



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION IX**  
**75 Hawthorne Street**  
**San Francisco, CA 94105**

February 13, 1996

Mr. Dave Song  
Engineering Field Activity, West  
900 Commodore Drive, Code 1832.3  
San Bruno, CA 94066

RE: EPA Review and Comment on the Draft Field Demonstration Report (Volume I) and Technology Transfer Report (Volume II) on Recycling Sandblast Grit into Asphaltic Concrete, Hunters Point Annex, San Francisco, California

Dear Mr. Song:

EPA has completed its review of the above-referenced two volume report documenting the sandblast grit recycling project at Hunters Point. EPA's comments are presented below.

**GENERAL COMMENTS**

1. A description of the asphalt composition should be provided. This is important because if the tests prove acceptable, restrictions can be placed on the allowable types of asphalt to be used in this process.
2. It appears that the tests performed on the test strips were only done on core samples. Asphalt wears over time generating fine particles due to tire friction, weathering, etc. These fine particles end up being transported by wind or in the road ditch carried by runoff. Long term wearing of the road surface may release the grit and its metal contaminants back into the environment. These fine particles will likely have leachability characteristics different than the core samples due to the finer particle size and increased surface area. Address this concern in the document.

**SPECIFIC COMMENTS**

**Volume I**

1. **Tables 2-3, 2-4, and 2-5.** The regulatory citation for TTLC and STLC is obsolete. The current equivalent is CCR, Title 22, 66262.24(a)(2)(A).
2. **Section 2.3.1, Table 2-7, p. 2-12.** Using data presented in Appendix B, it appears that tabulated results for mean concentrations include analytical results for both field and laboratory duplicate analyses (i.e., 28 samples are used, not 24). These are not independent samples and should not be included in the calculations.

3. **Section 2.3.1, Table 2-8, p. 2-13.** Using data presented in Appendix B, it appears that tabulated results for mean, standard deviation, and upper confidence limit include analytical results for both field and laboratory duplicate analyses. These are not independent samples and should not be included in the calculations. As presented, the number of samples used in the calculation of the above statistics is one greater than listed in the "Number of Samples" column.
4. **Table 2-16, p. 2-25.** The standard deviation and number of measurements should be included in this table.
5. **Table 2-20, p. 2-26.** The sieve sizes used in this table do not correspond to the sieve sizes described elsewhere in the text, nor to any known sieve size system.
6. **Page 4-1, third paragraph.** The references to the 46% and 7% mixes are unclear. Please clarify by specifying the composition of the 46% and 7% mixtures.
7. **Section 4.3.1, Table 4-2, p. 4-3.** The TTLC and STLC concentrations for lead and copper in untreated and treated grit do not match concentrations presented in Tables 2-4, 2-5, and 2-7 in Section 2. See comments 2 and 3 above.
8. **Section 4.4, p. 4-5.** The actual butyltin species in used sandblast grit cannot be assumed to be the chloride species. The most common compound used as an antifoulant was bis-tributyltin oxide. However, a wide range of butyltin species have been historically used in paints including the chloride, fluoride, hydroxide, acrylate, methacrylate, etc. The actual species present would have a marked influence on physical-chemical properties such as solubility and volatility. The gas chromatographic method used to determine butyltins uses a derivitization to convert all organotin species (MBT, DBT, TBT) to a form which can be analyzed and does not determine the original anion. Results are often expressed as the chloride because laboratories typically use the chlorides as standards.

The statement that dibutyltin chloride does not appear to be degraded or volatilized is not supported. Insufficient data have been provided to determine which, if any, mechanisms may be occurring for any of the organotin species.

The fact that DBT concentrations in the heated material is higher than in the starting material either implies that TBT is being decomposed to DBT or that analytical results are questionable.

Since TBT and MBT concentrations decrease upon heating (assuming analytical results are correct), they must be degraded or, more likely, volatilized from the samples. If volatilized, this may present air quality or air emissions concerns during production of asphaltic concrete at an asphalt batch plant.

9. **Section 4.4, Table 4-5, p. 4-5.** The standard deviation and number of measurements should be included in this table.
10. **Page 5-1, fifth paragraph.** Washing the asphalt sample may actually wash out the contaminants that could leach from the mixture. Since there are control samples that are also exposed the same local soils, the effect of these soils can be accounted for in the analysis.
11. **Section 6.2.1, Tables 6-9 through 6-12, pp. 6-11 and 6-12.** The concentrations for lead and copper in untreated and treated grit do not match concentrations presented in Tables 2-4, 2-5, and 2-7 in Section 2. See comments 2 and 3 above.
12. **Section 6.4.2.1, p. 6-14.** The air sampling and monitoring employed should be referenced throughout the document. A complete reference should follow the first citation and an abbreviation should follow each subsequent citation.
13. **Section 6.4.2.2, p. 6-19.** A Gaussian plume dispersion model is referenced. Please indicate which model was actually used. If an EPA model was used, it must be cited. Alternatively, if equation provided in the text was used, the text should indicate how the equation was used.

#### Volume II

1. **Table 2-2.** The regulatory citation for TTLC and STLC is obsolete. The current equivalent is CCR, Title 22, 66262.24(a)(2)(A).
2. **Section 4.3, Table 4-2, p. 4-3.** Total and WET lead concentrations do not match concentrations presented in Table 4-12 (page 4-3 of Volume I). See comments 2 and 3 for Volume I.

Questions or comments regarding this letter should be referred to me at (415) 744-2409.

Sincerely,



Claire Trombadore  
Remedial Project Manager

cc: Cyrus Shabahari, DTSC  
Karla Brasaemle, Weston