Station / Tow

BONGO TOWS			Sample	Start	Event	Tow	Max	Vol H2O
Expedition	SHIP	STANO	Date	Time	No.	Type	Depth	filtered
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 1	8/4/2012	1931	90	Vertical	99.03	55.8
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 2	8/4/2012	2114	95	Vertical	100.00	51.2
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 3	8/4/2012	2332	102	Vertical	99.62	45.3
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 4	8/4/2012	0055	107	Vertical	100.00	50.3
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 5	8/5/2012	0207	113	Vertical	99.94	43.1
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 6	8/5/2012	0315	118	Vertical	97.81	42.8
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 7	8/5/2012	0421	123	Vertical	99.62	41.5
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 8	8/5/2012	0534	127	Vertical	98.16	43.7
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 10	8/5/2012	0654	132	Vertical	100.00	39.5
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 11	8/5/2012	0848	139	Vertical	100.00	41.6
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 12	8/5/2012	1114	149	Vertical	100.00	44.9
CCE-LTER-P1208	R/V MELVILLE	EFRONT1 - 13	8/5/2012	1316	156	Vertical	99.94	41.1
CCE-LTER-P1208	R/V MELVILLE	Cycle 1 - 1	8/6/2012	1048	176	Oblique	215.15	263.3
CCE-LTER-P1208	R/V MELVILLE	Cycle 1 - 2	8/6/2012	2258	191	Oblique	215.15	145.7
CCE-LTER-P1208	R/V MELVILLE	Cycle 1 - 3	8/7/2012	1032	206	Oblique	219.60	271.9
CCE-LTER-P1208	R/V MELVILLE	Cycle 1 - 4	8/7/2012	2254	220	Oblique	202.81	325.0
CCE-LTER-P1208	R/V MELVILLE	Cycle 1 - 5	8/8/2012	1031	233	Oblique	202.03	391.5
CCE-LTER-P1208	R/V MELVILLE	Cycle 1 - 6	8/8/2012	2234	243	Oblique	210.59	345.2
CCE-LTER-P1208	R/V MELVILLE	Cycle 2 - 1	8/10/2012	1048	270	Oblique	209.83	488.1
CCE-LTER-P1208	R/V MELVILLE	Cycle 2 - 2	8/10/2012	0017	285	Oblique	238.22	481.0
CCE-LTER-P1208	R/V MELVILLE	Cycle 2 - 3	8/11/2012	1031	300	Oblique	212.52	422.3
CCE-LTER-P1208	R/V MELVILLE	Cycle 2 - 4	8/11/2012	2232	315	Oblique	208.40	410.0
CCE-LTER-P1208	R/V MELVILLE	Cycle 3 - 1	8/13/2012	1023	342	Oblique	186.53	499.5
CCE-LTER-P1208	R/V MELVILLE	Cycle 3 - 2	8/13/2012	2304	356	Oblique	191.90	459.9
CCE-LTER-P1208	R/V MELVILLE	Cycle 3 - 3	8/14/2012	1035	371	Oblique	202.52	481.4
CCE-LTER-P1208	R/V MELVILLE	Cycle 3 - 4	8/14/2012	2324	383	Oblique	205.00	476.2
CCE-LTER-P1208	R/V MELVILLE	Cycle 4 - 1	8/16/2012	1029	413	Oblique	201.29	493.9
CCE-LTER-P1208	R/V MELVILLE	Cycle 4 - 2	8/16/2012	2230	424	Oblique	206.01	473.5
CCE-LTER-P1208	R/V MELVILLE	Cycle 4 - 3	8/17/2012	1033	437	Oblique	216.07	468.9
CCE-LTER-P1208	R/V MELVILLE	Cycle 4 - 4	8/17/2012	2232	451	Oblique	211.89	480.7
CCE-LTER-P1208	R/V MELVILLE	Cycle 5 - 1	8/19/2012	1036	482	Oblique	216.95	440.4
CCE-LTER-P1208	R/V MELVILLE	Cycle 5 - 2	8/19/2012	2227	493	Oblique	204.33	429.5
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 1	8/20/2012	1849	508	Vertical	100.00	44.7
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 2	8/20/2012	2036	513	Vertical	99.62	39.3
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 3	8/20/2012	2230	520	Vertical	99.62	47.4
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 4	8/20/2012	0001	525	Vertical	100.00	44.0
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 5	8/21/2012	0125	530	Vertical	100.00	54.0
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 6	8/21/2012	0310	537	Vertical	100.00	52.7
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 7	8/21/2012	0424	542	Vertical	100.00	46.2
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 8	8/21/2012	0613	549	Vertical	99.62	47.1
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 9	8/21/2012	0701	551	Vertical	100.00	42.6
CCE-LTER-P1208	R/V MELVILLE	EFRONT2 - 10	8/21/2012	0949	563	Vertical	100.00	43.2

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106	MV	9	1	176	2011 - 8 - 6	09:48	10:11

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	48 "	NET NO.	LTER #5	LTER #2	TOW NO. 1 OF 1
			METER NO.	087856	08695	SEA (Conditions): (Circle one) Calm / Moderate / Rough
TOWING (at depth)		30 "	FINAL	439798	137275	
			INITIAL	416144	113298	
Total (ascend)	15	36 "	DIFF.			WIND: 20 knots
			MESH SIZE	202	202	

Sea State 5

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES	55	50	47	45	40	35	35	40	35	40	43	45	45	45	45
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	35	38		35	42	45	50	55	60	55	50	47	45	35	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50 (30)	40	30 (5)	20	10

	PORT	STB.					
No. OF JARS	BM/GF	1	NET CLOGGING	none or slight	moderate	heavy ✓	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)					
FORMALIN & BORATE ADDED	X	✓	NET WASHING	none	rinsed	washed ✓	
ALCOHOL ADDED	X	X					
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none ✓	location	when mended: (Circle one) Before station / After station	

REMARKS: JRP

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT)	
						BEGIN TOW	END TOW
CCE-P~~1106~~ 1208	MV	1	2	191	2011 -8,- 6	2158	2224

190 on label changed in Database to event 191 but did not change label

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Calbobl
SINKING (descend)	9	19 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough (Circle one)
TOWING (at depth)	0	28 "	FINAL	460077	154638	
			INITIAL	445526	142573	
Total (ascend)	16	22 "	DIFF.			WIND: 20.5 knots
			MESH SIZE	202 µm	202 µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES: 28

OBSERVERS: CN

ANGLES	50	50	55	55	52	51	51	51	50	52	53	46		47	46
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	45	43	42	40	38	35	35	40	40	38	37	35	30	30	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT		STB.					
No. OF JARS			1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P	Q	P (Q)				✓	
FORMALIN & BORATE ADDED			✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED						✓		
COLLECTORS INITS.			CN	RIPS AND HOLES IN NET	none ✓	location	when mended: (Circle one)	Before station / After station

REMARKS: 20 m/min down to 50m, then increase to 40 m/min up @ 20 m/min

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT)	
						BEGIN TOW	END TOW
CCE-P1108	MV	1	TOW 3		2011-0807	9:32	9:55

TIME	Min.	Sec.		PORT	STB.
SINKING (descend)	7	07	NET NO.		
			METER NO.		
TOWING (at depth)	30	"	FINAL	487343	179563
			INITIAL	460113	154741
Total (ascend)	15	45 "	DIFF.		
			MESH SIZE	202µm	202µm

TOW TYPE: Oblique Bongo

TOW NO. 1 OF 1

SEA (Conditions): (Circle one) Calm / Moderate / Rough

WIND: 20.6 knots

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES		50			48		48		45	45		47	48		45
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160

ANGLES	47		48		45	45	47	42		35	28		30	30	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:
Port side flowmeter spinning on deployment

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106 (1208)	MV	1	Tow 4	220	2011 - 08 - 07	21:54	22:18

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	8	05"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		33"	FINAL	528424	227139	(Circle one) Moderate
			INITIAL	504741	196924	Rough
Total (ascend)	15	22"	DIFF.			WIND: 16.5 knots
			MESH SIZE	202µm	202µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES	55	54	55	55	52	51	50	51	49	49	48	48	46	45	44
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	41	42	43	45	45	45	45	47	48	48	45	46	45	45	42
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		2	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)					
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JRP	RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:
—Starboard codend slipped in opening, some lost (prob <10%)

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106	MV	1	5	233	2011-08-01	09:31	09:54

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	45 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		30 "	FINAL	569730	764363	(Circle one) Moderate
			INITIAL	530288	727432	Rough
Total (ascend)	15	08 "	DIFF.			WIND: 11.8 knots
			MESH SIZE	202 µm	202 µm	
AMT. OF WIRE OUT: 300 meters				OBSERVERS: JP, MDO, DJ, Jenny —		
TOTAL NO. OF ANGLES:						

ANGLES	52	51		48		48		45	45			42	40	43	
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	45	45			51	55	52		54	53		49			42
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)					
FORMALIN & BORATE ADDED		yes	NET WASHING	none	(rinsed)	washed	
ALCOHOL ADDED		No					
COLLECTORS INITS.		JRP	(RIPS AND HOLES IN NET)	none	location: Port side, lower third, large rip	when mended: (Circle one)	Before station / After station

REMARKS:
Port side sample lost due to rip; split starboard sample for both preservation and size fractioning.

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1208 ~~1106~~	MV	1	Tow 6	243	2011-08 08	21:34	21:59

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique bongo
SINKING (descend)	8	25"	NET NO.			TOW NO. 1 OF 1
			METER NO.	B08786	B08695	SEA (Conditions): Calm
TOWING (at depth)		30"	FINAL	605237	296539	(Circle one) Moderate
			INITIAL	569752	264377	Rough
Total (ascend)	15	54"	DIFF.			WIND: 25.1 knots
			MESH SIZE	202 µm	202 µm	
AMT. OF WIRE OUT:	300	meters	OBSERVERS:			
TOTAL NO. OF ANGLES:						

ANGLES	48	50	48	48	48	45	45	44	45	44	43	43	43	45	
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	44	42	41	41	41	41	42	46	48	51	54	54	50	45	38
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT		STB.					
No. OF JARS				NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P	Q	P Q					
FORMALIN & BORATE ADDED				NET WASHING	none	rinsed?	washed	
ALCOHOL ADDED								
COLLECTORS INITS.				RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1108 (1206)	MV	2	1	270	2011-08-10	09:48	10:17

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Tow
SINKING (descend)	8	19 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		30 "	FINAL	649888	734299	(Circle one) Moderate Rough
			INITIAL	607486	696569	
Total (ascend)	16	24 "	DIFF.			WIND: 20.4 knots
			MESH SIZE	202 µm	202 µm	
AMT. OF WIRE OUT: 300 meters				OBSERVERS:		
TOTAL NO. OF ANGLES:						

ANGLES	54	53	50	48	46	45	45	42	38	38	38	36		36	
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES		41	40		43	47		48		54	58		58		
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS	Split	1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	(P) Q		X			
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED					X		
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station
				X			

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1~~06~~ 08	MV	2	2	285	2011 ~~08~~ 10	23:17	23:42

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	9	23"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		31"	FINAL	646485	388790	(Circle one) Moderate Rough
			INITIAL	649892	342997	
Total (ascend)	15	51"	DIFF.			WIND: 22 knots
			MESH SIZE	202 µm	202 µm	
AMT. OF WIRE OUT:	300	meters	OBSERVERS:			
TOTAL NO. OF ANGLES:						

ANGLES	44	41	39	35	35	34	32	32	29	28	28	28	28	30	32
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160

ANGLES	36	38	39	40	42	45	46	46	46	44	43	42	41	40	40
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS	split	1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	(P) Q		✓			
FORMALIN & BORATE ADDED		✓	NET WASHING	none	(rinsed)	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	(none)	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106	MV	2	3	300	2011 08 11	9:31	9:54

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	37"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)	47	"	FINAL	736612	428734	(Circle one) Moderate Rough
			INITIAL	696537	388754	
Total (ascend)	15	23"	DIFF.			WIND: knots
			MESH SIZE	202µm	202µm	
AMT. OF WIRE OUT:	300	meters	OBSERVERS:			
TOTAL NO. OF ANGLES:						

ANGLES	46	45	42	42		39			38	40	41	45			
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	45	45		46	45	45	45		48		53	52		51	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.		none or slight	moderate	heavy	very heavy
No. OF JARS		1	NET CLOGGING	X			
SIZE OF JAR (Circle One)	P Q	(P) Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed X	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none ✓	location	when mended: (Circle one)	Before station / After station

REMARKS: Salp chain in Port side, No salps in Stbd

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106 (1208)	MV	2	4	315	2012-8-11	21:32	21:55

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	50 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		30 "	FINAL	775848	467668	(Circle one) Moderate Rough
			INITIAL	736608	428810	
Total (ascend)	14	41 "	DIFF.			WIND: 17 knots
			MESH SIZE	202	202	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES: 30

OBSERVERS: MDO, JP, DJ, JB

ANGLES	56	55	55	53	52	48	45	43	42	41	39	39	38	37	38
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	39	40	41	40	44	45	49	50	51	51	51	49	48	49	52
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	(P) Q		X			
FORMALIN & BORATE ADDED		✓	NET WASHING	none	(rinsed)	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none X	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106 (1208)	MV	5	1	342	2011 -08- 13	09:23	9:46

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	45"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		30"	FINAL	823759	515782	(Circle one) Moderate
			INITIAL	775852	467670	Rough
Total (ascend)	15	31"	DIFF.			WIND: 6.7 knots
			MESH SIZE	202µm	202µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES										55	53	50	52	52	53
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	54	50	50	49	48	49		50	51	52	53	54		53	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1108 ~~1106~~	MV	3	2	356	2011 08 13	22:04	22:29

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	8	50"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough (Circle one)
TOWING (at depth)		30"	FINAL	874691	559053	
			INITIAL	823759	515377	
Total (ascend)	15	53"	DIFF.			WIND: 16.7 knots
			MESH SIZE	202µm	202µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS: JP, JB, TG, RE, DJ, MDO

ANGLES	54	53	51	50	51	50	50	52	50	50	51	51	52	50	50
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	53	51	50	50	50	50	50	50	50	49	49	48	48	47	47
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		2	NET CLOGGING	none or slight	moderate X	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)					
FORMALIN & BORATE ADDED		✓	NET WASHING	none	(rinsed)	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none X	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106	MV	3	3	371	2011-8-14	9:35	9:58

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	42"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough
TOWING (at depth)		37"	FINAL	920388	604876	
			INITIAL	874702	559052	
Total (ascend)	15	53"	DIFF.			WIND: 7.5 knots
			MESH SIZE	202 µm	202 µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES	52			52	50	49		49	49		47	51	53	52	54
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES		52	51		45	45	50	45	45	45	40	40	40	40	45
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight ✓	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)					
FORMALIN & BORATE ADDED		✓	NET WASHING	none	(rinsed)	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	(none)	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106	MV	3	Tow 4	383	2011-8-14	22°24	22°49

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	8	40"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		30"	FINAL	966743	650273	(Circle one) Moderate
			INITIAL	920389	604863	Rough
Total (ascend)	15	18"	DIFF.			WIND: 5.9 knots
			MESH SIZE	202 µm	202 µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES		54	55	53	53	52	51	50	50	48	47	46	45	45	43
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	44	45	44	46	46	45	46	43	45	44	44	43	45	44	44
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)					
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JS	RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106	MV	4	TOW 1	413	2011 08 16	9:29	9:52

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	49 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		30 "	FINAL	012985	697580	(Circle one) Moderate
			INITIAL	966242	650270	Rough
Total (ascend)	15	48 "	DIFF.			WIND: 6 knots
			MESH SIZE	20 cm	70 cm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES: 30

OBSERVERS: JT, JC, DI, BS

ANGLES	53	52	50	49	50	50	50	51	52	50		51	51	48	49
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	47	46	46	47	48	45	45	45	45	45	45	44	44	42	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	(P) Q		X			
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JC	RIPS AND HOLES IN NET	none X	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1~~106~~ 1108	MV	4	Tow 2	424	2011 08 16	21:30	21:53

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	32"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm Moderate Rough (Circle one)
TOWING (at depth)		30"	FINAL	056968	742499	
			INITIAL	012995	697394	
Total (ascend)	15	32"	DIFF.			WIND: 8.6 knots
			MESH SIZE	70Lum	70Lum	
AMT. OF WIRE OUT:	300		meters	OBSERVERS: JB, BP, DS, BS, MDO, TG, PT		
TOTAL NO. OF ANGLES:						

ANGLES	51		49	51	50		48	48	49	48	46	48	49	47	46
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160

ANGLES	47	46	44		46	45	45	45	45	45	45	45	44	42	45
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	(P) Q					
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1~~06~~ 1208	MV	4	Tow 3	457	2011 8 17	01:33	09:56

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	6	42"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Circle one) Calm / Moderate / Rough
TOWING (at depth)		30"	FINAL	102344	787144	
			INITIAL	056967	742499	
Total (ascend)	15	28"	DIFF.			WIND: 0 knots
			MESH SIZE	202µm	202µm	
AMT. OF WIRE OUT: 300 meters				OBSERVERS: JB, BS, JP, DJ		
TOTAL NO. OF ANGLES:						

ANGLES	50	48	46	48	48	46	46	46			49	45		45	45
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	44	44	44	44	42	40	42	42	44	42	42	40	42	42	33
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	(P) Q		X			
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none X	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1~~1106~~ 1208	MV	4	4	451	2011 -08 17	21:32	21:55

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	7	08 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm
TOWING (at depth)		30 "	FINAL	147472	832955	(Circle one) Moderate Rough
			INITIAL	102352	787141	
Total (ascend)	15	36 "	DIFF.			WIND: 19 knots
			MESH SIZE	202 µm	202 µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS: JB, JP, PT, DJ, MDO, TG

ANGLES	52	51	49	48	46	49	48	49	45	45	46	45	46	45	47
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160

ANGLES	43	42	40	39	39	42	43	41	42	41	42	44	43	48	52
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)		X			
FORMALIN & BORATE ADDED		✓	NET WASHING	none	(rinsed)	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none X	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P~~1106~~ 1208	MV	5	Tow 1	482	2011-08-19	09:36	10:01

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	8	40"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough (Circle one)
TOWING (at depth)		30"	FINAL	193073	874697	
			INITIAL	147476	832956	
Total (ascend)	15	44"	DIFF.			WIND: 13.6 knots
			MESH SIZE	202 µm	202 µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS: JJ, JP, DS, DJ

ANGLES				45	43	43	42	42	42	42		41	40	40	40
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160
ANGLES	41	41		42		45	46			49		53		53	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)				X	
FORMALIN & BORATE ADDED		✓	NET WASHING	none	(rinsed)	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JS	RIPS AND HOLES IN NET	none X	location	when mended: (Circle one)	Before station / After station

REMARKS:

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P1106 (1108)	MV	5	Tow 2	~~492~~ 493 changed in Database but not on table	2011 - 8 - 19	21:27	21:50

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: Oblique Bongo
SINKING (descend)	7	23"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): Calm (Circle one) Moderate Rough
TOWING (at depth)		30"	FINAL	238269	915354	
			INITIAL	193087	874680	
Total (ascend)	15	37"	DIFF.			WIND: 19 knots
			MESH SIZE	202 µm	202 µm	

AMT. OF WIRE OUT: 300 meters

TOTAL NO. OF ANGLES:

OBSERVERS: JP, DJ, MDO, BS, JB, PT

ANGLES	52	50	48	46	46	44	44	38	52	52	53	53		55	53
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	180	170	160

*line next outboard, changed viewing angle

ANGLES	54	50	50	52	52	46	46	46	45	44	42	41	39	38	35
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P (Q)		X			
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.		JP	RIPS AND HOLES IN NET	none X	location	when mended: (Circle one)	Before station / After station

REMARKS: