TATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY

DEPARTMENT OF HEALTH SERVICES
TC SUBSTANCES CONTROL DIVISION
215 BERKELEY WAY, ANNEX 7
BERKELEY, CA 94704

N00217.000374
HUNTERS POINT
SSIC NO. 5090.3

June 24, 1988

Commanding Officer
Naval Station Treasure Island
Building 1 (Code 70)
San Francisco, CA 94130-5000
(Attn: Mr. Kam Tung)

HUNTERS POINT ANNEX - AIR SAMPLING PLAN

Dear Mr. Tung:

We have reviewed the above Air Sampling Plan and have discussed our preliminary comments with your consultant - Harding Lawson Associates.

Enclosed are our final comments based on our review and the discussion with HLA on May 10, 1988. These comments must be addressed in a revised final document. Pursuant to Section 6.9(b) of the Remedial Action Order, please submit the Final Air Sampling Plan by July 24, 1988.

If you have any questions, please contact Chein Kao of this office at (415) 540-3052.

Sincerely,

for Howard Hatayama, Chief
Site Mitigation Unit
North Coast California Section
Toxic Substances Control Division

cc: Roger James, RWQCB
Jerry Clifford, EPA Region IX
Scott Lutz, BAAQMD
Dave Wells, S.F. DPH
Steve Castleman, S.F. DA
Alex Dong, Navy West Div.

HH:ck:krf

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Section 2.0 The stated objective of the Air Sampling Plan is "data collected during the air sampling program will be used to assess whether atmospheric contamination is present at HPA at detectable concentrations and if so, to assess the extent of such contamination". Explain how the data obtained will be used to evaluate current air quality conditions at HPA. The receptors of concern and the type of exposure of concern must be identified. Future land use must also be considered and it would be appropriate to assume that the receptor of concern is a resident and that the exposure of concern is an annual average concentration based on 24-hour integrated samples. These items must be addressed before an adequate air sampling plan can be designed and they should be used to help determine the locations of samplers, sampling durations, and analytical methods etc. Furthermore, once the purpose of the sampling is determined, it should be realized that the first "round" of sampling may indicate that further studies are required.

Section 3.4.3 The data obtained in the "PHA 1&2 Risk Assessment" air sampling is suspect since the methods used did not address breakthrough, extraction efficiency, particulate borne SOCs, and did not include proper QA/QC.

Section 4.0 As mentioned above, the purpose of the air sampling must be determined. "Ambient air concentrations that pose a threat to human health or the environment" will vary depending on the receptor. "The air sampling program has been designed to...evaluate air dispersion characteristics at the site"- this will be difficult using the present sampling strategy because the entire site may be sampled on different days and because of the large number of potential sources at the site.

Section 4.1 The location of the 4 background samplers should be clarified. All sampling locations should be shown on a topographical map.

Section 4.2.2 The identification of an "upwind" monitor in each "sampling zone" is not a good idea because even though the monitor may be "upwind" of that particular "sampling zone" it might be "downwind" of other "sampling zones" or contaminated areas. The use of "sampling zones" might not be the best approach. It would be preferable to look at the entire site as the "sampling zone".

- Minimum distances from buildings (10x height) should be specified.

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Section 4.3 A proper QA/QC program must be described and followed before data that is "consistent, reproducible, and representative" can be generated. This hasn't been done.
- If the purpose of the 3 eight hour sampling periods is to collect data that is representative of a "worst case" scenario and then assume that this is an annual average concentration based on 24-hour integrated samples, then a description of and rationale for the "worst case" scenario should be included in the workplan.

Once data is collected then HLA must be able to prove that these are indeed "worst case" data. This must be proven for all types of possible exposure scenarios (i.e. both semi-volatiles and volatiles in the vapor phase and also for particulate borne contaminates). (Note: See comment under Section 6.1.2 regarding "worst case" meteorological data) This might not be feasible and a different sampling strategy might be more appropriate. Furthermore, to obtain some of the required detection limits, sampling durations greater than 8 hours might be required.

Section 5.2

Table 2

- For VOCs- please provide the method or reference for the extraction of VOCs from Tenax using methanol. If no method can be provided, this method should be thoroughly validated and the data submitted to the Department before it can be used to generate any data for this site.
- Explain the rationale for not sampling for Ketones such as MEK.
- For absorbents, especially for VOC analysis using Tenax, the compound specific breakthrough volumes and sampling rates must be addressed. The sampling conditions described in this report will result in the breakthrough of many compounds and as a result the data generated will be useless. Furthermore, the sampling method should be such that a back-up absorbent is mounted behind the primary absorbent. If the proper sampling volume is used, this will indicate if breakthrough is occurring in the primary absorbent.
- Because the receptors are identified as "residents" than the methods described may not have detection limits that are low enough because the Action Levels for some compounds are below these detection limits. For example:

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Listed detection

Compound	Action Level (ug/m)	Limit (ug/m)
Chloroform	0.43*	4.0
Benzo(a)pyrene	0.0087*	10.0
Arsenic	0.00007**	5.0

* DHS Applied Action Level
** Draft Health Effects Assessment Documents, EPA, 1984

Section 5.2.1.1 The desorption efficiency of the chosen methods must be determined via a proper QA/QC plan to show the percent recovery from each absorbent for each compound.
- The collection of samples in Tedlar bags and stainless steel canisters at the same location as samples on Tenax tubes are to be collected appears to be the extent of QA/QC for air sampling method validation. As described, it is unacceptable. The statement that these different sampling methods will be evaluated to select appropriate air quality monitoring procedures if future monitoring is necessary is inappropriate. If the actual concentrations in the air sampled are not known, how can it be determined which method gives the "best answer"? This type of study should be done in the controlled environment of a lab using air with known concentrations of contaminates.

Section 5.2.2 As mentioned above, the detection limits may not be appropriate.

Section 6.0
- The rationale for dividing the site in 5 zones is suspect.
- If the meteorological data is to be compared to meteorological data from San Francisco Airport, then data must be sampled concurrently for at least 90 days.
- If "air contamination" is to be compared between stations, then the stations must be sampled concurrently.
- Samples should be collected at the "breathing zone height". Equipment description/calibration and probe siting criteria must be specified.
- All methods must be validated before field use.
- Define "lot" and also describe the frequency of "duplicates".
- QA/QC should include "spikes".

Section 6.1.2 The wind pattern "characterization" should cover a 24 hour time period (for ex. day vs. night patterns/seasonal variations etc.) and include all pertinent data, especially if a short analytical sampling period is to be used to estimate "worst case" annual average concentrations based on 24-hour integrated samples. Additionally, it should be realized that conditions that are "worst case" for volatile emissions will not be "worst case" for particulate emissions.

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- The "data interpretation" should be further explained, especially in regards to "industrial and other activities that may impact the air quality at a sampling station".

Section 6.2 Sampling rate, breakthrough, and the use of backup absorbents must be addressed in the sampling methods.

Section 7.0 The statement "if possible, air sampling will not be scheduled concurrently with any soil sampling activities that are judged to have a potential impact on air quality monitoring results" needs further clarification. It may be necessary to address air quality during the RI/FS activities as a separate issue.

Section 7.2 Describe the qualifications of "qualified field technician".

Section 7.3 Please explain what "unusual meteorological conditions" will be avoided during sampling.

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