LONG BEACH FIRE DEPARTMENT
Marine Safety Division

TRAINING ACTION PLAN

B-Shift Shark Navigator Drill

Operational Period

Date From: 12/5/2024 Date To: 12/5/2024

Time From:0900 Hours Time To: 1200 Hours

Approved By Incident Commander:

_____

Rank, First Initial, Last Name

INCIDENT OBJECTIVES (ICS 202)

1. Incident Name: B-Shift Shark Navigator	**2. Operational Period:** Date From: 12/5/2024 Date To: 12/5/2024 Time From: 0900 Time To: 1200

3. Objective(s):

-This drill is to refamilliarize dive team members with the use of the Shark Navigator Sonar System.

-Dive Objectives:
Descend PLS
Mark PLS on Navigator
360 Degree Scan
Identify Bridge abutment
Navigate to bridge abutment.
Circumnavigate the bridge abutment keeping it on your left shoulder
Navigate back to the PLS.
Controlled ascent to the surface.

- Follow Directions of Rescue Boat Operator and Deckhand on and around the rescue boat
- Controlled descent to planned depth
- Conduct Search pattern as laid out in the briefing
- Controlled Ascent with awareness of surroundings
- Surface with 500 psi minimum

4. Operational Period Command Emphasis:

- Participants must attend the the Safety briefing
- If an accident should occur the IC shall be notified immediately. Use "EMERGENCY RADIO TRAFFIC" as necessary
- Breathing Compressed air is dehydrating, hydrate pre and post diveUtilize safe practices in carrying out the mission
- Employ clear communication
- Facilitate networking between agencies

General Situational Awareness

- Expected depth of 15 to 20 feet.
- Potential for entanglement from the Navigator GPS.
- Potential for overhead environment near the bridge abutment.

5. Site Safety Plan Required? Yes ☐ No ☒

Approved Site Safety Plan(s) Located at:

6. Incident Action Plan (the items checked below are included in this Incident Action Plan)**:**

☐ ICS 203	☐ ICS 207	Other Attachments:	
☐ ICS 204	☒ ICS 208	☒	Long Beach Dive Team Dive Plan
☒ ICS 205	☐ Map/Chart	☒	LBFD Training Roster
☐ ICS 205A	☐ Weather Forecast/Tides/Currents	☒	Noaa Dive Table
☒ ICS 206		☒	LBFD Repetitive Dive Log

7. Prepared by: Name: Morrison Position/Title: RBC / Dive Sup. Signature: _____

8. Approved by Incident Commander: Name: _____ Signature: _____

ICS 202	**IAP Page** 1	Date/Time: 11-20-2024

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name:	2. Date/Time Prepared:	3. Operational Period:
B-Shift Shark Navigator	Date: 11/20/2024 Time:	Date From: 12/5/2024 Date To: 12/5/2024 Time From: 0900 Time To: 1200

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks
	4	Command	Fire 4	Dive Group						
	1	Emergency	Fire 1	Medical Group						
	A	Tactical		Divers						Through water coms.
	16/22	USCG		Resource Group						

5. Special Instructions:

- Surface OPS. on FIRE 4
- Through water coms. for diver to diver and diver to surface ban A.
- Emergency resources FIRE 1
- VHF 16/22 for USCG

6. Prepared by (Communications Unit Leader) Name: Morrison Signature: _____

ICS 205 | **IAP Page** _____ Date/Time: 11/20/2024

MEDICAL PLAN (ICS 206)

1. Incident Name: BShift Shark Navigator	**2. Operational Period:** Date From: 12/5/2024 Time From: 0900	Date To: 12/5/2024 Time To: 1200

3. Medical Aid Stations:

Name	Location	Contact Number(s)/Frequency	Paramedics on Site?
Rescue Boat 3	On Scene	LOB V-4 / VHF -16	☐ Yes ☒ No
Rescue Boat 1	On Scene	LOB V-4 / VHF -16	☒ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

4. Transportation (indicate air or ground)**:**

Ambulance Service	Location	Contact Number(s)/Frequency	Level of Service
LBFD	St. 33	LBFD V-1	☒ ALS ☐ BLS
LACO Sheriff Air Rescue 5			☒ ALS ☐ BLS
USCG, Air Ops		(650) 784-8904	☐ ALS ☒ BLS
			☐ ALS ☐ BLS

5. Hospitals:

Hospital Name	Address, Latitude & Longitude if Helipad	Contact Number(s)/ Frequency	Travel Time		Trauma Center	Burn Center	Helipad
			Air	Ground			
Long Beach Memorial	2801 Atlantic Ave, Long Beach, CA 90807	(562) 933-2000	5	15	☒ Yes Level:_____	☐ Yes ☐ No	☒ Yes ☐ No
Catalina Chamber	1 Big Fisherman Cove Avalon	(310) 510-1053	10		☐ Yes Level:_____	☐ Yes ☒ No	☒ Yes ☐ No
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No

6. Special Medical Emergency Procedures:

- All patients will be assesed for barotrauma, and transported to the chamber at Isthmus if required per medical direction.

☐ Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.

7. Prepared by (Medical Unit Leader)**:** Name: Morrison Signature: _____

8. Approved by (Safety Officer)**:** Name: _____ Signature: _____

ICS 206	**IAP Page** _____	Date/Time: 11/20/2024

SAFETY MESSAGE/PLAN (ICS 208)

1. Incident Name:	2. Operational Period:	
B-Shift Shark Navigator	Date From: 12/5/2024	Date To: 12/5/2024
	Time From: 0900	Time To: 1200

3. Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan:

- Participants must attend the Safety briefing
- Any Participant my suspend the drill due to safety concerns; at the discretion of the Dive Officer the exercise may be terminated
- If an accident should occur notify the IC or Instructor immediately. Use "EMERGENCY RADIO TRAFFIC" as necessary
- Dive equipment / gear must be in excellent working condition in order to participate in exercise
- Divers shall inspect their buddy's equipment prior to entering the water
- Participants will act in a responsible manner at all times during this exercise
- Divers will maintain buddy disipline with NO EXCEPTIONS
- Never hold your breath while diving on compressed air
- Always make eye contact with the deckhand when approaching the Rescue Boat
- Follow instructions from the deckhand when embarking / disembarking the swim step
- Divers will execute a 3 minute safety stop at 15 feet prior to surfacing
- Clear you ears early and often
- Participants on SCUBA will return to the surface with not less than 500 psi at the completion of the dive exercise
- Table profiles will be monitored pre and post dive
- Always maintain situational awareness, IF YOU SEE SOMETHING SAY SOMETHING! Our safety is everyones concern.
- If you get separated from your buddy search for no more than a minute, then safely surface.

4. Site Safety Plan Required? Yes ☐ No ☒

Approved Site Safety Plan(s) Located At:

5. Prepared by: Name: Morrison Position/Title: RBO / Dive Supervis Signature: _____

ICS 208	IAP Page _____	Date/Time: 11/20/2024

Long Beach Fire Department Dive Team

Dive Plan

Date: 12-5-2024 **Location:** Boat Ops **Dive Supervisor:** Morrison

Depth: 15'- 20'	**Visibility:** 0-5'		**Temp:** 62 deg	
Equipment:	☒ Wet	☒ Dry	☐ RDU	☒ SCUBA ☒ Surface Comms
Dive Type:	Shark Navigator			
Hazards:	☒ Entanglement	☒ Overhead Environment	☐ Pollution	☐ Strong Current
	☐ Other:			

Dive 1	**Time:** 0930		**Dive 2**	**Time:** 1100		**Dive 3**	**Time:** 1130	
Divers:	Fletcher Beebe		Divers:	Morimoto Buso		Divers:	Trinkle Buso	
RIC:	Trinkle		RIC:	Trinkle		RIC:	Morimoto	
Start P.G.:	A		Start P.G.:	A		Start P.G.:	B	
Depth:	20 Ft.		Depth:	20 Ft.		Depth:	20 Ft.	
Bottom Time:	20 Min.		Bottom Time:	20 Min.		Bottom Time:	20 Min.	
Safety Stop:	N/A		Safety Stop:	N/A		Safety Stop:	N/A	
End P.G.:	B		End P.G:	B		End P.G.:	D	
Surface Interval:			Surface Interval:	5 Min		Surface Interval:		
Coverage:	RB-3	ABM	Coverage:	LG-6	Beach	Coverage:	LG-6	Beach
	LG-7	Beach		RB-1	DTM		RB-2	ABM

Trin

Notifications: ☐ USCG (310) 521-3815 ☐ Catalina Hyperbaric Chamber (310) 510-4020

Dive Description/Sketch:

Descend PLS
Mark PLS on Navigator
360 Degree Scan
Identify Bridge abutment Navigate to bridge abutment.
Circumnavigate the bridge abutment, keeping it on your left shoulder
Navigate back to the PLS.
Controlled ascent to the surface.
Switch rolls if applicable and repeat

0930 RB1, LG6 (Fletcher, Beebe) meet at station 33. LG7 cover beach, RB3 cover Bay

1100 RB2 (Morimoto), LG-7 (Buso) meet at station 33. RB1 cover DTM, RB3 cover Bay

NOAA NO-DECOMPRESSION TABLE
MULTIPLE AIR DIVES

WARNING: EVEN STRICT COMPLIANCE WITH THESE CHARTS WILL NOT GUARANTEE AVOIDANCE OF DECOMPRESSION SICKNESS. CONSERVATIVE USAGE IS STRONGLY RECOMMENDED.

RNT RESIDUAL NITROGEN TIME
+ ABT ACTUAL BOTTOM TIME
ESDT EQUIVALENT SINGLE DIVE TIME

(USE ESDT TO DETERMINE END-OF-DIVE LETTER GROUP)

THESE CHARTS ARE BASED ON THE U.S. NAVY AIR DECOMPRESSION TABLES 7, 8, & 9 REV. 6

CHART 1 — DIVE TIMES WITH END-OF-DIVE GROUP LETTER

00 MAXIMUM NO-STOP TIME

DIVE TIME REQUIRING DECOMPRESSION STOP MINUTES REQUIRED AT 20 fsw (6.1 msw) — 00 / 00

DEPTH msw	DEPTH fsw	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Z
12.2	40	12	20	27	36	44	53	63	73	84	95	108	121	135	151	163	180 / 14
13.7	45	11	17	24	31	39	46	55	63	72	82	92	102	114	125	130 / 2	150 / 25
15.2	50	9	15	21	28	34	41	48	56	63	71	80	89	92	100 / 4	110 / 8	130 / 34
16.8	55	8	14	19	25	31	37	43	50	56	63	71	74	80 / 4	90 / 10	100 / 17	
18.3	60	7	12	17	22	28	33	39	45	51	57	60	65 / 2		80 / 14	90 / 23	
21.3	70	6	10	14	19	23	28	32	37	42	47	48	55 / 9	60 / 14	70 / 24		
24.4	80	5	9	12	16	20	24	28	32	36	39	45 / 10		50 / 17	60 / 30		
27.4	90	4	7	11	14	17	21	24	28	30	35 / 4		40 / 14	45 / 23			
30.5	100	4	6	9	12	15	18	21	25		30 / 3		35 / 15	40 / 26			
33.5	110	3	6	8	11	14	16	19	20	25 / 3		30 / 14		35 / 27			
36.6	120	3	5	7	10	12	15		20 / 2		25 / 8		30 / 24				
39.6	130	2	4	6	9	10		15 / 1		20 / 4		25 / 17					

CHART 3 — REPETITIVE DIVE TIME

REPETITIVE DIVES SHALLOWER THAN 40 FSW (12.2 MSW) ARE TO USE THE 40 FSW (12.2 MSW) REPETITIVE SCHEDULE

fsw / msw	40 / 12.2	45 / 13.7	50 / 15.2	55 / 16.8	60 / 18.3	70 / 21.3	80 / 24.4	90 / 27.4	100 / 30.5	110 / 33.5	120 / 36.6	130 / 39.6	GROUP LETTER
	13 / 150	12 / 113	11 / 81	10 / 64	9 / 51	8 / 40	7 / 32	6 / 24	5 / 20	5 / 15	5 / 10	4 / 6	A
	21 / 142	18 / 107	17 / 75	15 / 59	14 / 46	12 / 36	10 / 29	9 / 21	8 / 17	8 / 12	7 / 8	6 / 4	B
	29 / 134	25 / 100	23 / 69	20 / 54	19 / 41	16 / 32	14 / 25	12 / 18	11 / 14	10 / 10	9 / 6	9 / 1	C
	37 / 126	32 / 93	29 / 63	26 / 48	24 / 36	20 / 28	18 / 21	16 / 14	14 / 11	13 / 7	12 / 3		D
	45 / 118	40 / 85	35 / 57	32 / 42	29 / 31	25 / 23	22 / 17	19 / 11	17 / 8	16 / 4	14 / 1		E
	55 / 108	48 / 77	42 / 50	38 / 36	35 / 25	29 / 19	25 / 14	22 / 8	20 / 5	18 / 2			F
	64 / 99	56 / 69	49 / 43	44 / 30	40 / 20	34 / 14	29 / 10	26 / 4	23 / 2				G
	74 / 89	64 / 61	57 / 35	51 / 23	46 / 14	39 / 9	33 / 6	29 / 1					H
	85 / 78	73 / 52	65 / 27	58 / 16	52 / 8	44 / 4	38 / 1						I
	97 / 66	83 / 42	73 / 19	65 / 9	58 / 2								J
	109 / 54	93 / 32	81 / 11	72 / 2									K
	122 / 41	104 / 21	90 / 2										L
	136 / 27	115 / 10											M
	152 / 11												N
													O
													Z

00 / 00 — RED NUMBERS (TOP) ARE RESIDUAL NITROGEN TIMES (RNT)
BLACK NUMBERS (BOTTOM) ARE ADJUSTED NO-STOP REPETITIVE DIVE TIMES
ACTUAL DIVE TIME SHOULD NOT EXCEED THIS NUMBER

CHART 2 — SURFACE INTERVAL TIME

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Z
2:20 / :10	3:36 / 1:17	4:31 / 2:12	5:23 / 3:04	6:15 / 3:56	7:08 / 4:49	8:00 / 5:41	8:52 / 6:33	9:44 / 7:25	10:36 / 8:17	11:29 / 9:10	12:21 / 10:02	13:13 / 10:54	14:05 / 11:46	14:58 / 12:38	15:50 / 13:31
	1:16 / :10	2:11 / :56	3:03 / 1:48	3:55 / 2:40	4:48 / 3:32	5:40 / 4:24	6:32 / 5:17	7:24 / 6:09	8:16 / 7:01	9:09 / 7:53	10:01 / 8:45	10:53 / 9:38	11:45 / 10:30	12:37 / 11:22	13:30 / 12:14
		:55 / :10	1:47 / :53	2:39 / 1:45	3:31 / 2:38	4:23 / 3:30	5:16 / 4:22	6:08 / 5:14	7:00 / 6:07	7:52 / 6:59	8:44 / 7:51	9:37 / 8:43	10:29 / 9:35	11:21 / 10:28	12:13 / 11:20
			:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22	6:06 / 5:14	6:58 / 6:07	7:50 / 6:59	8:42 / 7:51	9:34 / 8:43	10:27 / 9:35	11:19 / 10:28
				:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22	6:06 / 5:14	6:58 / 6:07	7:50 / 6:59	8:42 / 7:51	9:34 / 8:43	10:27 / 9:35
					:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22	6:06 / 5:14	6:58 / 6:07	7:50 / 6:59	8:42 / 7:51	9:34 / 8:43
						:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22	6:06 / 5:14	6:58 / 6:07	7:50 / 6:59	8:42 / 7:51
							:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22	6:06 / 5:14	6:58 / 6:07	7:50 / 6:59
								:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22	6:06 / 5:14	6:58 / 6:07
									:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22	6:06 / 5:14
										:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30	5:13 / 4:22
											:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38	4:21 / 3:30
												:52 / :10	1:44 / :53	2:37 / 1:45	3:29 / 2:38
													:52 / :10	1:44 / :53	2:37 / 1:45
														:52 / :10	1:44 / :53
															:52 / :10

Time Ranges in hours: minutes
Enter Chart 2 from the top, move down to find surface interval time, move left to find the next repetitive group letter.

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PUBLIC SAFETY DIVE TEAM
REPETITIVE DIVE LOG

Date: December 5, 2024 Location: Boat Ops Dive Supervisor: Morrison

Tables Used: Noaa Dive Type: Drill Dive Description: Shark Navigator

DIVER/SAFETY	SI	BEG. PG	STARTING PSI	TIME DOWN	MAX. DEPTH	TIME UP	SAFETY STOP	ENDING PSI	RES. NIT. TIME	TOTAL TIME	END PG
Fletcher											
Beebe											
Morimoto											
Buso											
Trinkle											
Buso											

LONG BEACH FIRE DEPARTMENT
TRAINING DIVISION

ROSTER / SIGN-IN SHEET

Type of Training / Drill	Location: Boat Ops	Date:
B-Shift Shark Navigator	Time: 0900 - 1300	12-5-2024
Coordinator: Morrison		

#	Print Last Name, First Name	Agency	Station / Shift	Signature/Phone #