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ALAMEDA POINT
SSIC NO. 5090.3

Department of Toxic Substances Control

Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

8800 Cal Center Drive
Sacramento, California 95826-3200

Arnold Schwarzenegger
Governor

February, 11, 2005

Mr. Luciano A. Ocampo, PE
Base Realignment and Closure
Program Management Office West
1230 Columbia Street, Suite 1100
San Diego, California 92101

2005 FEB 15 A 9:36
BRAC OFFICE

Re: COMMENTS ON THE DRAFT CLOSURE REPORT FOR THE INDUSTRIAL WASTE TREATMENT PLANT (IWTP) 32 , NAVAL AIR STATION, ALAMEDA, CALIFORNIA, EPA ID # CA 2 170 023 236

RCRA

Dear Mr. Ocampo:

The Department of Toxic Substances Control (DTSC) received the Draft Closure Report for the Industrial Waste Treatment Plant (IWTP) 32 dated December 22, 2004. The DTSC Geological Support Unit (GSU) and the Human and Ecological Risk Division (HERD) have reviewed the document and provided comments in memorandums enclosed with this letter. Please address the recommendations found in the memorandums and bare in mind that the final closure report must be a stand alone document that provides all necessary lines of evidence to support the final closure decision. DTSC requests that a revised report be submitted by March 18, 2005. If you have any questions or comments concerning this letter please contact me at (916) 255-6528.

Sincerely,

Dean Wright
Standardized Permitting and Corrective Action Branch

Attachments: GSU Memorandum dated February 8, 2005
Herd Memorandum dated January 19, 2005

cc with attachments: Next page

TO
cc: AR 2/17/05

cc: Ms. Glynis Foulk
Tetra Tech EM Inc.
10670 White Rock Road, Suite 100
Rancho Cordova, California 92101

Mr. Dan Shafer
Shaw Environmental, Inc.
1326 North Market Blvd.
Sacramento, California 95834

Mr. Peter Russell
Russell Resources Inc.
950 Northgate Drive, Suite 313
San Rafael, California 94903

cc: w/o attachments:

Mr. Sal Ciriello, P.E.
Standardized Permitting and Corrective Action Branch
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Ms. Dot Lofstrom, R.G.
Geological Support Unit
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, California 95826

Ms. Riz Sarmiento, Ph.D.
Human and Ecological Risk Division
Department of Toxic Substances Control
1011 North Grandview Avenue
Glendale, California 91201

Department of Toxic Substances Control

Alan C. Lloyd, Ph.D.
Agency Secretary
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Arnold Schwarzenegger
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MEMORANDUM

TO: Dean Wright, RG
Engineering Geologist
Standardized Permits and Corrective Action Branch
Hazardous Waste Management Program

FROM: Dot Lofstrom, RG
Engineering Geologist
Northern California Geological Services Unit
Hazardous Waste Management Program

CONCUR: Brian Lewis, CHG, CEG
Senior Engineering Geologist
Northern California Geological Services Unit
Hazardous Waste Management Program

DATE: February 8, 2005

SUBJECT: Draft Closure Report for Industrial Waste Treatment Plant 32
Former Naval Air Station Alameda (Alameda Point)
Alameda, Alameda County, California
EPA ID No. 21700223236
PCA 25040/200004-33/6/HWMP

DOCUMENT REVIEWED

"Draft Closure Report, Industrial Waste Treatment Plant 32, Hazardous Waste Facility Permit CA 2170023236, Naval Air Station, Alameda, California," dated December 22, 2004, prepared by Shaw Environmental, Inc.

INTRODUCTION

The Northern California Geological Services Unit (GSU) of the Department of Toxic Substances Control (DTSC) has reviewed the document referenced above (hereafter referred to as Draft Closure Report) and has the following comments and recommendations. If you have any questions, please call Dot Lofstrom at (916) 255-6449 or Brian Lewis at (916) 255-6332.

BACKGROUND

The Draft Closure Report for Industrial Waste Treatment Plant 32 (IWTP 32) provides documentation of Resource Conservation and Recovery Act (RCRA) removal action activities

at IWTP 32, including the dismantling and disposing of RCRA Part B permitted and non-permitted waste tanks and associated waste conveyance piping. The draft Closure Report also presents the results of additional subsurface soil sampling, concrete chip confirmation sampling, and associated risk assessments completed as part of this project.

Soil and groundwater investigations were completed in 1999 to determine whether activities at IWTP 32 resulted in a release of hazardous constituents to soil or groundwater. Seven soil and groundwater samples were collected and analyzed for metals, volatile organic compounds (VOCs), semi-volatile organic compounds, hexavalent chromium, and pH. Elevated concentrations of hexavalent chromium were detected in a sample collected from beneath the cadmium tank (0.11 milligrams per kilogram [mg/kg]) and from beneath the final neutralization tank (0.10 mg/kg). Several VOCs were detected at low concentrations in soil and groundwater collected beneath Building 32, where IWTP 32 is located. Groundwater beneath IWTP 32 is contaminated with VOCs, which may be a result of releases from nearby Installation Restoration Site 5 (IR Site 5). Groundwater contamination associated with IR Site 5 is currently being investigated and remediated under the Comprehensive Environmental Response, Compensation and Liability Act program.

Additional soil sampling along the eastern and southern sides of Building 32 was conducted in June of 2004 at the request of DTSC. The analytical results of the most recent soil and concrete chip sampling activities were combined with the 1999 data to conduct a human health risk assessment (HHRA) and screening-level ecological risk assessment (SLERA) for IWTP 32.

COMMENTS

Title 22 of the California Code of Regulations (CCR), sections 66264.110 state that post-closure care requirements apply to owners and operators of: (1) all hazardous waste disposal facilities; (2) waste piles and surface impoundments that cannot acheive closure by removal; (3) tank systems that are required under sections 66264.197 to close as a landfill; and (4) containment buildings that are required under section 66264.1102 to meet the requirement for landfills. Facilities with tanks systems with contamination that cannot be practicably removed or decontaminated are requirred to be closed as landfills and are subject to post-closure care requirements (22 CCR, section 66264.197). Thus, in determining if post-closure requirements are applicable at IWTP 32, there are three questions that must be answered, as follows:

1) Is there residual contamination in soil, groundwater, or other environmental media as a result of a release from one or more regulated units?
2) Does the residual contamination exceed levels that are protective of public health and the environment?
3) Is there extensive groundwater contamination exceeding beneficial use protective water quality limits or maximum contaminant levels?

The Navy's responses to questions 1 and 3 are subject to review by GSU. The Navy's repsonse to question 2 is subject to review by the DTSC Human and Ecological Risk Division (HERD), and has been or is being addressed separately in memoranda written by HERD.

The Navy does not adequately address questions 1 and 3 in the Draft Closure Report. In answering the first question, the Navy states that several VOCs were detected in soil and

groundwater collected beneath Building 32 and IWTP 32, in addition to hexavalent chromium that was detected at a concentration of 0.11 mg/kg at a depth of 14 to 16 feet. The Navy does not state the identification or the location of the detected VOCs in soil and groundwater, either on figures, tables or the text. GSU acknowledges that the required information may be contained in other texts prevously supplied to DTSC. Nonetheless, the Draft Closure Report is a significant milestone document and conclusions in the report should be specfically stated and supported by data contained within the report. The Draft Closure Report suggests that a release may have occurred from the tank system, as evidenced by the detected concentration of hexavalent chromium above background values and by the presence of VOCs in soil and groundwater samples. The Draft Closure Report further states that the only constituent present in the subsurface that is potentially related to the operation of IWTP 32 is hexavalent chromium, but makes no attempt to explain the low values of VOCs in soil alluded to in the previous paragraph.

The third question as stated above is addressed obliquely in the Draft Closure Report. In reference to the presence of VOCs in groundwater collected at the site, the Navy states that IWTP 32 is located within the northeast boundary of IR Site 5, and that the groundwater beneath IR Site 5 is contaminated with VOCs as a result of IR Site 5 operations. The Draft Closure Report further states that the groundwater is currently being investigated and remediated under the Comprehenisve Environmental Response, Compensation and Liability Act. However, the Draft Closure Report does not directly state that the VOC-contaminated groundwater is not a result of a release from the regulated units at IWTP 32, and evidence is not provided in the report to support the Navy's contention that the groundwater contamination beneath IWTP-32 is from nearby IR Site 5.

RECCOMENDATIONS

The number and locations of soil samples appear adequate to characterize the site. However, the Navy needs additional details to support the argument that activities at IWTP 32 did not contribute to groundwater contamination present at the site. The Navy states that additional details can be found in the report titled, "Draft, RCRA Part B Permit Closure, Subsurface Investigation Report Industrial Waste Treatment Plant #32, Alameda Point, Alameda, California, IT Corporation, DO No. 44, February 2000." The Draft Closure Report summarizes the Draft Subsurface Investigation Report, but is lacking in detail. Thus, the Navy should include a more thorough and detailed summary of the Subsurface Investigation Report for IWTP 32 within the text, tables and figures of the Closure Report. Additional lines of evidence must be provided to DTSC before it can be determined whether or not groundwater contamination at IWTP 32 is due solely to a release at IR Site 5.

Alan C. Lloyd, Ph.D.
Agency Secretary
Cal/EPA

Department of Toxic Substances Control

1011 North Grandview Avenue
Glendale, California 91201

Arnold
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MEMORANDUM

TO: Dean Wright, R.G.
Standardized Permits and Corrective Action Branch
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826

FROM: Riz A. Sarmiento, Ph.D.
Staff Toxicologist
Human and Ecological Risk Division

DATE: January 19, 2005

SUBJECT: Draft Closure Report - Industrial Waste Treatment Plant 32, Hazardous Waste Facility Permit CA 2170023236

PCA: 25045 Site: 200004 -33

BACKGROUND

Document Reviewed: HERD reviewed the Draft Closure Report for Industrial Waste Treatment Plant (IWTP) 32, dated December 22, 2004. The report was prepared by Shaw Environmental, Inc.

Scope of Review: The document was reviewed for scientific content related to human health risk assessment issues. The screening ecological risk assessment is being reviewed separately and comments on the ecological risk assessment will be provided in a separate memorandum. Minor grammatical or typographical errors that do not affect the interpretation have not been noted. We assume that regional personnel have evaluated the sampling of environmental media, analytical chemistry data, and quality assurance procedures. Any future changes or additions to the document should be clearly identified.

Background: Alameda Point is located on the western tip of Alameda Island. Most of the land that is now Alameda Point was created by filling subtidal areas, natural tidelands, marshlands, and sloughs with dredge spoils from the surrounding San Francisco Bay, Seaplane Lagoon, and Oakland Inner Harbor. IWTP 32 occupies the western section of Building 32 that is located in the central section of Alameda Point. Building 32 was designed to house plating shop and

waste processing operations. Other processes inside Building 32 used or generated chemicals and waste including mixed metals, cyanide waste, cadmium waste, chromium, acids, alkalis, chromium waste, and nickel precipitates. Disposal of waste process chemicals was accomplished by treatment at IWTP 32 followed by discharge into the sanitary sewer.

As part of the Base Realignment and Closure Program, the IWTP 32 had to comply with the requirements for a Resource Conservation and Recovery Act (RCRA) Permit Closure. DTSC's comments on the Closure Plan Amendment for IWTP 32 (TTEMI, 2003) requested additional soil sampling at IWTP 32 along the eastern and southern sides of Building 32. DTSC agreed that no additional soil and groundwater data would be necessary for the remainder of IWTP 32 (Shaw, 2004). This report states that the work described in this Closure Report was in accordance with the DTSC-approved Work Plan dated December 17, 2003 (Shaw, 2003). The stated purpose of this closure report is to provide the required documentation for the removal action that was conducted at IWTP 32. The activities include (a) the removal of RCRA permitted and non-permitted waste tanks and associated piping, (b) soil and concrete chip confirmation sampling, and (a) associated risk assessments. Under the reuse plan of the NAS Alameda community, Alameda Point was divided into seven geographical areas. According to the reuse plan, Building 32 that contains IWTP 32 is located in the civic core area. Therefore, the likely reuse is commercial/industrial.

The human health risk assessment was based on potential exposures to soil. Risk associated with groundwater pathways will be evaluated in the remedial investigation for CERCLA Site 5. Data from samples collected during the 1999 RCRA closure investigation were compared to the 1998 residential soil preliminary remediation goals (PRGs) published by EPA. Hexavalent chromium was detected at levels below the 1998 residential soil PRGs and was not detected in groundwater (Shaw Environmental, 2004).

GENERAL COMMENTS

This Draft Closure Report stated that IWTP 32 has met closure performance standards and does not require postclosure care requirements. The conclusion is essentially based on the results of the human health and ecological risk assessments. Based on the review of the human health risk assessment, HERD agrees that the primary contributor to the risk estimates is arsenic. Since the arsenic concentration is presumably within background levels, the report should present the risk estimates based on the background levels deemed applicable at the site. HERD is also recommending specific revisions and corrections on inaccurate concepts that were presented in the human health risk assessment.

SPECIFIC COMMENTS

1. Section 7.2, page 7-3, 2nd paragraph

The text in the second paragraph states that residential receptors were assumed to be exposed to soil from 0 to 2 feet bgs, but the summary table on page 7-3 presents the cancer risk and hazard index for a residential receptor's exposure to soil from 0 to 2 feet deep and from 0 to 8 feet deep. Please revise or clarify this inconsistency.

2. Section J.4.2.2, 1st paragraph, page J-10

Residential soil PRGs are not screening toxicity values, as indicated in this section. PRGs are risk-based values that could be used as screening concentrations because these are risk-based concentrations that assume conservative exposure conditions in a residential or industrial setting. These risk-based concentrations are based on the assumed exposure conditions and on the toxicity value for each chemical. Please revise the text for accuracy.

3. Section J.4.2.2, last paragraph, page J-10

HERD disagrees that some of the PRGs are lower than method detection limits. If the applicable soil PRGs were reviewed prior to specifying the laboratory data quality objectives, the sample quantitation limits (rather than the method detection limits) could be specified so that the PRGs were not exceeded. If a chemical has a sample quantitation limit that is higher than its corresponding PRG, the chemical would be reported as a non-detect, thus, erroneously indicating that the chemical is not present when, in fact, it is. The last statement in this paragraph that PRGs lower than method detection limits would result in the inclusion of chemicals that do not add significantly to overall risks would be valid if the method detection limits were at or below the most conservative risk-based concentrations. Unless this is demonstrated in the risk assessment, this statement is incorrect and should be deleted or revised.

4. Section J.4.2.3, 1st paragraph, page J-10

It is incorrect to state that ambient or background chemicals, particularly metals, are usually not of health concern. Arsenic is an example of one metal that is typically detected in background samples at levels that could pose a potential health concern. Risk managers should be cognizant of the potential health effects associated with background concentrations, particularly when the land use is or will be residential. For this reason, chemicals considered background are included in the risk assessment in order to provide an additional perspective in risk management decisions. If the cumulative risks include the estimated risk due to background, this information should be discussed in the risk assessment. Please revise the discussion accordingly.

Contrary to the statement that Appendix B is the background comparison, Appendix B is a compilation of the Disposal Manifests and of the Steel Scrap Weight Tickets. The correct reference should be Appendix I.

5. Appendix J, Attachment C, Table 1

In addition to the future resident and construction worker, the future commercial/industrial worker should be identified as having a complete exposure pathway to vapors from subsurface to indoor air.

6. Appendix J, Table J-2

The particulate emission factors (PEF) for the inorganic constituents should be 1.3E+09 instead of 1.3E-09.

The volatilization factor (VF) for methylene chloride should be 2.5E+03 instead of 2.5E-03.

7. Appendix J, Attachment C, Tables 2.1 and 2.2

The rationale for the selection of COPCs should be presented more clearly. First, Section J.4.2 indicates that the frequency of detection was not a criterion used for the selection of COPCs, yet Tables 2.1 and 2.2 show that the frequency of detection (FOD) was frequently used as the rationale for selection or deletion.

HERD cannot correlate the locations of the maximum concentrations that are listed in Tables 2.1 and 2.2 with the information presented in the soil data summary presented in Attachment A. Sufficient explanation should be provided on the tabulated data. As an example, Figure 2 shows IWTP32-061, -062, and -063 as soil samples from SB-008. The soil data summary in Attachment A lists IWTP32-061 and -063 as sample IDs for 0-8 feet bgs, but IWTP32-062 is not listed at all. Please explain whether IWTP32-061, -062, and -063 represents samples from 0-2 feet bgs, 0-4 feet bgs, and 0-8 feet bgs, respectively. Similar ambiguities exist for the remaining locations. Please provide a better discussion on the soil samples that were used in the human health risk assessment in order to demonstrate the spatial distribution of the chemical concentrations shown in Tables 2.1 and 2.2.

Based on specific comment 3, "Screening Toxicity Value" should be replaced with "Screening Concentration or Screening Risk-Based Concentration."

Although the maximum concentrations of inorganic chemicals, except arsenic, were lower than the residential soil PRGs or screening concentrations, these were retained as COPCs in order to determine their contribution to the overall risk. HERD recommends that the rationale be stated along these lines rather than use FOD as the basis for including these chemicals in the risk assessment.

If two risk calculations were presented in order to account for differences in toxicity values between EPA and Cal-EPA, then the Cal/EPA-modified PRG for arsenic of 0.06 mg/kg should be listed in Tables 2.1 and 2.2.

Considering that plating operations occurred in IWTP 32, it is more appropriate to screen against the screening value for hexavalent chromium. Please revise.

8. Appendix J, Attachment C, Table 3.1

Please correct the inconsistencies in this Table. The exposure point concentrations presented in this Table are the maximum concentrations. Therefore, mercury, methylene chloride, and silver should be identified as (13), i.e., maximum, rather than as a (5) nonparametric Chebyshev 95% UCL.

9. Appendix J, Attachment C, Table 4

DTSC 2000 was cited as the source for the skin surface area of 3,300 cm^2 for the construction worker. Since the list of references does not include this citation, please include the complete citation in the reference list. Otherwise, HERD recommends a skin surface area of 5000 cm^2 (EPA, 1992) for the construction worker.

10. Appendix J, Attachment C, Tables 6.1 and 6.2

If the risk estimates were to be calculated based on both EPA's and Cal-EPA's toxicity values, then these tables should also present the oral and inhalation slope factors established by Cal-EPA. The Cal-EPA oral and inhalation slope factors for arsenic are 9.5 and 12 $(mg/kg\text{-}day)^{-1}$, respectively.

11. Section 7.2, page 7-4, 2nd paragraph

The risk assessment identifies arsenic as being primarily responsible for the carcinogenic risk estimate. This argument can be best supported by presenting the risk and hazard index estimates based on the background levels of inorganic constituents that were applied at the site.

12. Appendix J, Sections J.8.3.1, J.8.3.2, and J.8.3.3, 2nd paragraph, pages J-32 and J-33

The risk estimates based on reasonable maximum exposure (RME) conditions to soil are 1E-06 and 8E-06, based on EPA and DTSC toxicity values. The statement that the EPA value is within the risk management range of 1E-06 and 1E-04, and the DTSC value is less than the risk management range is reversed. The DTSC value (8E-06) is within the risk management range of 1E-06 and 1E-04. The EPA risk estimate of 1E-06 is in the lower end of, but not below, the risk management range. Please incorporate this comment.

HERD recommends that it would be more appropriate to state that arsenic is within background levels than to state, "arsenic present in soil is considered background." Please revise.

The discussion on background is in Appendix I, instead of Appendix B. Please revise.

13. Appendix J, Section J.8.3.4 and Attachment E

Please indicate "Lead in Soil (ug/g)" under the Input column of the Lead Risk Assessment Spreadsheets.

14. Appendix J, Section J.9, page J-35, 4th paragraph

The background levels of some metals could result in a risk estimate that would be of potential health concern. Therefore, it is a misrepresentation to state that background metals are not of health concern and are excluded from further evaluation. On the contrary, a risk assessment should present risk and hazard index estimates due to background levels. Although risk management decisions often negate remediation to levels below background, it is misleading to state that levels deemed to be background are not a health concern. Please modify this discussion.

CONCLUSIONS

The human health risk assessment demonstrated that potential exposures based on either commercial/industrial or residential land use would not pose unacceptable levels of health risk. It should be noted, however, that the risk estimates for the residential scenario are in the higher end of the risk management range. The primary contributor to the risk estimate is arsenic. Since the site concentration of arsenic was considered to be within the range of background levels, HERD recommends that the estimated risk due to background should be presented in this report. HERD also recommends that the report should refrain from making erroneous statements that may be intended to minimize concerns over the risk values. Suggested modifications are discussed in the specific comments, and should be incorporated into the next submittal of the report. Various inconsistencies and incorrect citations were also noted for correction. HERD's comments should be addressed satisfactorily before the closure report is considered acceptable.

Reviewed by : Michael J. Wade, Ph.D., D.A.B.T.
Senior Toxicologist