



Department of Toxic Substances Control

N00217.000514
HUNTERS POINT
SSIC NO. 5090.3



Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

September 18, 2001

Commanding Officer
Department of the Navy
Naval Facilities Engineering Command
Southwest Division
1220 Pacific Highway
San Diego, CA 92132-5190
Attention: Richard Mach

PARCEL E DRAFT REMOVAL ACTION LANDFILL CAP CLOSE-OUT
REPORT, HUNTERS POINT SHIPYARD, SAN FRANCISCO,
CALIFORNIA

Dear Mr. Mach:

California Department of Toxic Substances Control has completed review
of the above-mentioned document. Our comments are attached.

If you have any questions, Please contact me at (510) 540-3822.

Sincerely,

Chein Ping Kao, P.E.
Senior Hazardous Substance Engineer
Office of Military Facilities

CC: Mr. Michael Work
US EPA Region IX
75 Hawthorne Street
San Francisco, California 94105-3901

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at www.dtsc.ca.gov.*

Mr. Michael Bessette Rochette, R.G.
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Ms. Amy Brownell
City and County of San Francisco
Department of Public Health
1390 Market Street, Suite 910
San Francisco, Ca 94102

MEMORANDUM

TO: Chein Kao, P.E.
Site Mitigation
Northern California Region
Berkeley

VIA: John Hart, P.E. (Original signed by)
Chief, Engineering Services Unit

FROM: Ram Ramanujam, P.E. (Original signed by)
Hazardous Substances Engineer
Engineering Services Unit

DATE: September 17, 2001

SUBJECT: Review Comments - Draft Removal Action Landfill
Cap Close-out Report - Parcel E, Hunters Point Shipyard, CA

Per your request, I have reviewed the following document:

Draft Removal Action Landfill Cap Close-out Report - Parcel E,
Hunters Point Shipyard, CA (prepared by Tetra Tech EM Inc., July 13,
2001).

Based on the review, my comments are as follows:

GENERAL:

Regarding Parcel E, I have provided review comments (May 22,
2001) on the following document:

Attachment D, Liquefaction Potential at parcel E, Draft Field
Sampling Plan/Quality Assurance Plan for Parcel E Data gaps
Investigation, Hunters Point Shipyard, CA (prepared by Tetra Tech EM
Inc., April 6, 2001).

My comments (May 22, 2001) should be included with the review
comments for the present document (Draft Removal Action Landfill Cap
Close-out Report - Parcel E).

COMMENTS:

1. The design of cover and Parcel E landfill(landfill) closure should follow the requirements of the site specific Applicable or Relevant and Appropriate Requirements(ARARs) and To Be Considered(TBC) requirements. The Report should demonstrate that the cover and landfill closure design is consistent with ARARs and TBCs.

2. The Report should include engineering design criteria for both cover and the landfill closure system.

3. The Report should include stability analysis of cover and landfill closure system for both static and seismic conditions.

4. The Report should include critical subsurface cross section profiles (both north-south and east-west directions) of the landfill. The cross section profiles of the subsurface materials are important to evaluate the stability analysis of the landfill.

5. The Report should include settlement (both total and differential) analysis for the cover system. Also, the Report should provide assurance that the geosynthetic cover system will maintain its integrity after experiencing the predicted settlement.

6. The Report should include soil loss/erosion analysis for the cover system to meet the requirements of 2Tons/acre/year (REF: Design and Construction of RCRA/CERCLA Final Covers, EPA/625/4-91/025, May 1991).

7. Two settlement markers were installed for the cover system. It should be noted that the cover system extends about 14 acres and providing only two settlement markers are not sufficient. Moreover, with two settlement markers it is not possible to draw any settlement profile for the site. The number of settlement markers should be increased to obtain appropriate settlement profile of the site.

8. The Report should include the design for the surface drainage and the erosion control.

9. The Report should include a typical monitoring well construction details.

10. Figure 4: The report should include:

- . Anchor trench design.
- . Design of the pipe.
- . Mattressed gabion riprap design.

11. Figure 2: The installation of the cover system should completely envelop the landfill waste. However, the edge of the waste goes beyond the coverboundary.

12. Department of Toxic Substances Control(DTSC) have not received the construction specifications or the Construction Quality Assurance(CQA) or the Construction Quality Control documents(CQC) for review.

I will be available to attend any project meeting to resolve the technical issues identified in this memorandum. In the meantime, if you need any clarification on this memorandum, please contact me at (916) 255-6662.

Cc: Eileen Hughes - Site Mitigation, Berkeley

MEMORANDUM

TO: Chein Kao
Site Mitigation
Northern California Region
Berkeley

VIA: John Hart, P.E. (Original Signed by)
Chief, Engineering Services Unit

FROM: Ram Ramanujam, P.E. (Original Signed by)
Hazardous Substances Engineer
Engineering Services Unit

DATE: May 22, 2001

SUBJECT: Review Comments -Draft Field Sampling Plan/QAPP for
Data Gaps -Liquefaction Potential At Parcel E,
Hunters Point Shipyard, CA

Per your request, I have reviewed the following document:

Attachment D, Liquefaction Potential at Parcel E, Draft Field Sampling Plan/Quality Assurance Project Plan for Parcel E Data Gaps Investigation, Hunters Point Shipyard, CA (prepared by Tetra Tech EM Inc., April 6, 2001.

Based on the review, I provide the following summary:

SUMMARY:

1. Quantitative analyses of in-situ liquefaction resistance require the site specific ground-motion parameters and representative strong-motion records. It is not clear whether these parameters were established for the site and approved by the Agencies (if not, these issues become a data gap for the site).

2. The Report should include a typical subsurface soil profile using the available soil borings at the site. Various substrata of the soil profile should

be identified using the Unified Soil Classification System(USCS).

3. The Report should include a description of various engineering controls (in place) at the landfill area. Also, these engineering controls should be identified in a site map.

4. Section 5.2: Based on the analyses, the Report should identify the zone of potential liquefaction on a map (to understand the affected areas).

5. Section 6.0: The Report proposes 20 to 30 Cone Penetrometer Tests(CPTs) around the southern and southwestern edge of the landfill. The Department of Toxic Substances Control(DTSC) would like to know when the number of CPTs probes will be finalized. Also, the Report should include the proposed depth of the CPT probes.

6. Section 6: The Report proposes 10 to 15 soil borings around the southern and southwestern edge of the landfill. These soil borings will be drilled using a drill rig or Geoprobe unit. It is not clear how a Standard Penetrometer Test(SPT) will be carried out with the Geoprobe unit. It should be noted that the SPT results are needed for liquefaction analysis. Also, DTSC would like to know when the number of soil borings will be finalized.

7. The Report should include a map indicating the proposed locations of CPT probes and soil borings.

8. The Report should include some correlation borings between CPT probes and soil borings (for the geotechnical interpretation).

9. Figure D-2, (Outside Liquefaction Issue):

. It is not clear how the 'Limit of Cap Geomembrane' can fall outside of the protective cover area. The protective cover should encompass all the geomembrane areas. This issue needs clarification.

. It is not clear how the waste area can go beyond the protective cover area. It appears that the waste area is not fully covered by the protective cover. This issue needs clarification.

I will be available to attend any project meeting to resolve the technical issues identified in this memorandum. In the meantime, if you need any clarification on this memorandum, please contact me at (916) 323-3637.

Cc: Eileen Hughes -Site Mitigation, Berkeley