	
060	33	23	20:59	BE	CTD		49°22.787	123°37.334	171		-		YJ	☐ ☒	
060	33	23	21:04	BO	CTD		49°22.826	123°37.354	171	160	-			☐ ☐	
060	33	23	21:07	EN	CTD		49°22.848	123°37.363	171		-			☐ ☐	
061	33	23	21:10	BE	NET		49°22.872	123°37.369	171		-			☐ ☐	FW 59792
061	33	23	21:14	BO	NET		49°22.889	123°37.373	171	160	-			☐ ☐	
061	33	23	21:17	EN	NET		49°22.903	123°37.383	171		-		↓	☐ ☐	FW 60660
062	34	23	21:55	BE	SET		49°22.646	123°36.861	171	45	-			☐ ☐	T 10.2
062	34	23	22:25	EN	SET		49°39.852	123°39.867	-	45	-			☐ ☐	

Event Type:

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Month <u>SEPTEMBER</u>				Year <u>2021</u>		Vessel <u>Nordic Pearl</u>				Cruise ID <u>2021-049</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
063	35	24	14:24	BE	SET		49°28.354	124°01.927	146	0	-			☐ ☐	T14.3
063	35	24	14:54	EN	SET		49°29.418	124°04.747	316	0	-			☐ ☐	
064	36	24	16:07	BE	SET		49°24.110	124°10.360	262	30	-			☐ ☐	T11.7
064	36	24	16:37	EN	SET		49°22.620	124°12.636	323	30	-			☐ ☐	
065	36	24	17:00	BE	CTD		49°22.013	124°13.440	312		-		YJ	☐ ☒	
065	36	24	17:06	BO	CTD		49°22.026	124°13.311	312	250	-			☐ ☐	
065	36	24	17:11	EN	CTD		49°22.027	124°13.225	313		-			☐ ☐	
066	36	24	17:12	BE	NET		49°22.028	124°13.210	313		-			☐ ☐	FW 60660
066	36	24	17:18	BO	NET		49°22.015	124°13.109	313	250	-			☐ ☐	
066	36	24	17:23	EN	NET		49°22.004	124°13.032	313		-		↓	☐ ☐	FW 62100
067	37	24	17:55	BE	SET		49°21.356	124°13.041	218	15	-			☐ ☐	T11.8
067	37	24	18:25	EN	SET		49°23.114	124°11.762	345	15	-			☐ ☐	
068	38	24	19:00	BE	SET		49°23.490	124°11.630	336	0	-			☐ ☐	T13.6
068	38	24	19:30	EN	SET		49°21.910	124°13.770	312	0	-			☐ ☐	
069	39	24	20:40	BE	SET		49°21.520	124°16.560	232	0	-			☐ ☐	T13.9
069	39	24	21:00	EN	SET		49°22.799	124°17.513	313	0	-			☐ ☐	
070	40	24	22:13	BE	SET		49°26.490	124°21.280	331	45	-			☐ ☐	T13.0
070	40	24	22:43	EN	SET		49°24.989	124°23.632	342	45	-			☐ ☐	
071	40	24	23:05	BE	CTD		49°24.513	124°24.358	319		-		YJ	☐ ☒	

Event Type:

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Bottle Firing Method:

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Notes:

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Month <u>September</u>				Year <u>2021</u>			Vessel <u>Nordic Pearl</u>			Cruise ID <u>2021-049</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
071	40	24	23:11	BO	CTD		49°24.499	124°24.373	319	250	-		YJ	☐ ☐	
071	40	24	23:15	EN	CTD		49°24.500	124°24.365	316		-			☐ ☐	
072	40	24	23:17	BE	NET		49°24.501	124°24.365	316		-			☐ ☐	FW 62100
072	40	24	23:22	BO	NET		49°24.511	124°24.352	317	250	-			☐ ☐	
072	40	24	23:27	EN	NET		49°24.511	124°24.342	317		-			☐ ☐	FW 63440
073	41	25	00:01	BE	SET		49°23.483	124°26.341	138	15	-			☐ ☐	T 11.8
073	41	25	00:31	EN	SET		49°23.100	124°24.078	342	15	-			☐ ☐	
074	42	25	14:19	BE	SET		49°23.882	124°30.849	-	0	-			☐ ☐	T 14.0
074	42	25	14:49	EN	SET		49°24.774	124°33.689	98	0	-			☐ ☐	
075	43	25	15:41	BE	SET		49°25.510	124°32.050	157	45	-			☐ ☐	T 13.4
075	43	25	16:21	EN	SET		49°27.412	124°33.687	-	45	-			☐ ☐	
076	43	25	16:32	BE	CTD		49°27.610	124°34.456	207		-		YJ	☐ ☒	
076	43	25	16:37	BO	CTD		49°27.636	124°34.430	207	200	-			☐ ☐	
076	43	25	16:41	EN	CTD		49°27.646	124°34.432	208		-			☐ ☐	
077	43	25	16:42	BE	NET		49°27.647	124°34.433	208		-			☐ ☐	FW 63440
077	43	25	16:48	BO	NET		49°27.653	124°34.448	208	200	-			☐ ☐	
077	43	25	16:52	EN	NET		49°27.651	124°34.454	208		-			☐ ☐	FW 64490
078	44	25	17:29	BE	SET		49°25.790	124°33.520	138	15	-			☐ ☐	T 12.1
078	44	25	17:59	EN	SET		49°27.090	124°36.277	146	15	-			☐ ☐	

Event Type:

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Bottle Firing Method:

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Month <u>September</u>			Year <u>2021</u>			Vessel <u>Nordic Pearl</u>			Cruise ID <u>2021-049</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
079	45	25	18:37	BE	SET		49°28.633	124°37.266	142	0	-			☐ ☐	T13.5
079	45	25	19:07	EN	SET		49°28.841	124°34.217	-	0	-			☐ ☐	
080	46	25	20:02	BE	SET		49°28.490	124°32.790	185	60	-			☐ ☐	T10.4
080	46	25	20:32	EN	SET		49°30.380	124°30.380	149	60	-			☐ ☐	
081	46	25	21:02	BE	CTD		49°30.831	124°29.840	172		-		YJ	☐ ☒	
081	46	25	21:07	BO	CTD		49°30.864	124°29.879	172	160	-			☐ ☐	
081	46	25	21:10	EN	CTD		49°30.889	124°29.928	172		-			☐ ☐	
082	46	25	21:11	BE	NET		49°30.888	124°29.933	171		-			☐ ☐	FW64490
082	46	25	21:14	BO	NET		49°30.910	124°29.987	171	160	-			☐ ☐	
082	46	25	21:17	EN	NET		49°30.927	124°30.025	171		-			☐ ☐	FW65555
083	47	25	22:41	BE	SET		49°31.620	124°28.870	178	30	-			☐ ☐	T11.1
083	47	25	23:11	EN	SET		49°33.498	124°27.193	-	30	-			☐ ☐	
084	48	26	00:00	BE	SET		49°33.195	124°24.007	137	0	-			☐ ☐	T14.1
084	48	26	00:30	EN	SET		49°32.129	124°26.895	138	0	-			☐ ☐	
085	49	26	01:31	BE	SET		49°33.987	124°22.386	349	15	-			☐ ☐	T11.3
085	49	26	02:03	EN	SET		49°35.404	124°25.796	341	15	-			☐ ☐	
086	50	26	14:37	BE	SET		49°49.613	124°34.533	229	0	-			☐ ☐	T14.3
086	50	26	15:07	EN	SET		49°47.709	124°33.782	315	0	-			☐ ☐	
087	51	26	15:55	BE	SET		49°46.080	124°30.650	319	30	-			☐ ☐	T12.9

Event Type:

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Bottle Firing Method:

US = Up / Stop (default)
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Time Code:

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Notes:

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Month <u>September</u>			Year <u>2021</u>			Vessel <u>Nordic Pearl</u>			Cruise ID <u>2021-049</u>						
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
087	51	26	16:25	EN	SET		49°45.560	124°27.430	318	30	-			☐ ☐	
088	51	26	16:45	BE	CTD		49°45.425	124°26.504	319		-		YJ	☐ ☒	
088	51	26	16:51	BO	CTD		49°45.411	124°26.647	318	250	-			☐ ☐	
088	51	26	16:53	EN	CTD		49°45.405	124°26.746	318		-			☐ ☐	
089	51	26	16:55	BE	NET		49°45.403	124°26.770	318		-			☐ ☐	FW 65555
089	51	26	16:59	BO	NET		49°45.392	124°26.890	319	250	-			☐ ☐	
089	51	26	17:03	EN	NET		49°45.406	124°26.009	319		-			☐ ☐	FW 67312
090	52	26	17:30	BE	SET		49°45.250	124°26.010	315	15	-			☐ ☐	T9.7
090	52	26	18:00	EN	SET		49°44.780	124°22.856	244	15	-			☐ ☐	
091	53	26	18:36	BE	SET		49°44.496	124°21.730	-	0	-			☐ ☐	T14.1
091	53	26	19:06	EN	SET		49°43.400	124°18.711	174	0	-			☐ ☐	
092	54	26	20:11	BE	SET		49°43.260	124°14.540	238	60	-			☐ ☐	T9.6
092	54	26	20:41	EN	SET		49°41.285	124°14.414	303	60	-			☐ ☐	
093	54	26	21:12	BE	CTD		49°39.936	124°14.879	371		-		YJ	☐ ☒	
093	54	26	21:16	BO	CTD		49°39.982	124°15.022	369	250	-			☐ ☐	
093	54	26	21:20	EN	CTD		49°39.011	124°15.009	368		-			☐ ☐	NET CANCELLED DUE TO WEATHER
094	55	26	21:41	BE	SET		49°39.717	124°14.921	363	15	-			☐ ☐	T11.8
094	55	26	22:11	EN	SET		49°37.485	124°14.564	313	15	-			☐ ☐	
094	56	26	22:59	BE	SET		49°36.270	124°11.913	330	0	-			☐ ☐	T13.3

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Month <u>September</u>				Year <u>2021</u>		Vessel <u>Nordic Pearl</u>				Cruise ID <u>2021-049</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
095	56	26	23:29	EN	SET		49°35.581	124°08.772	—	0	-			☐ ☐	
096	57	27	00:12	BE	SET		49°35.830	124°06.060	276	45	-			☐ ☐	T 9.8
096	57	27	00:42	EN	SET		49°33.887	124°06.784	349	45	-			☐ ☐	
097	58	27	14:20	BE	SET		49°36.112	124°26.663	329	0	-			☐ ☐	T 12.9
097	58	27	14:50	EN	SET		49°37.409	124°29.701	308	0	-			☐ ☐	
098	59	27	15:47	BE	SET		49°37.920	124°31.050	295	30	-			☐ ☐	T 12.2
098	59	27	16:17	EN	SET		49°39.400	124°33.410	340	30	-			☐ ☐	
099	59	27	16:43	BE	CTD		49°40.001	124°34.110	247		-		YJ	☐ ☒	
099	59	27	16:48	BO	CTD		49°40.088	124°34.288	261	235	-			☐ ☐	
099	59	27	16:51	EN	CTD		49°40.182	124°34.379	265		-			☐ ☐	
100	59	27	16:54	BE	NET		49°40.238	124°34.435	265		-			☐ ☐	FW 67312
100	59	27	16:59	BO	NET		49°40.385	124°34.598	265	250	-			☐ ☐	
100	59	27	17:06	EN	NET		49°40.541	124°34.799	265		-			☐ ☐	FW 70570
101	60	27	17:34	BE	SET		49°41.402	124°35.835	194	45	-			☐ ☐	T 9.8
101	60	27	18:04	EN	SET		49°42.728	124°38.307	341	45	-			☐ ☐	
102	61	27	18:38	BE	SET		49°43.555	124°39.587	331	0	-			☐ ☐	T 12.5
102	61	27	18:58	EN	SET		49°42.626	124°38.391	344	0	-			☐ ☐	
103	62	27	20:01	BE	SET		49°43.177	124°40.763	—	15	-			☐ ☐	T 12.4
103	62	27	20:31	EN	SET		49°41.031	124°40.406	216	15	-			☐ ☐	

Event Type:

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Month <u>September</u>				Year <u>2021</u>		Vessel <u>Nordic Pearl</u>				Cruise ID <u>2021-049</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
104	62	27	20:55	BE	CTD		49°39.715	124°41.317	155		-		YJ	☒	STRONG WIND 35-40 kt
104	62	27	20:59	BO	CTD		49°39.717	124°41.397	155	140	-			☐	
104	62	27	21:02	EN	CTD		49°39.726	124°41.465	155		-			☐	NET CANCELLED DUE TO WHEATER
105	63	27	21:31	BE	SET		49°37.910	124°42.670	143	30	-			☐	T10.8
105	63	27	22:01	EN	SET		49°35.910	124°41.560	132	30	-			☐	
106	64	27	22:38	BE	SET		49°36.050	124°42.800	102	15	-			☐	T11.8
106	64	27	23:08	EN	SET		49°38.166	124°42.665	141	15	-			☐	
107	65	27	23:45	BE	SET		49°38.691	124°43.336	142	60	-			☐	T9.8
107	65	28	00:15	EN	SET		49°40.411	124°45.191	137	60	-			☐	
108	66	28	14:20	BE	SET		49°35.780	124°45.068	82	0	-			☐	T11.3
108	66	28	14:35	EN	SET		49° -	124° -	-	0	-			☐	LAT/LONG DEPTH NOT RECORDED
109	67	28	15:25	BE	SET		49°41.260	124°46.560	137	30	-			☐	T10.6
109	67	28	15:55	EN	SET		49°42.908	124°48.390	117	30	-			☐	
110	68	28	16:38	BE	SET		49°44.470	124°46.890	279	0	-			☐	T11.3
110	68	28	17:08	EN	SET		49°46.036	124°44.684	352	0	-			☐	
111	68	28	17:33	BE	CTD		49°45.821	124°43.771	346		-		YJ	☒	
111	68	28	17:38	BO	CTD		49°45.807	124°43.800	346	250	-			☐	
111	68	28	17:45	EN	CTD		49°45.760	124°43.869	350		-			☐	
112	68	28	17:48	BE	NET		49°45.737	124°43.862	351		-			☐	FM 70570

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Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Latitude	Information Longitude	Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
112	68	28	17:54	BO	NET		49°45.675	124°43.943	351	250	-		YJ	☐ ☐	
112	68	28	18:00	EN	NET		49°45.647	124°44.007	351		-		↓	☐ ☐	FM 72050
113	69	28	18:22	BE	SET		49°45.970	124°45.100	356	60	-			☐ ☐	T 9.4
113	69	28	18:52	EN	SET		49°47.323	124°47.570	253	60	-			☐ ☐	
114	70	28	19:59	BE	SET		49°46.860	124°42.300	208	0	-			☐ ☐	T 13.3
114	70	28	20:29	EN	SET		49°48.290	124°44.829	234	0	-			☐ ☐	
115	71	28	21:07	BE	SET		49°48.500	124°45.580	224	15	-			☐ ☐	T 13.2
115	71	28	21:37	EN	SET		49°50.080	124°48.240	190	15	-			☐ ☐	
116	71	28	21:58	BE	CTD		49°50.576	124°48.448	187		-		YJ	☐ ☒	
116	71	28	22:03	BO	CTD		49°50.583	124°48.485	187	180	-			☐ ☐	
116	71	28	22:06	EN	CTD		49°50.600	124°48.493	187		-			☐ ☐	
117	71	28	22:08	BE	NET		49°50.608	124°48.485	187		-			☐ ☐	FW 72050
117	71	28	22:12	BO	NET		49°50.631	124°48.487	187	175	-			☐ ☐	
117	71	28	22:15	EN	NET		49°50.654	124°48.479	187		-		↓	☐ ☐	FW 73018
118	72	28	22:35	BE	SET		49°50.970	124°49.180	190	0	-			☐ ☐	T 13.0
118	72	28	22:55	EN	SET		49°51.968	124°50.368	195	0	-			☐ ☐	
119	73	29	23:51	BE	SET		49°51.938	124°52.125	288	30	-			☐ ☐	T 11.4
119	73	29	00:21	EN	SET		49°50.070	124°53.846	291	30	-			☐ ☐	
120	74	29	01:02	BE	SET		49°51.070	124°57.070	252	45	-			☐ ☐	T 11.0

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Month <u>September</u>				Year <u>2021</u>		Vessel <u>Nordic Pearl</u>				Cruise ID <u>2021-049</u>					
Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information		Bottom Pressure	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/FI Cleaned	Comments
							Latitude	Longitude							
120	74	29	01:22	EN	SET		49° 51.460	124° 58.940	217	45	-			☐	
121	75	29	14:37	BE	SET		50° 04.951	124° 52.471	325	0	-			☐	T13.4
121	75	29	14:52	EN	SET		50° 06.057	124° 52.858	287	0	-			☐	
122	76	29	15:52	BE	SET		50° 04.830	124° 49.370	509	0	-			☐	T13.4
122	76	29	16:07	EN	SET		50° 05.619	124° 48.681	498	0	-			☐	
123	77	29	17:20	BE	SET		50° 07.180	124° 47.040	489	0	-			☐	T13.3
123	77	29	17:35	EN	SET		50° 07.881	124° 46.104	472	0	-			☐	
124	77	29	17:56	BE	CTD		50° 07.922	124° 45.931	467		-		YJ	☒	
124	77	29	18:01	BO	CTD		50° 07.882	124° 45.983	467	250	-			☐	
124	77	29	18:05	EN	CTD		50° 07.880	124° 46.022	466		-			☐	
125	77	29	18:07	BE	NET		50° 07.879	124° 46.086	466		-			☐	FW 73018
125	77	29	18:12	BO	NET		50° 07.881	124° 46.100	466	250	-			☐	
125	77	29	18:16	EN	NET		50° 07.890	124° 46.158	466		-		↓	☐	FW 74492
126	78	29	19:02	BE	SET		50° 04.819	124° 49.386	510	15	-			☐	T12.4
126	78	29	19:12	EN	SET		50° 05.516	124° 48.931	512	15	-			☐	
127	79	29	21:34	BE	SET		50° 18.103	124° 57.231	509	0	-			☐	T12.7
127	79	29	21:49	EN	SET		50° 17.142	124° 57.874	509	0	-			☐	
128	80	29	22:39	BE	SET		50° 14.151	125° 01.642	472	0	-			☐	T12.8
128	80	29	22:59	EN	SET		50° 12.878	125° 00.861	519	0	-			☐	

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							Latitude	Longitude							
129	80	29	23:20	BE	CTD		50°12.380	125°00.542	492		-		YJ	☐ ☒	
129	80	29	23:26	BO	CTD		50°12.387	125°00.574	486	250	-			☐ ☐	
129	80	29	23:34	EN	CTD		50°12.408	125°00.599	486		-			☐ ☐	
130	80	29	23:35	BE	NET		50°12.416	125°00.600	486		-			☐ ☐	FM 74492
130	80	29	23:42	BO	NET		50°12.439	125°00.629	486	250	-			☐ ☐	
130	80	29	23:48	EN	NET		50°12.468	125°00.639	486		-			☐ ☐	FM 75830
131	81	30	14:24	BE	SET		50°03.514	125°07.114	260		-			☐ ☐	T 12.3
131	81	30	14:39	EN	SET		50°02.552	125°07.244	-	0	-			☐ ☐	
132	82	30	16:29	BE	SET		49°58.497	124°58.316	153	0	-			☐ ☐	T 12.6
132	82	30	16:49	EN	SET		49°57.252	124° - . -	146	0	-			☐ ☐	
133	82	30	17:10	BE	CTD		49°56.789	124°57.346	173		-			☐ ☒	
133	82	30	17:14	BO	CTD		49°56.853	124°57.438	173	163	-			☐ ☐	
133	82	30	17:19	EN	CTD		49°56.891	124°57.528	119		-			☐ ☐	
134	82	30	17:20	BE	NET		49°56.902	124°57.558	116		-			☐ ☐	FM 75830
134	82	30	17:23	BO	NET		49°56.935	124°57.638	116	108	-			☐ ☐	
134	82	30	17:26	EN	NET		49°56.965	124°57.783	116		-			☐ ☐	FM 76842 DAS
135	83	30	18:08	BE	SET		49°55.437	125°02.115	298	30	-			☐ ☐	T 11.0
135	83	30	18:38	EN	SET		49°53.254	125°02.133	204	30	-			☐ ☐	
136	84	30	19:47	BE	SET		49°53.460	125°02.930	160	15	-			☐ ☐	T 10.9

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