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ALAMEDA POINT
SSIC NO. 5090.3

Department of Toxic Substances Control

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July 1, 2003

Mr. Richard Weissenborn
Department of Navy
Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
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DRAFT SITE INSPECTION REPORTS, FED-1A, PBC-1A, EDC-3, EDC-12, EDC-17, PBC-3, EDC-21, AND EDC-5, ALAMEDA POINT, ALAMEDA, CALIFORNIA

Dear Mr. Weissenborn:

The Department of Toxic Substances Control (DTSC) has reviewed three draft Site Inspection (SI) reports, dated March 2, March 9, and March 16, 2003 for the above referenced transfer parcels. Together these three reports have tried to assess the suitability to transfer for 975 acres of land which is about 64% of the land encompassed by Alameda Point. Almost all the land that is not currently investigated and remediated under the CERCLA or Installation Restoration (IR) program is being addressed by these three SI reports.

Based primarily on the Environmental Baseline Survey (EBS), the SI assumes: 1) there is no history of contaminant release at the subject parcels, 2) the parcels were identified as ready for transfer in the EBS, and 3) the only remaining environmental issue is potentially elevated levels of polycyclic aromatic hydrocarbons (PAHs) in soil resulting from PAH-contaminated sediments being used as fill. The SI estimates the risk and hazard associated with the PAHs and integrates them with what were reported for the non-PAH compounds (i.e. metals and organics that are not PAHs) in the EBS. If the integrated risk is below 10^{-5} and the hazard index is less than 1, the parcel is considered suitable for transfer and no further action is warranted.

DTSC disagrees with the assumptions these site inspections are based on. We believe some EBS parcels situated within the transfer parcels may have experienced releases that warrant further evaluation and PAHs may not be the only remaining environmental issue at the subject parcels. Furthermore, we believe PAHs in the fill originated from historical petroleum industries in the region may not be the sole source for PAHs and past Navy activities may have also contributed to the elevated levels of PAHs at Alameda Point.

As to the human health screening risk evaluation, DTSC is concerned that the methodology described in the SI diverts from the standard risk assessment practices and lacks presentation of the total incremental cancer risk and or hazard. Also, DTSC is concerned with the term "target risk management level" used by the Navy that allows cumulative risk below 10^{-5} to be the basis of no further action under CERCLA. Although there have been previous DTSC risk management decisions granting "no further action" to sites with total cumulative risk of 1×10^{-5} or above, the decisions have been strictly site-specific and based on rigorous risk assessment that considers both total and incremental cancer risks and hazards including any presentation of "ambient" risk and or hazard. Please contact DTSC risk assessor to make sure the methodology used in the SI meets the standard.

In the aspect of ecological risk screening, it appears that the evaluation is based on the SI data and may have not adequately considered the impact of contaminants other than the PAHs. Also, the subject SI reports have not been submitted to the Department of Fish and Game (DFG) for review and comments. As the co-trustee for natural resources for the State of California, the DFG should be involved in the process. Please contact both DFG and DTSC risk assessors and make sure the approach used in the study adequately protects the environment.

Aside from human health and ecological screening risk evaluation, also considered critical in the determination of suitability for transfer is the environmental impacts from sites adjacent to the transfer parcel. Although the SI has recommended against transfer for parcels EDC-17 and EDC-21 that have known groundwater contamination extended from neighboring sites, it has considered parcels PBC-1A, EDC-3, EDC-12, and EDC-17 transferable despite potential groundwater contamination from adjacent parcels. This does not seem prudent. Please make sure all parcels deemed suitable for transfer are adequately evaluated for the migration of contaminants from neighboring parcels through groundwater or soil media (e.g. landfill gas). It is our opinion that any parcel that has a potential to be impacted by adjacent sites is not suitable for transfer until further evaluation.

Our comments are attached. Part I prepared by the Office of Military Facility (OMF) is based on a detailed review of FED-1A which considers the EBS in conjunction with the SI for the determination of suitability to transfer. Part IA contains general comments that, although worded for FED-1A, address DTSC concerns underlying all eight transfer parcels. Part IB and IC are comments specific to FED-1A which are generated primarily in an effort to determine if RCRA corrective action requirements are met. No such detailed review was performed for transfer parcels other than FED-1A due to the difficulty reconciling the parcel variations in the EBS and SI.

Please review the attached comments. Should you have any questions, please call me at (510) 540-3767.

Sincerely,

Marcia Y. Liao

Marcia Liao, Ph.D., CHMM
Hazardous Substances Engineer
Office of Military Facilities

enclosure

cc: Michael McClelland, SWDiv
Andrew Dick, SWDiv
Steve Edde, Alameda Point
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Randolph Brandt, LFR
Burt Morgan, RAB Co-Chair
Lea Loizos, Arc Ecology
Eric Johansen, Bechtel

DTSC COMMENTS
DRAFT SITE INSPECTION REPORT
TRANSFER PARCEL FED-1A
ALAMEDA POINT, ALAMEDA, CALIFORNIA

PART I: COMMENTS FROM THE OFFICE OF MILITARY FACILITY (OMF)

IA: GENERAL COMMENTS

Study Objective

1. Alameda Point is a Part B hazardous waste facility subject to RCRA corrective action. Please clarify if this Site Inspection (SI) is intended to also satisfy RCRA corrective action requirements.

Project Basis

2. Section 3.3.1 of the SI states that the sampling design at transfer parcel FED-1A was based on the following factors: 1) there is no history of contaminant release, 2) this parcel was identified as ready for transfer in the Environmental Baseline Survey (EBS), and 3) the only remaining environmental issue is potentially elevated levels of PAHs in soil resulting from PAH-contaminated sediment being used as fill.

   DTSC disagrees with these statements. It is our understanding FED-1A, Parcel 23 for instance, may have experienced a number of releases. In the comments dated May 6, 1999, DTSC has recommended ECP 7 (i.e. not ready for transfer) for Parcel 23 (see Parcel Specific Comment #6). It is our opinion FED-1A has potential environmental issues other than PAHs that need to be addressed before transfer takes place. Please refer to parcel specific comments for further details.

Risk-Based Transfer Criteria

3. For readers who are less familiar with the site history and transfer process, please explain what the Navy considers as "suitable for transfer" and "suitable for transfer with unrestricted use" and what are the criteria for determination. Since the transfer is risk-based, please also explain the level of risk evaluation that would go into the suitability determination (e.g. Tier 1 or Tier 2).

   In addition, because the Navy has used ECP classification to differentiate suitability for transfer and ECP classification is the final product of EBS, please explain how the ECP classification was

decided and how it should be used in the transfer suitability determination (see General Comment #5). Please provide the ECP classification for the EBS parcels discussed in this SI to help the readers connect between the EBS, SI and future Finding of Suitability to Transfer (FOST) documents.

4. Page 5-2 of the SI report states, "The EBS cumulative target risk level was 10^{-4} for all potential carcinogens and all pathways; the cumulative target risk for this SI is 10^{-5}". Page 5-11 states, "In summary, the combined human-health SI and EBS screening risk evaluation results show that cumulative risks are below 1×10^{-5} for cancer and an HI of 1 for noncancer and no further action under CERCLA is warranted".

   These seem to say that the EBS has used 10^{-4} cancer risk as an acceptable criterion. Anything below 10^{-4} is considered acceptable for human health and suitable for transfer without any restriction (see page 12 of Appendix B or page 11 of Parcel 23 of the Phase 2 EBS report). The SI, on the other hand, appears to have considered 10^{-5} cancer risk as acceptable.

   Although there have been previous DTSC risk management decisions granting "no further action" to sites with total cumulative risk of 10^{-5} or above, the decisions were strictly site-specific and based on rigorous risk assessment that considers both *total* and *incremental* cancer risks and hazards including any presentation of "ambient" risk and or hazard. The risk screening FED-1A has been subject to may not meet this standard (see General Comments # 7). In general, we are unaware of any "target risk level" or blanket risk screening criteria at the EBS or SI level allowing cumulative risk below 1×10^{-5} to be the basis of no further action under CERCLA. The point of departure has always been 1×10^{-6}.

5. While the EBS and SI seem to have considered cancer risks less than 10^{-4} and less than 10^{-5} as acceptable, the Supplementary EBS (SEBS) appears to have used a more stringent criterion. Appendix B of the SEBS states that a transfer parcel is classified as ECP 3 if Tier 1 or Tier 2 cancer risk is below 10^{-6}. Please clarify this discrepancy among the EBS, SI and SEBS.

Additional Transfer Criteria (Impact from Neighboring Sites)

6. Please identify all EBS parcels situated adjacent to FED-1A, describe their environmental conditions (e.g. current ECP classification, recent groundwater monitoring data) and discuss their potential impacts (e.g. migration of groundwater plume and/or landfill gas) to FED-1A in terms of suitability for transfer. Recommendation for transfer should not be

made if contamination from neighboring sites may impact the subject transfer parcel.

Risk Screening Methodology (Human Health Risk)

7. The risk screening methodology in this SI appears to divert from the standard risk assessment practices. Please discuss with DTSC risk assessor to make sure the methodology is acceptable before revising the SI report. Please refer to Part II for detailed Human and Ecological Risk Division (HERD) comments.

8. Since the SI sampled only for PAHs, to obtain a full presentation of the risks at FED-1A requires integration of non-PAHs results from the EBS. But since the EBS and SI are based on two different parceling systems, their areas of study do not necessarily coincide.

   To match the parcel and integrate the risks from PAHs (i.e. from SI) with those from non-PAHs (i.e. from EBS), the Navy has used the "50 percent" approach in which portions of EBS parcels were included in the transfer parcel if at least 50 percent of the EBS parcel is within the transfer parcel boundary. No explanation was given as to how "50 percent" was selected. This approach, as Section 5.1 acknowledges, is unconventional and technically incorrect.

   Since this "50 percent" approach is also used in two other Site Inspection reports involving a total of eight transfer parcels or approximately 64% of all land encompassed by Alameda Point, it is important that the approach is correct and able to withstand scrutiny. We strongly recommend that only the data pertinent to the transfer parcel be used in risk evaluation (see General Comment #14). We believe this can be easily achieved electronically by sorting out soil and groundwater data specific to the transfer parcel from the EBS, combine them with the data from SI, and then perform the risk calculation.

9. To assist readers less familiar with the site history and facilitate the review of future FOST document, please explain if the agencies have concurred with the risk screening methodology used in the EBS, specifically, the technical memorandum entitled *Methodology for Human Health Risk-Based Tiered Screening Analysis Technical Memorandum dated April 17, 1997, prepared by PRC.* This memorandum is included as Appendix B to Volume 0 of Phase 2 EBS reports.

   This methodology describes a tiered approach in which Tier 1 screening estimates risk and hazard by comparing the 95UCL of chemicals of concern (COC) to respective residential PRGs. Tier 2

screening is more rigorous. It includes evaluation of toxicological parameters and exposure pathways and considers the intended uses of specific parcels.

According to the methodology, Tier 2 will be conducted if Tier 1 cancer risk is greater than 10^{-4} or hazard index is greater than 1. It does not specify what will be done to parcels with risks between 10^{-4} and 10^{-6}. We are concerned if this could mean any parcel with a Tier 1 cancer risk less than 10^{-4} is considered suitable for transfer with unrestricted use and no further risk evaluation (e.g. Tier 2) is necessary (also see General Comment # 4). Please clarify.

10. The estimated risk and hazard from the groundwater medium is based on the EBS which, in turn, is base on hydropunch data collected between 1994 and 1995. Please update it using more recent groundwater data, if available.

Ecological Risk Screening

11. The future planned use of FED-1A is wildlife refuge. It appears that the ecological risk screening is based solely on the SI data and considers only PAHs (the EBS contains no ecological risk screening). Please explain why this is considered sufficient.

    As stated earlier, it is our opinion FED-1A has potential environmental issues other than PAHs. Their impacts on biological inhabitants, if any, should be adequately discussed.

12. We reiterate that the Department of Fish and Game (DFG), as the co-trustee for natural resources for the State of California, must be included in the discussion of any biological resources issues. This SI report was not sent to the DFG for review and comments. Please make sure the DFG is included in any future transmittal of documents involving biological resources.

Previous Investigations

13. Executive Summary, first paragraph states, "Previous investigations identified eight transfer parcels, including transfer parcel federal agency (FED)-1A as suitable for transfer". For clarity, please explain what the transfer criteria were (was 10^{-4} cancer risk considered one of the criteria?).

14. EBS is an integral part of the SI. Together they form the basis for decisions on transfer of non-CERCLA sites which account for the majority of land encompassed by Alameda Point. To facilitate the

review, the EBS and SI reports must be consistent and allow easy cross referencing. Relevant soil and groundwater data and corresponding sampling locations must be readily retraceable and, preferably, summarized in tables and figures that allow easy access. Please address the following for FED-1A SI:

- Difference in EBS Parcels and SI Transfer Parcels: As discussed earlier, the EBS and SI use two different parceling systems. While the EBS is based on the City's system and has a total of 214 parcels, the SI follows the Navy's (i.e. parcels with designations of FED, PBC, or EDC) which is numbered at less than 30.

  Oftentimes the boundaries of transfer parcels transect EBS parcel boundaries, resulting in EBS parcels being situated in multiple transfer parcels. The EBS parcels, on the other hand, have been subdivided into subparcels which are channeled into various restoration programs depending on the contamination identified by the EBS (e.g. operable unit (OU), corrective action area (CAA), non-CERCLA sites, and buffer zones between OU or CAA and non-CERCLA sites). For example, Parcel 23 has been subdivided into nine subparcels which are situated, partially or as a whole, in various program sites including OU-1, OU-2C, OU-5, CAA Area A, CAA Area B, two buffer zones, and four non-CERCLA transfer parcels including FED-1A, PBC-1A, EDC-3, and EDC-5 .

  The EBS report, however, is presented in a parcel-by-parcel fashion. For each EBS parcel, the report lists all the site features and soil and groundwater data and calculates the risk and hazard associated with the individual EBS parcel. It does not break down according to the subparcels or corresponding program sites. In order to decipher information from the EBS and apply it to the understanding of a transfer parcel such as FED-1A, one has to tailor EBS data according to appropriate subparcels and transfer parcels and sort out those applicable ones from data relevant to other program sites. This is very difficult and time consuming especially for transfer parcels that consist of multiple EBS parcels partially contained in the transfer parcel (e.g. EDC-5).

  To facilitate the review, we recommend that for each transfer parcel:

  1) Provide a site feature table (e.g. Table 1-1) which indicates which EBS parcel/subparcel the subject feature is, or was, located.
  2) Provide a site map (e.g. Figure 1-3) which depicts all relevant site features and parcel/subparcel boundaries.

3) Summarize soil and groundwater data specific to the transfer parcel (see the comment below) and depict corresponding sampling locations on a map.
4) Use parcel-specific soil and groundwater data in risk and or hazard calculation (see General Comment # 8).

- EBS Data: The SI provides very limited summary of the EBS. For example, it offers only one sentence for Parcel 23: "No analytes were detected at concentrations greater than screening criteria in the vicinity of the aircraft-arresting gear, parking, fueling, and maintenance areas" (see Page 1-13). This summary repeats or paraphrases the conclusion from the EBS but stops short of furnishing any critical details (e.g. areas of concern (AOCs), relevant soil and groundwater data, and applicable screening criteria) that are essential for the readers to comprehend the basis for Navy's conclusion. To facilitate the review, we strongly recommend that the SI summarize EBS soil and groundwater data pertinent to the transfer parcel (see the comment above).

- Site Features: The site features as listed in Table 1-1 do not include all the features discussed in the EBS. It is our opinion that site features include all buildings, structures (e.g. ASTs and USTs), conduits (e.g. fuel lines and sewers), and open spaces. Please update Table 1-1 to include all features.

- Site Boundary: The northern and eastern boundaries of FED-1A are not consistent with those shown in the EBS, specifically Figure 2-1, Volume 0 of the June 2001 Final Comprehensive Guide to the EBS. Please make them consistent.

15. Aside from EBS, there have been five separate investigations plus an ongoing groundwater monitoring conducted within transfer parcel FED-1A. The SI has summarized their findings as follows:

INVESTIGATION	REPORTS	FINDINGS
SWAT Investigation	Final SWAT and Data Summary Report , PRC, April 1993.	A number of soil borings and monitoring wells were installed.
Background	Samples for Use as Background Letter Report, PRC, February 1997	A substantial number of samples for inclusion in the background data sets were located at FED-1A

Environmental Summary Document	Draft Environmental Summary Document for FED-1, TtEMI, January 2001	FED-1A suitable for transfer with acceptable risk to human health and the environment
Fuel line investigation	Final Fuel Pipeline Oversight and Sampling Report, TtEMI, May 2000 Draft SEBS, TtEMI, August 2002	No further action
Storm sewer investigation	Draft Final Storm Sewer Report, TPH Addendum, TtEMI, January 2001	No further action
Groundwater monitoring	?	A number of monitoring wells are located at or adjacent to FED-1A

Please address the following:

- It is unclear if all above study reports have received concurrence from the agencies. Please clarify.
- The findings as summarized by the SI for SWAT investigation, background study, and groundwater investigation do not lend to any understanding of the environmental condition at FED-1A. Please improve.
- The findings as summarized by the SI for environmental summary document, fuel line investigation, and storm sewer investigation do not provide critical details (e.g. relevant soil and groundwater data) to allow readers comprehend the basis of the findings. Please provide them.
- It is unclear if any of the subject findings has been incorporated into the risk evaluation for FED-1A. Please clarify.

Sources of PAH Contamination

16. The conceptual site model of this SI states that the PAHs originated from petroleum industries operated in the region prior to the Navy presence is likely the source of PAHs at Alameda Point. It does not discuss the likelihood that the Navy's own operation could also

contribute to the elevated levels of PAHs. The same logic is also reflected in the conclusion and executive summary of the report.

According to Section 1.3, transfer parcel FED-1A was used by the Navy for taxiway, runway, aircraft arresting, and airfield field operations including parking, fueling, and maintenance which involved the use of petroleum substances. Substantial staining was observed on historical aerial photographs according to the EBS. It is conceivable that the past naval activities have also contributed to the PAH contamination at FED-1A. Please revise the report as appropriate.

17. While the PAHs contamination due to fill materials tends to be ubiquitous, horizontally and vertically, contamination due to past runway operations is likely to be localized. It is possible that the five clustered PAH hotspots located at the southern portion of FED-1A is a result of the runway operation, not the fill material. Please discuss it.

Explosive Survey

18. Except runway operation, FED-1A was also used for magazines for storage of high-explosive munitions. Please explain if there has ever been an explosive survey conducted at Alameda Point. Please discuss the likelihood of release of explosive constituents at FED-1A.

Asbestos and Lead

19. The Phase I EBS report characterizes the asbestos assessment at FED-1A buildings and structures as "Informal assessment; no supporting evidence". For readers less familiar with the transfer process, please explain if this is within the Navy's transfer guideline.

20. The EBS has identified a number of FED-1A buildings and structures as having asbestos and lead-base paint concerns which the Navy plans to do a full disclose during property transfer. Please note that while full disclosure is considered adequate for non-released asbestos and lead (i.e. asbestos and lead present as part of the buildings or structures), for lead and asbestos that have been released to the environment (e.g. paint chip fell to the soil surrounding the building or structure) proper investigation and remediation will have to be instituted before the transfer occurs.

Data Reporting

21. Page 4-2 of the SI states, "Between 40 and 79 percent of the carcinogenic PAH analyses were reported as not detected above the reporting limit". As a rule, when reporting analytical data please

always indicate the range of the reporting limits. This helps the reader conclude if high reporting limit (e.g. higher than the PRGs) poses any problem in the data interpretation.

IB: PARCEL-SPECIFIC COMMENTS

Parcel 5

1. Please clarify if Parcel 5 referred in this SI means Subparcel 5 of EBS Parcel 5.

2. Parcel 5 is located between Site 1 and Site 2 landfills. With the investigation at the landfill is yet to be completed, please discuss the likelihood of Parcel 5 being impacted by the migration of groundwater plume and landfill gas from IR Site 1 and 2.

3. The Navy has theorized that the rather widespread radiological anomalies observed at the site immediately north of Parcel 5 (i.e. IR Site 1) was a result of excavating and grading Site 1 landfill contents during the runway construction. Please explain if excavation and grading could have also impacted Parcel 5. Please clarify if the radiological survey conducted at Site 1 had extended to Parcel 5.

Parcel 23

4. Please clarify if Parcel 23 referred in this SI means Subparcel 23 of EBS Parcel 23.

5. DTSC has recommended classification as ECP category 7 for subparcel 23 (see May 6, 1999 DTSC comments). However, the Phase 2B EBS published in June 2001 states, "The Navy, DTSC, and EPA concurred as a result of reclassification meetings held in February 2000, and subsequent work through December 12, 2000, that Parcel 23 should be classified as ECP category 2 and category 3 based on inclusion in the Fuel Line Corrective Action Area A and minor contaminants detected during the investigation, respectively; and suitable for transfer without restriction". For clarity, please:

   - Explain the whereabouts of the Fuel Line Corrective Action Area A and its proximity to FED-1A.
   - Elaborate for the "subsequent work through December 12, 2000".
   - Explain the classification criteria for ECP 3 (was it 10^{-4} ?)
   - Provide specific reference for DTSC concurrence on "suitable for transfer without restriction" for Parcel 23.

6. For the purpose of parcel transfer, please address the following concerns for Parcel 23:

FEATURE	PAST ACTIVITIES	CONCERNS
Bldgs 50, 51, 56, 57, 58	Storage of high explosive munitions from 1941 to the date of EBS	No site inspection was conducted at the time of EBS due to presence of classified munitions. A transformer was reportedly present at Building 56 at the time of EBS. Lead-based paint may be present in the soil surrounding the buildings
Bldg 71 (Demolished)	Gasoline fueling station from 1950 until 1962; at least four Underground storage tanks (USTs) reportedly present in the vicinity.	It appears that Bldg 71 was addressed as Target Area 2 in the EBS which is on Parcel 23G. If this is true, Bldg 70 is located outside the FED-1A boundary. Please clarify. If Bldg 71 is on Parcel 23 (i.e. within FED-1A), please address the UST issue. Please refer to DTSC comments dated May 6, 1999 for this matter. If Bldg 71 is on Parcel 23G (i.e. outside of FED-1A), please clarify the cleanup/transfer status of Parcel 23G. The EBS seems to suggest that Parcel 23G has received "no further action" under the TPH corrective action program. Please confirm.
Building 100	Transformer vault	Building 100 was not physically inspected at the time of EBS. Transformers and oil-filled switches stored in Building 100 were suspected to contain PCBs. Although all equipment were removed from Building 100 during the Phase 1 EBS, it is not clear if the vault itself was evaluated for the presence of residual PCBs.
Building 272	miscellaneous storage facility since 1945	Lead based paint may be present based on the age of the building.

Building 332 (Demolished)	Navy Exchange Garage – auto maintenance and repair from 1947 to 1962	Bldg 332, same as Bldg70, was addressed as Target Area 2 in the EBS which is on Parcel 23G and outside the FED-1A boundary. Please clarify. Also, please clarify the UST issue.
Structure 259	Aircraft wash pad from 1983	Please clarify if there was a 200-gal diesel AST present at the aircraft wash pad (see DTSC comments dated May 6, 1999). If so, please clarify its status. According to the EBS, site inspection found no oil/water separator and the rinsate from aircraft washdown appears to have drained to the storm sewer. Please discuss the integrity of the storm sewer in the vicinity and the possibility of rinsate leaking from the sewer.
Structure 452	Aviation meteorological facility since 1960	Based on the age, lead-based paint may be present.
Structure 483	Aircraft arresting device constructed between 1957 and 1967	Please clarify if this structure has been demolished. Table 1-1 of this report indicates it is still present. But Phase 2 of the EBS report it has been removed. Please clarify the status of two 60-gal diesel ASTs at this structure.
Structure 495 (Demolished)	Aircraft arresting device from1957/1967 to 1988	Please clarify the status of two 60-gal diesel ASTs at this structure.
Structure 567 (Demolished??)	Aircraft arresting device from1957/1967 to 1988 (??)	Please clarify the status of two 60-gal diesel ASTs if Structure 567 was indeed an aircraft arresting device (See minor comment #1)

Open Space III	Aircraft washdown, fire fighting training, aircraft warmup, aircraft runway.	It appears the Open space in Parcel 23 at FED-1A includes Open Space II, III, IV (in part) and V of EBS Parcel 23. Please confirm. Although Open Space III was not designated as a Target Area in the EBS, the following are the concerns: Fire fighting training occurred in various areas for Open Space III. No investigation appears to have taken place. Washdown reportedly occurred in the SE of the open space, north of the E/W runway and west of Structure 489 and appears to involve more than the concrete pad at Structure 259 (aircraft wash pad). The impact of this activity is unclear. One 200-gal AST, with no secondary containment, was formerly located at Open Space III. There has been no report of assessment of spills and/or overfills Flammable fuels for fire fighting training were stored at Open Space III. There has been no report of assessment of spills and/or leaks. Aerial photos and site inspection data have shown spills in the aircraft parking areas. The impact of these spills is unclear.
Open Space V	Munition storage, aircraft taxiway, roadway	Landfill gas migration from IR Site 2 to the west

Parcel 24

7. The Parcel Evaluation Plan (PEP) designated one zone-wide target area at Parcel 24. But the subsequent EBS did not collect any sample from Parcel 24. According to the EBS, it was thought sampling related to IR Site 2 could cover the issues relevant to the zone-wide target area (specifically pesticides).

Parcel 24, located in Zone 4 (Runway Zone) and designated as least tern nesting area, is approximately 2,250 ft east of IR Site 2 and surrounded on all sides by Parcel 23. For clarity, please explain why sampling related to IR Site 2, which is located in another zone (Zone 1 or Western Landfill Zone), could cover the issues relevant to Parcel 24, Zone 4. Also, please provide any IR Site 2 data that are considered relevant to Parcel 24.

IC: MINOR COMMENTS

1. Table 1-1:

   - Buildings 71 and 332 appear to belong to Parcel 23G and outside of FED-1A. If this is correct, please delete Buildings 71 and 332 from the table.
   - Building 379 does not appear to be located in any EBS parcels within FED-1A (i.e. not Parcel 5, 23, or 24). If it is correct, please delete Building 379 from the table.
   - Building 490 has been demolished. The correct entry for "demolition date' should be "unknown" rather than "none".
   - Structures 452, 520 and 567 are listed as existing structures (demolition date shown as "none") but it is not certain if they are located on transfer parcel FED-1A. Please explain why the Navy is unable to determine the whereabouts of existing structures.
   - Structures 483, 567, and 599 are listed as existing structures (demolition date shown as "none") but Phase II EBS has reported them as demolished. Please reconcile the difference.
   - Structure 567 is reported as an aircraft compass calibration pad in this table but an aircraft arresting device in the Phase II EBS. Please reconcile the difference.

2. Page 1-13, first bullet states, "Surface soil sample analytical results indicated that the ASTs had not leaked". Please note that except tank failure, spills and overfills during fueling operation is also a leading cause to AST releases.

3. Page 5-3, the second paragraph of Section 5.3.1 states, "A Tier 1 screening risk evaluation was conducted for EBS parcel 23 using the methods presented in Section 5.2 of this report ...". This statement appears to be erroneous. Please verify if it actually meant Section 5.2 of the EBS report.

4. Table 5-1: Please indicate the appropriate concentration unit (e.g. mg/kg). A number of entries including the average and 95% UCL are rounded off connoting the data are less accurate than they actually are (because of significant numbers). Please reconsider the round-off.

5. Appendix A: The page numbers appear to be erroneous. Please fix it.

PART II: COMMENTS FROM THE HUMAN HEALTH RISK DIVISION (HERD)

Please see the attached memorandum prepared by Dr. Jim Polisini.

Department of Toxic Substances Control

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

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TO: Marcia Liao, DTSC Project Manager
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FROM: James M. Polisini, Ph.D.
Staff Toxicologist, HERD
1011 North Grandview Avenue
Glendale, CA 91201

DATE: June 10, 2003

SUBJECT: NAVAL AIR STATION ALAMEDA
[SITE 201209-00 PCA 18040 H:32]

BACKGROUND

HERD has reviewed the documents titled:

Draft Site Inspection Report Transfer Parcels EDC-12, EDC-17, PBC-3, EDC-21 and EDC-5;

Draft Site Inspection Report Transfer Parcels PBC-1A and EDC-3, Alameda Point, Alameda, California, and;

Draft Site Inspection Report Transfer Parcel FED-1A, Alameda Point, Alameda, California.

All three reports are dated March 2003. This review is in response to your request transmitted via electronic mail.

Naval Air Station (NAS) Alameda was an active naval facility from 1940 to 1997. Operations included aircraft, engine, gun and avionics maintenance; fueling activities; and metal plating, stripping and painting. Areas included in this Site Inspection (SI) Report are adjacent to the northern and eastern side of the Seaplane Lagoon and extend to the northern boundary of NAS Alameda adjacent to the Oakland Inner Harbor Channel.

GENERAL COMMENTS

1. The human health incremental cancer risk and non-cancer hazard associated with polycyclic aromatic hydrocarbons (PAHs) in soil is the only criterion used to determine whether a potential transfer parcel is appropriate for transfer or should be dealt with in the CERCLA program at NAS Alameda. Other carcinogens (e.g., arsenic) and or noncarcinogens are not included in the assessment of potential risk and or hazard. HERD finds this an unacceptable basis for decisions on parcel transfer. U.S. EPA Region 9 and HERD require both that total cancer risk and hazard, site-specific incremental cancer risk and hazard be included with any presentation of 'ambient' risk and or hazard in the human health risk assessment.

2. In addition, there appears to be an internal disconnect in how contaminants other the PAHs might influence the decision regarding whether a potential transfer parcel is, indeed, appropriate for transfer. Transfer of one potential transfer parcel (EDC-21) is not recommended based on groundwater contamination associated with IR Site 25 north of this parcel. No such recommendation is made for other potential transfer parcels (e.g., EDC-12 and EDC-17) which might be impacted by groundwater contamination from IR Site 27. During the last week, HERD reviewed the Field Sampling and Analysis Plant (FSAP) for IR Site 27 in which it is stated that the source of the chlorinated and non-chlorinated groundwater contamination at IR Site 27 has not been determined, and in fact the boundary of the IR 27 groundwater plume has not been identified. The logical disconnect for EDC-21 as compared to EDC-12 and EDC-17 is obvious and unacceptable for a risk-based recommendation on parcel transfer for the parcels addressed.

3. To the knowledge of this reviewer, HERD has never agreed that an incremental cancer risk of $1x10^{-5}$ is the 'target risk range'. A one in a million incremental cancer risk (i.e., $1x10^{-6}$) is the point of departure at which HERD would recommend consideration of remedial alternatives based on the nine risk management 'balancing criteria' outlined in the National Contingency Plan (NCP). This SI Report uses a 'target risk range' of $1x10^{-5}$.

4. In addition, the sum of the 'integrated' risk from the Environmental Baseline Study (EBS) and the SI study is not provided (Section 6) for the risk manager.

5. HERD did not agree, at the May 31, 2001 Base Realignment and Closure Team (BCT) meeting, to a risk range of $1x10^{-5}$ to $1.6x10^{-5}$ (Section 3.2, page 3-1 and 3-4). This risk range encompasses benzo(a)pyrene Toxicity Equivalent Factor (TEF) concentrations of 620 µg/kg to 1000 µg/kg in soil.

SPECIFIC COMMENTS

1. Based on the risk assessment comments listed in the General Comments above, HERD terminated the review of these three volumes. HERD understands that an attempt was made to incorporate the results of the PAH-only human health risk assessment into the former Environmental Baseline Survey (EBS) study. However, there appear to be diversions from the standard risk assessment practices which HERD follows, as well as a lack of presentation of the total incremental cancer risk and or hazard required for the risk managers (Section 6) to decide whether the potential transfer parcels are appropriate for transfer

2. There is an inconsistency in the recommendation made regarding transfer of potential transfer parcels based on the proximity to groundwater plumes. In addition to the recommendations made in one SI report, HERD would recommend that potential transfer parcel EDC-12 and EDC-17 not be transferred prior to completion of the groundwater investigation planned at IR27.

CONCLUSIONS

HERD does not find the presentation of the human health risk assessment portions of the Site Investigation Reports complete. Revision of the Site Inspection Reports should include the total incremental cancer risk and or hazard not simply the incremental risk and or hazard associated with polycyclic aromatic hydrocarbons (PAHs).

Exposure from media other than soil (i.e., groundwater) must be included in the estimate of incremental risk and or hazard for consideration by the risk managers.

HERD has discussed these opinions with Dr. Sophia Serda, the toxicologist for U.S. EPA Region 9, and the Superfund Technical Assistance Section. Dr. Serda is in agreement with these comments.

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