

**RESPONSE TO RAB COMMENTS FROM TECHNICAL REVIEW OF
CTO-0092 DRAFT REPORT FOR SEDIMENT CHARACTERIZATION OF THE BOAT CHANNEL**

Comments from Z. Kripke

Written on 9 September 1996
From: Z. Kripke
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COMMENT 1: Page i; Point of Information; Why was Stratum 3 considered an area outside the Boat Channel' when it is not in the open bay, but is bordered by the West Basin of Harbor Island an part of the NTC containing the Fire Fighter Training School? It does not seem to represent sediment uninfluenced by possible NTC contamination. Doesn't using that area as the comparison baseline for the other two Strata skew allowable contamination higher?

RESPONSE 1: The water body designated as the NTC Boat Channel terminates at the Harbor Drive bridge. Stratum 3 was never represented as an area totally uninfluenced by possible NTC contamination. Paragraph 2 of the Executive Summary states the "the third stratum represents an area of higher tidal flushing and lower potential influence from the outfalls lining the boat channel." The sampling plan and the use of Stratum 3 for baseline comparisons was developed, and agreed upon, with the regulatory agencies, SWDIV, and BNI. Using the Stratum 3 results as a comparison baseline is further discussed in the response to Comment 4.

Please note that a "+" was recorded within the Evaluation Matrix under sediment chemistry for Stratum 1 or 2 when any one value exceeded the ERL or the mean of Stratum 3. Therefore, comparison with Stratum 3 is only one way that further investigation was indicated.

Additional References:

BNI. 1995. Response to Navy Comments from Technical Review of CTO-0092 Draft Work Plan for Sediment Characterization of the Boat Channel. 06 October.

BNI. 1996. Response to Agency Comments from Technical Review of CTO-0092 Draft Work Plan for Sediment Characterization of Boat Channel. 19 January.

BNI. 1996. Resolution of DTSC and RWQCB-SD Comments on the CTO-0092 Draft Work Plan for Sediment Characterization of the Boat Channel. 26 February.

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COMMENT 2: Page ii; Why are only Strata 1 and 2 to be further investigated when DDT and mercury were found in elevated amounts in Stratum 3?

RESPONSE 2: With the exception of mercury at station S3S2 (1-5.5 ft) and total DDT isomers at station S3S2 (0-1 ft, 1-5.5 ft), analytes were not detected above the ERL in the Stratum 3 samples.

The Boat Channel was divided into Stratum 1 and Stratum 2. Stratum 3 was included in this investigation for baseline comparison purposes only. Section 6 has been expanded to include a comparison of the Stratum 3 results with BPTCP station results. The comparison supports the conclusion that sediment parameters from Stratum 3 are within the range of chemical concentrations and bioassay results of sites in northern San Diego Bay and may be appropriate for use as a background/reference area during further investigation.

COMMENT 3: Page 1-3: Again the area marked San Diego Bay is actually the West Basin of Harbor Island and hardly open bay enjoying full tidal influences. In fact this is confirmed in 1.2.2.

RESPONSE 3: Paragraph 2 of the Executive Summary states that "the third stratum represents an area of higher tidal flushing and lower potential influence from the outfalls lining the boat channel."

COMMENT 4: BPTCP results also indicate that samples in our Stratum 1 are contaminated more than would be found in areas truly within the Bay. Site 90104 opposite Harbor Island, for example, within Stratum 1 was higher in every metal count, every PAH, every DDT metabolite and every chlorinated pesticide than was site 90056, located in the Bay. There seems to be no justification for using Stratum 1 as any sort of baseline for comparing areas further up in the Boat Channel.

RESPONSE 4: Strata 1 and 2 sampling results were compared to Stratum 3 results from this investigation and were not compared to the BPTCP West Basin station 90104 discussed by the commentator. The results were also compared with the ERLs (see response to Comment 1).

There was an in-depth search for an applicable reference station; however, the intent of the investigation was to select a reference site that was representative both hydrologically and physically to the Boat Channel. The sampling plan and the use of Stratum 3 for baseline comparisons was developed, and agreed upon, with the regulatory agencies, SWDIV, and BNI.

Two stations sampled during the BPTCP (Stations 90049 and 90056) were represented as San Diego Bay. The maximum Stratum 3 results are less than or within the range of these two San Diego Bay stations for metals, LPAHs, HPAHs, total PAHs, and DDT isomers as shown in the new tables in Section 6 (Tables 6-11, -12, and -13). The Stratum 3 results are comparable to the BPTCP bay station results and therefore are as justifiable for use in baseline comparisons as the station 90056 results suggested by the commentator. A comparison of the Stratum 3 results with BPTCP station results is provided in Section 6 and supports the conclusion that sediment parameters from Stratum 3 are within the range of chemical concentrations and bioassay results of sites in northern San Diego Bay and may be appropriate for use as a background/reference area during further investigation.

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COMMENT 5: What is the rationale for considering water at 1 foot below the surface as Background water quality data? Is this generally accepted as water unaffected by storm drain and other contamination.

COMMENT 6: This study seems to have been undertaken without the services of a statistician who could have ascertained the number and location of samples needed to generate any usable data. Having conducted a statistically invalid study it is not scientifically rescued by comparing data between strata particularly when such an ad hoc substitution for statistical accuracy involves taking Stratum 1 as a baseline. Stratum 1 is clearly shown by past testing (see above) to have chemistries elevated above Bay levels.

RESPONSE 5: The basic water quality samples were collected to provide a context for physical conditions encountered during sampling. These data were not used in any of the analyses.

RESPONSE 6: Stratum 3 results, not Stratum 1 results, were used for baseline comparison. Stratum 3 results are comparable to the results from the BPTCP stations. Please see response to Comment 4.

The data collected during this study are not "statistically invalid" as suggested by the commentor. The purpose of this study was to obtain data to determine whether there is an indication of contamination in the Boat Channel, not to determine the magnitude of contamination. As such, the results from comparing maximums to maximums, means to means, or maximums to means are more descriptive than strictly quantitative. Using the maximum to mean comparison is based on the Superfund methodology for risk assessments using small data sets; therefore, a precedent has already been established for this type of comparison.

It should be noted that the sediment chemistry results were also compared to the NOAA ERL and ERM values. A "+" was recorded within the Evaluation Matrix under sediment chemistry for Stratum 1 or 2 when any one value exceeded the ERL or the mean of Stratum 3. In this way, comparison with Stratum 3 is only one way that further investigation was indicated.

The sampling plan and the use of Stratum 3 for baseline comparisons was developed, and agreed upon, with the regulatory agencies, SWDIV, and BNI. See response to Comment 2.

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COMMENT 7: The conclusion recommends only that Stratum 1 be further studied. In the Executive Summary both Stratum 1 and Stratum 2 are to be further studied. There seems no excuse for ignoring Stratum 3, where DDT and copper were found elevated over baseline and control. This is enough, in a study unfortunately undertaken without care that the results be useful and usable, to warrant a study being done that meets statistical requirements and reveals the true status of the whole Boat Channel, including Stratum 3.

RESPONSE 7: The conclusion and the Executive Summary both recommend that Stratum 1 and Stratum 2 be investigated further.

The data obtained during this study served the purpose for which they were collected; that is, to evaluate the potential for contamination within the Boat Channel and potential effects on benthic organisms.

Stratum 3 was included in this investigation for baseline comparison purposes only. Section 6 has been expanded to include a comparison of the Stratum 3 results with BPTCP station results. As stated previously, the comparison supports the conclusion that sediment parameters from Stratum 3 are within the range of chemical concentrations and bioassay results of sites in northern San Diego Bay and may be appropriate for use as a background/reference area during further investigation.

The sampling plan and the use of Stratum 3 for baseline comparisons was developed, and agreed upon, with the regulatory agencies, SWDIV, and BNI. See response to Comment 2.