

Muise Marcel

From: Tucker Adam
Sent: Thursday, December 12, 2019 10:40 AM
To: Muise Marcel
Subject: FW: Conception - Questions for Sector Command Center
Attachments: 8 - Sector LA-LB RFF Data.ppt; Conception Initial Call LOB's.PNG; SnipImage.JPG

As requested.

From: [REDACTED] LT [REDACTED]@uscg.mil>
Sent: Thursday, December 12, 2019 10:33 AM
To: Tucker Adam [REDACTED]@ntsb.gov>
Cc: Neubauer, Jason CAPT [REDACTED]@uscg.mil>
Subject: Conception - Questions for Sector Command Center

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Good Morning Adam,

Below are answers to the questions for the Sector Command Center. I reached out to the Sector Command Center Chief LT [REDACTED] but as you will see below the questions have been answered by the Command Center Search and Rescue Specialist, Mr. [REDACTED]

- **How did you calculate the position broadcasted in the first UMIB?**

R21 RFF's Bald MT and Honda Ridge obtained Lines of Bearing of 149T and 124T with 2 degrees error (+/-) respectively with a DF Fix Ellipse position of 34-08.243N 119-48.525W approx. 6.5 nm NW of Platts Harbor at 10:14:23Z where DV CONCEPTION was actually anchored. Due to the smoke on board the vessel and total conflagration, it was very difficult to understand exactly what the CONCEPTION's master nature of distress actually was other than he "couldn't breathe" due to the smoke. The SCC watch floor initially believed it to be a possible medevac/heart attack victim. So the initial UMIB went out with that initial DF Fix position obtained from R21. It was later amended once we were able to make contact with the Motor Yacht GRAPE ESCAPE anchored approx. 400 feet away from CONCEPTION in Platts Harbor approx. 15 minutes later when the Master and his crew made it over to the GRAPE ESCAPE. (See attached Conception Initial Call.PNG above)

- **Does your Sector ever receive VHF-DSC distress calls? MF/HF DSC calls?**

Yes; VHF-DSC distress calls. SCC does NOT monitor or receive any MF/HF distress calls.

- **If yes, how many of those include position and/or vessel identity information such as MMSI?**

Approximately 95% of these VHF-DSC calls are false alarms due to operator error, equipment malfunction, accidental activation, or intentional hoax calls. Luckily, a large percentage of those accidental activation's include the vessels MMSI number so we are able to run those MMSI numbers through our different MMSI data bases and usually find the contact information for that vessel and are then able to verify the vessel to NOT be in distress. If the

vessel happens to be underway, other contact information obtained from the MMSI lists other Points of Contact that have information on owner/operator's present location and if they happen to be underway and where they could possibly be.

- **Do you have any data from post-SAR boarding's on how many vessels in distress have VHF DSC and don't use it, how many are not even hooked up to GPS or programmed with an MMSI?**

Post-SAR boarding's do NOT track the numbers of vessels that have/do not have VHF DSC on their VHF radios as recreational vessels are not presently required to be equipped with radios but are always recommended. Whether those vessels that do have VHF DSC have their VHF radios synched up with their GPS navigation sets is also not tracked.

- **Where are your VHF high sites?**

See in the attached section above (RFF Data.ppt).

- **Are any of your Stations equipped with a SAR alarm that the SCC could use to wake boat crews ?**

Our stations have SAR alarms and are activated at the stations. The SCC does not have any control of their SAR alarms.

- **Was the SCC made aware at the time that the Station waited for the paramedics before launching the RB-M, until they learned it was a fire.**

Yes. When we initially launched Station Channel Island Harbor, it was assumed the caller had suffered a massive heart attack and was unable to get back on the radio due to being unconscious. When we launched them, CIH asked if they should wait for a local EMS/Paramedic to ride out on the boat with them. The SCC responded yes but not to wait if they were unduly delayed. After launching both FOB Mugu and Sta CIH, the SCC learned from the M/Y GRAPE ESCAPE that a commercial vessel anchored in PLATTS Harbor was on fire and fully engulfed. Approximately one minute after that the SCC learned it was the Dive Vessel CONCEPTION with 33 souls (later 34) trapped below decks. We then correlated the initial MAYDAY call (thought to be a heart attack) to the boat fire in PLATTS Harbor. SCC then initiated CIC and launched all available local OGA's to assist with this case including three Fire Captains from Oxnard FD that rode out on one of the RBM's from Sta CIH and three fire boats.

- **Are you aware of any other SAR cases where the EPIRB burned up before it could be used? No.**

Respectfully submitted,

Mr. [REDACTED]
Civilian SAR Specialist
Sector LA-LB SCC
310-[REDACTED]

Very Respectfully,

LT [REDACTED]
Investigating Officer
USCG Sector Los Angeles - Long Beach
Office: 310-[REDACTED]

Muise Marcel

From: [REDACTED] CIV <[REDACTED]@uscg.mil>
Sent: Monday, February 10, 2020 12:59 AM
To: [REDACTED] LT; [REDACTED] LT
Subject: FW: Conception: A few questions related to SAR

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Hi [REDACTED]

As requested by Mr. Tucker (NTSB Lead);

- What day and time was the search suspended and what was the final calculated probability of detection. The last sitrep we have is from 031119Z .
The search was suspended by Captain Rochester at 031638Z Sep 19. The final calculated Joint Probability of Success (POS) is 49% for a Person in the Water w/o PFD as the search object. POS is a statistically generated measure of search effectiveness and is the probability that a given search will succeed in locating the search object.
The formula to find POS is $POS = POC \times POD$ with POC being the Probability of Containment and POD being Probability of Detection.
- The screen shot from Rescue 21 showing the RDF LOPs includes the Honda Ridge and Bald Mountain high sites. Can you verify the high site at Laguna Peak was in service?
The Laguna Peak RFF was in service the night of the call and a Line of Bearing (LOB) of 264T was obtained. Bald Mountain RFF (149T) and Honda Ridge RFF (124T) LOB's were also obtained.
- What is the policy for station small boats and the WPB on running AIS in LE mode during SAR cases, crossing a TSS, and/or in patchy fog?
If you are asking whether station small boats and Coastal Patrol Boats (CPB) can operate with their AIS turned off as well as darkened ship while in the LE mode (LEPAT) the answer is yes they can. If they are launched specifically for a SAR case or diverted for a SAR case while operating in the LE mode and their AIS was turned off, then it would be prudent for them to energize their AIS especially in low visibility and/or while crossing a Traffic Separation Scheme (TSS).

V/R,

[REDACTED]

From: [REDACTED] LT <[REDACTED]@uscg.mil>
Sent: Thursday, February 6, 2020 7:22 AM

To: [REDACTED] LT <[REDACTED]@uscg.mil>; [REDACTED] CIV <[REDACTED]@uscg.mil>

Subject: FW: Conception: A few questions related to SAR

Good Morning LT [REDACTED] Mr. [REDACTED]

Below are a couple follow up questions from the lead investigator at NTSB for the CONCEPTION case in regard to the response back in September. Thank you for your continued assistance with these inquiries.

Very Respectfully,

LT [REDACTED]

Investigating Officer

USCG Sector Los Angeles - Long Beach

Office: 310-[REDACTED]

From: Tucker Adam [REDACTED] <[REDACTED]@ntsb.gov>

Sent: Thursday, February 6, 2020 5:06 AM

To: [REDACTED] LT <[REDACTED]@uscg.mil>

Cc: Muise Marcel [REDACTED] <[REDACTED]@ntsb.gov>; Neubauer, Jason CAPT [REDACTED] <[REDACTED]@uscg.mil>

Subject: [Non-DoD Source] Conception: A few questions related to SAR

Hi LT,

I hope all is well with you.

I have a few SAR related questions which I was wondering if you could channel through the appropriate personnel at Sector.

- What day and time was the search suspended and what was the final calculated probability of detection. The last sitrep we have is from 031119Z .
- The screen shot from Rescue 21 showing the RDF LOPs includes the Honda Ridge and Bald Mountain high sites. Can you verify the high site at Laguna Peak was in service?
- What is the policy for station small boats and the WPB on running AIS in LE mode during SAR cases, crossing a TSS, and/or in patchy fog?

Many thanks for your help with these questions,

Adam

Adam Tucker

Accident Investigator

National Transportation Safety Board

MS-10 Major Investigations

[REDACTED] <[REDACTED]@ntsb.gov>

Mobile: 202-[REDACTED]

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Muise Marcel

From: ██████████ ██████████ LCDR <██████████@uscg.mil>
Sent: Friday, March 13, 2020 6:28 PM
To: Tucker Adam
Cc: Neubauer, Jason CAPT; Fawcett, Keith CIV; ██████████ ██████████ LT; Muise Marcel
Subject: FW: Conception - CG Radio Direction Finder

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Good day Adam,

Please find below two emails from our Sector Command Center who attempted to answer the questions posed. If you need more technical answers we can coordinate with CG-SAR or the system SME to assist as well.

Let me know if you have any follow on questions or need anything further. Thank you.

V/r,
LCDR ██████████ ██████████
Chief, Investigations Division
USCG Sector Los Angeles - Long Beach
1001 S. Seaside Ave, Bldg 20
San Pedro, CA 90731-0208
310-██████████ (O)

From: ██████████ CIV ██████████@uscg.mil>
Sent: Friday, March 13, 2020 2:59 AM
To: ██████████ LT ██████████@uscg.mil>; ██████████ ██████████ LCDR <██████████@uscg.mil>
Subject: RE: Conception - CG Radio Direction Finder

Hi Tim/██████████

Tim, your answers are on the money. Nice job. One thing to add is that the LOB's we were receiving off Laguna were intermittent while the LOB's we received from both Honda and Bald Mountain were consistently being displayed. I believe the master off CONCEPTION stated he was "North of Santa Cruz Island" initially which matched up with the LOB's received from Honda and Bald Mtn. We issued the UMIB off that initial information then updated the UMIB soon after we were able to determine the actual position was Platts Harbor. Hope this helps.

v/r,

From: ██████████ ██████████ LT ██████████@uscg.mil>
Sent: Thursday, March 12, 2020 8:30 PM
To: ██████████ ██████████ LCDR <██████████@uscg.mil>
Cc: ██████████ ██████████@uscg.mil>
Subject: RE: Conception - CG Radio Direction Finder

Hi [REDACTED]

I CCD [REDACTED] [REDACTED] as he was the OU that night and can probably elaborate, but these questions are pretty straightforward:

- Does the user select which high sites to use or does the Rescue 21 software decide, perhaps based on signal quality or best angle?

- You can select or deselect them, however common practice is to keep all of the high sites up and running unless one of them goes down for some reason.

- Does the user select the position while looking at the displayed LOBs on an electronic chart or is the position calculated by the software.

- It depends on the situation, however there will in fact be an actual 'fix' that is calculated by SAROPs at the intersecting LOBs. The program uses software as well as electronic charts and overlays to most accurately depict this. However, there are often position errors associated with using chart overlays, so we typically default to SAROPs since it's a GIS/ESRI type program.

- In this case, why not use Laguna Peak?

- Based off the way R21 works, it shouldn't really matter which site you are using if you're getting intersecting LOBs. If we are actually playing back tapes to listen to somebody, then we will look for the tower with a stronger signal. But for triangulation purposes, we would typically use any intersection of LOBs... If there is dead space between the intersecting lines of three different towers, then we would compute that entire area and use a central point for the fix.

Hope this makes some sense. I can talk with you more about it tomorrow in the office.

Danny do you have any insight on this you want to add?

[REDACTED]

From: [REDACTED] [REDACTED] LCDR <[REDACTED]@uscg.mil>

Date: Thursday, Mar 12, 2020, 6:50 PM

To: [REDACTED] [REDACTED] LT [REDACTED]@uscg.mil>

Subject: FW: Conception - CG Radio Direction Finder

Tim,

Would you be able to answer NTSB's questions below? Or do you have a recommended POC I can discuss the below with?

[REDACTED]

From: Tucker Adam <adam.tucker@ntsb.gov>
Sent: Thursday, March 12, 2020 12:25 PM
To: ██████████ ██████████ LCDR <██████████@uscg.mil>
Cc: Fawcett, Keith CIV <George.K.Fawcett@uscg.mil>; Neubauer, Jason CAPT <Jason.D.Neubauer@uscg.mil>; ██████████ ██████████ LT <██████████@uscg.mil>; Muise Marcel <Marcel.Muise@ntsb.gov>
Subject: [Non-DoD Source] FW: Conception - CG Radio Direction Finder

Hi LCDR,

Wondering if you could direct the question below to the appropriate personnel for response at sector?

Many thanks,

Adam

From: Muise Marcel <Marcel.Muise@ntsb.gov>
Sent: Thursday, March 12, 2020 2:14 PM
To: Tucker Adam <adam.tucker@ntsb.gov>
Cc: Muise Marcel <Marcel.Muise@ntsb.gov>
Subject: Conception - CG Radio Direction Finder

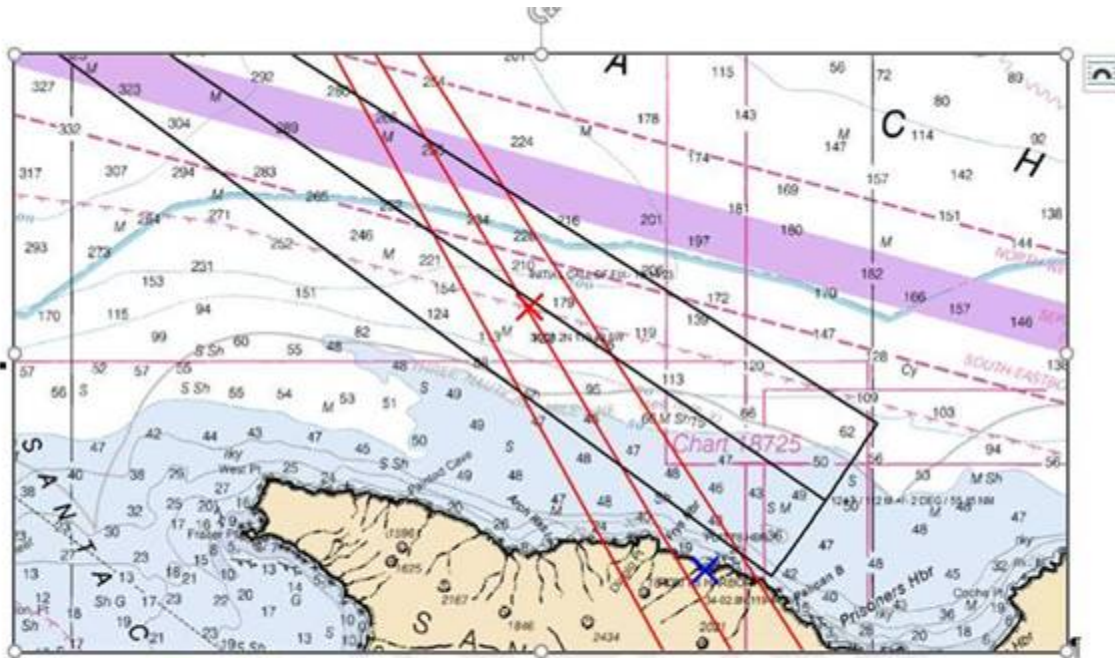
Good afternoon Adam,

As mentioned, I'm trying to be accurate with my description. The position of the first UMIB was about 7 miles off to the NW and was based on Honda Ridge and Bald Mountain RDF lines of bearing (LOB). That's understandable as Honda Ridge (black) is over 60 miles away. The (red) LOB for Bald Mountain passes very near Platts Harbor as seen the screen shot below. The SCC answered a follow up later that the Laguna Peak site was also operational and provided a LOB of 149°. That site is much closer, off to the NE, and crosses the Bald Mountain LOB at a better angle. When I plot the LOB, it also passes right through Platts Harbor (white line on aerial photo below).

If you would please share some more follow up questions:

- Does the user select which high sites to use or does the Rescue 21 software decide, perhaps based on signal quality or best angle?
- Does the user select the position while looking at the displayed LOBs on an electronic chart or is the position calculated by the software.
- In this case, why not use Laguna Peak?

Thanks,
Marcel



A screen-shot from the Coast-Guard's Rescue-21 system of the accident-site. Lines-of-position with 2°-margins-of-error from VHF-direction-finders at Bald-Mountain (red) and Honda-Ridge (black). The red-X marks the Rescue-21 derived-position and the blue-X the actual-position of the Conception. (Source: Coast-Guard)

Marcel L. Muise

Marine Accident Investigator | Master Mariner
 National Transportation Safety Board
 Direct (202) [REDACTED] Mobile (202) [REDACTED]



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