

RESPONSE TO REGULATORY COMMENTS  
ON THE DRAFT POST-CLOSURE MAINTENANCE PLAN FOR SITE 1  
INACTIVE LANDFILL, NAVAL TRAINING CENTER, SAN DIEGO  
CTO-0128

Comments from John P. Anderson

Written on 19 September 1997  
Received by facsimile on 23 September 1997

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Site Mitigation and Cleanup Unit  
California Regional Water Quality Control Board, San Diego Region

### GENERAL COMMENT

#### Comment 1:

The proposed Draft Post-Closure Maintenance Plan (PCMP) is generally well written and complete. The RWQCB concurs with the approach of the PCMP with the exception of Section 5 "Groundwater Monitoring Program". This section would have been more appropriately included as part of the "Groundwater Monitoring Plan" report.

#### Comment 2: Data Interpretation and Evaluation

The RWQCB does not concur with the "Data Interpretation and Evaluation of Groundwater Quality" (Section 5.4.3) method of evaluation. Please reevaluate the data consistent with the general format of Article 5 of Chapter 15, Title 23 of the California Code of Regulations (CCR). Please note that the regulations of Title 14 and 23 regarding solid waste have been combined and relocated into new regulations entitled *Combined SWRCB/CIWMB Regulations Division 2, Title 27 (27 CCR)*. These regulations were effective on July 18, 1997. We have attached a SWRCB Regulation Cross-Reference sheet for your convenience.

Based on the proximity of the landfill to San Diego Bay, and as discussed in the PCMP, Section 5 "Groundwater Monitoring Program" the appropriate numerical objectives would be those that are protective of human health and aquatic life. These are contained in the California Enclosed Bays and Estuaries Plan or USEPA Federal Ambient Water Quality Criteria, Saltwater Aquatic Life Protection standards. Our preliminary review of the groundwater data

#### Response 1:

As agreed in the 08 October meeting, the GMP will be issued as a separate document and will be included in the PCMP as an appendix.

#### Response 2:

As discussed in the 08 October meeting, it is proposed that the revised GMP evaluate all appropriate groundwater monitoring data, including the last four sampling rounds and appropriate data from the ESI and water Solid Waste Assessment Test (SWAT) data, using the Mann-Kendall trend estimation method contained in the United States Environmental Protection Agency Guidance for Data Quality Assessment, Practical Methods for Data Analysis (EPA QA/G-9, QA 96 Version, July 1996). This method would continue to be used as the method to monitor concentration trends at Site 1, Inactive Landfill. Also, as per the 08 October meeting, the GMP and PCMP will be revised to reflect to recently promulgated Title 27.

As discussed above, it is proposed that trends for the chemicals of concern at the Inactive Landfill be established by the Mann-Kendall trend estimation technique. As discussed in the 08 October meeting, future standards for comparison will be based on these trends.

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submitted indicates that the site would be in compliance with these concentrations limits established for volatile organic constituents, but would exceed the concentration limits for some metals.

The Regional Board may establish a concentration limit for a constituent of concern that is greater than the background value only if the Board finds that it is technologically or economically infeasible to achieve the background value and that the constituent will not pose a substantial present or potential hazard to human health or the environment. In order to establish concentration limits for each constituent of concern, the Navy may proposed one of the following: (1) the concentration limit for a constituent will be equal to the background value of that constituent, as determined pursuant to 27 CCR Section 20415; or (2) a concentration limit greater than background established pursuant 27 CCR corrective action program.

We have also evaluated the statistical analysis proposed for the groundwater constituents contained in Table 5-2 which are based on a monitoring program for the Mission Bay Landfill. This method involved pooling water quality data to develop the standard deviation, mean, etc., for a set of surface water sample points. The conclusions based on this analysis tends to oversimplify the existing water quality at the site and is not appropriate for the evaluation of groundwater sample data results.

**Comment 3: Groundwater Monitoring Program**

In the first quarter of 1997, the Navy reduced the number of monitoring wells sampled from 26 to 19 and has proposed long-term monitoring which would further reduce wells sampled to 10. Prior to any reduction in the monitoring network, please provide the rationale for proposed reduction in the number of well sample points, and attain approval from this agency. All existing monitoring wells should be sampled during this initial period of data collection in order to assess background concentrations, contaminants trends, and to assist in the development of concentration limits. The Navy must reevaluate the

As discussed in the 08 October meeting, due to the complexity of the tidal influences and the subsurface conditions as well as the lack of applicability of data from monitoring wells across the Boat Channel, a technically defensible method of proposing background levels cannot be determined. It is proposed that trends for the chemicals of concern at the landfill be established by the Mann-Kendall trend estimation technique. As discussed in the meeting, standards for comparison will be set in the future based on these trends.

As stated above, the Mann-Kendall method is being proposed. This method would not pool data but evaluate trends in each well individually.

**Response 3:**

As discussed in the 08 October meeting, the Navy proposes monitoring selected wells at the point of compliance (per CCR 27). In general, monitoring wells inside the landfill boundary will not be included in the monitoring network, unless they are critical wells that are just inside the boundary and are accessible for sampling. The proposed number of monitoring wells to be sampled is 16. This number includes the addition of well pairs ES7, ES11, and ES13 to the existing ten wells proposed in the PCMP. As agreed in the meeting, RWQCB will evaluate the proposal and give written approval if they agree. RWQCB will include in writing any additional wells they believe should be included in the monitoring network.

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current and proposed reduction of groundwater sampling points consistent with 27 CCR, Section 20380.

Upon completion of this evaluation, the Navy must propose a groundwater monitoring program for approval by the Regional Board. The purpose of the monitoring program is to evaluate the long-term effectiveness of the proposed single-layer soil cover and any potential impacts to the waters of San Diego Bay and adjoining Boat Channel. The monitoring program must include a list of constituents of concern, concentration limits, identify points of compliance and all monitoring points. The proposed monitoring network must provide a sufficient number of monitoring wells, installed at appropriate locations and depths to yield groundwater samples representative of the quality of groundwater at the site. The groundwater monitoring program will apply during the postclosure maintenance period and during any compliance period.

In addition, as suggested in the 08 October meeting, a table will be included in the revised GMP and is included as Attachment A. The table lists each well, whether or not it is included in the monitoring network, and the reason for its inclusion or exclusion.

The proposed monitoring program includes a list of the chemicals of concern. These are listed in Table 5-1 and will be included in the revised GMP. The 16 proposed monitoring wells discussed in the 08 October meeting are positioned to intercept groundwater in both water-bearing zones within pathways leading to the San Diego Bay and the Boat Channel. After the soil cap has been placed, it is proposed that chemical trends be developed and evaluated using the Mann-Kendall method. It will take several years to develop these trends.

## **SPECIFIC COMMENTS**

### **Comment 1: Page 1-1, Section 1, Introduction**

Fourth paragraph, third line, add stormwater monitoring to the list of types of monitoring performed at Site 1.

### **Comment 2: Page 1-2, Section 1.2, Regulatory Requirements**

Delete (Cal-EPA) Department of Toxic Substances Control from reference of regulatory agencies with authority for Site 1 postclosure maintenance activities and add the local implementing agency (LIA) and local Air Pollution Control District (APCD).

### **Comment 3: Page 3-1, Responsible Parties**

First paragraph, last line, add stormwater to the list of monitoring programs for Site 1.

### **Response 1:**

The Navy is currently discussing this issue with Navy Legal.

### **Response 2:**

DTSC is currently the lead agency for Site 1 postclosure maintenance activities. However, as per a letter from DTSC dated 28 October 1997 titled "Division of State Agency Responsibility for CERCLA Remedial Action," the RWQCB has been designated the lead agency for oversight activities at the NTC facility beginning 31 December 1997. The local enforcement agency and the APCD will receive all applicable documents pertaining to the site. The text will be revised to clarify this issue.

### **Response 3:**

As per response 1 above, the Navy is currently discussing this issue with Navy Legal.

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**Comment 4: Page 2-7, Section 2.3, Current Condition**

Please describe current site condition and use(s) and planned use(s) of the property during the postclosure maintenance period.

**Response 4:**

The current site condition and use as well as planned use of the property are addressed in Section 1, 2nd paragraph, and Section 2.1, 4th paragraph. Any changes in property conditions or uses will be updated in the final PCMP.

**Comment 5: Page 5-14, Table 5-1**

Please include all sampling events in footnotes by date: SWAT - April & October 1991; ESI - April, October, 1995 and January 1996; 1997 - Quarterly monitoring.

**Response 5:**

Table 5-1 will be revised to include all sampling events by date in the footnotes.

**Comment 6: Page 5-30, Section 5.4.2, Groundwater Monitoring and Sampling**

The groundwater sampling periods indicated in the first paragraph need to be modified by approximately one month. We prefer that the wet season sampling be performed during March and the end of the dry season sampling to occur during/prior to September each year.

**Response 6:**

The text will be revised to state that sampling will be performed twice a year, once near the end of the wet season (approximately March) and once near the end of the dry season (approximately September).

The second paragraph indicates that groundwater contour maps will not be generated unless warranted. The Regional Board staff does not agree with this statement. The biannual reports shall include a groundwater contour map for our review. Groundwater measurements shall be taken within a period of time short enough to avoid temporal variations in groundwater flow.

As agreed in the 08 October meeting, plotting water-level data may be misinterpreted due to the complexity of the tidal influences, therefore, contour maps will not be produced in reports unless the groundwater flow changes dramatically. The GMP will be revised to state this more clearly.

**Comment 7: Page 6-1, Section 6.1, Regulatory Requirements**

Please correct the NTC NPDES Industrial Storm Water Permit No. to "937-S001856."

**Response 7:**

As per Response 1, the Navy is currently discussing this issue with Navy Legal.

**Comment 8: Page 6-1, Section 6.2, Surface-Water Bodies**

Please change surface water runoff to "stormwater runoff" at the beginning of the second paragraph.

**Response 8:**

As per Response 1, the Navy is currently discussing this issue with Navy Legal.

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<p><b>Comment 9: Page 6-1, Section 6.3, Surface-Water Monitoring</b></p> <p>Please change surface water runoff to "stormwater runoff" at the end of the first line of the first paragraph.</p>	<p><b>Response 9:</b></p> <p>As per Response 1, the Navy is currently discussing this issue with Navy Legal.</p>
<p><b>Comment 10: Page 6-2, Section 6.3, Surface-Water Monitoring</b></p> <p>Please change the first line of the second paragraph to read "Sampling of the stormwater discharge . . ."</p> <p>Please change the third sentence of the second paragraph to read "The stormwater sampling location . . ."</p> <p>Please change the last sentence of the second paragraph to read "In accordance with the NPDES permit . . ."</p> <p>Please change the references of Order 91-13-DWQ to "Order No. 97-03" in the second and third paragraphs. This is a revised NPDES permit for stormwater.</p>	<p><b>Response 10:</b></p> <p>As per Response 1, the Navy is currently discussing this issue with Navy Legal.</p>
<p><b>Comment 11: Page 8-1, Section 8, Reporting Requirements Summary. Item No. 4, Cover, Drainage, Vegetation, and Final Grading Inspection and Maintenance</b></p> <p>Please ensure that the quarterly inspection results are included in the biannual reports submitted to this office.</p>	<p><b>Response 11:</b></p> <p>As per Response 1, the Navy is currently discussing this issue with Navy Legal.</p>
<p><b>Item No. 5, Surface-Water Monitoring and Inspection</b></p> <p>Please change title to "Stormwater Monitoring and Inspection." First bullet should read "quarterly visual observation of nonstormwater discharges."</p>	<p>As per Response 1, the Navy is currently discussing this issue with Navy Legal.</p>
<p><b>Item No. 5, Surface-Water Monitoring and Inspection</b></p> <p>Add another bullet which reads as follows: "monthly visual observation of stormwater discharges during the wet season."</p>	<p>As per Response 1, the Navy is currently discussing this issue with Navy Legal.</p>
<p><b>Activities for Site 1</b></p> <p>Change second bullet to read as follows: "results of monitoring (subsidence, leachate, groundwater, and stormwater)."</p>	<p>As per Response 1, the Navy is currently discussing this issue with Navy Legal.</p>

18 November 1997

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**Comment 12: Page 9-1, Section 9, Inspection and Maintenance Plan**

Add another bullet to read as follows: "stormwater monitoring."

**Response 12:**

As per Response 1, the Navy is currently discussing this issue with Navy Legal.

**ATTACHMENT A**

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**MONITORING NETWORK MATRIX**

### Monitoring Network Matrix

Monitoring Well ID	Include in Monitoring Network	Rationale
DMW-10	No	DMW-10 is a deep groundwater monitoring well located approximately 100 feet from the northern border of the inactive landfill. It is not included in the network because it duplicates the coverage of ES-6D and ES 13D, which are included in the network and monitor the same water-bearing zone.
DMW-4	No	DMW-4 is a deep groundwater monitoring well located approximately 25 feet from the eastern border of the inactive landfill. It is not included in the network because it duplicates the coverage of ES-7D, which is in the network and monitors the same water-bearing zone.
DMW-5	No	DMW-5 is a deep groundwater monitoring well located within the inactive landfill area. It is not included in the network because its location within the inactive landfill area would not provide any information regarding off-site migration of potentially contaminated groundwater. Due to its location, it may also interfere with landfill cap construction and be inaccessible once the cap is in place.
DMW-8	Yes	DMW-8 is a deep groundwater monitoring well located approximately 50 feet outside the western border of the inactive landfill. It is included in the network because it is located on the western side of the landfill, and it monitors the deep water-bearing zone.
ES-10S	No	ES-10S is a shallow groundwater monitoring well located within the area of the inactive landfill. It is not included in the network because its location within the inactive landfill area would not provide any information regarding off-site migration of potential groundwater contamination. Due to its location, it may also interfere with landfill cap construction and be inaccessible once the cap is in place.
ES-11D	Yes	ES-11D is a deep groundwater monitoring well located approximately 200 feet outside the southern border of the inactive landfill. It is included in the network because it is located on the southern side of the landfill, and it monitors the deep water-bearing zone. In addition, its location between the landfill and San Diego Bay will allow it to monitor the potential for impacts to San Diego Bay from the landfill.
ES-11S	Yes	ES-11S is a shallow groundwater monitoring well located approximately 200 feet outside the southern border of the inactive landfill. It is included in the network because it is located on the southern side of the landfill, and it monitors the shallow water-bearing zone. In addition, its location between the landfill and San Diego Bay will allow it to monitor the potential for impacts to San Diego Bay from the landfill.
ES-12S	No	ES-12S is a shallow groundwater monitoring well located approximately 600 feet north of the inactive landfill. It is not included in the network because it is located in the same northern direction from the landfill as ES-5S and ES-13S, which are both part of the network and monitor the same water-bearing zone. In addition, it is farther from the landfill than these wells.

(matrix continues)

**Monitoring Network Matrix (continued)**

Monitoring Well ID	Include in Monitoring Network	Rationale
ES-13D	Yes	ES-13D is a deep groundwater monitoring well located approximately 150 feet outside the northeastern corner of the inactive landfill. It is included in the network because its location provides for northeastern coverage around the perimeter of the landfill.
ES-13S	Yes	ES-13S is a shallow groundwater monitoring well located approximately 150 feet outside the northeastern border of the inactive landfill. It is included in the network because its location provides northeast coverage around the perimeter of the landfill.
ES-14D	Yes	ES-14D is a deep groundwater monitoring well located approximately 250 feet outside the western border of the inactive landfill. It is included in the network because it is located on the western side of the landfill, and it monitors the deep water-bearing zone. In addition, this monitoring well was installed specifically for the long-term groundwater monitoring plan as requested by the regulatory agencies to provide additional data on the western side of the landfill.
ES-14S	Yes	ES-14S is a shallow groundwater monitoring well located approximately 250 feet outside the western border of the inactive landfill. It is included in the network because it is located on the western side of the landfill, and it monitors the shallow water-bearing zone. In addition, this monitoring well was installed specifically for the long-term groundwater monitoring plan as requested by the regulatory agencies to provide additional data on the western side of the landfill.
ES-1D	Yes	ES-1D is a deep groundwater monitoring well located just inside the southwestern border of the inactive landfill. It is included in the network because it is located near southwest corner of the landfill, and it monitors the deep water-bearing zone.
ES-1S	Yes	ES-1S is a shallow groundwater monitoring well located just inside the southwestern border of the inactive landfill. It is included in the network because it is located near southwest corner of the landfill, and it monitors the shallow water-bearing zone.
ES-2S	Yes	ES-2S is a shallow groundwater monitoring well located approximately 50 feet outside the western border of the inactive landfill. It is included in the network because it is located on the western side of the landfill to monitor the shallow water-bearing zone.
ES-3D	Yes	ES-3D is a deep groundwater monitoring well located approximately 300 feet outside the northwestern border of the inactive landfill. It is included in the network because it is located near the northwest corner of the landfill, and it monitors the deep water-bearing zone. In addition, its location between the landfill and the Boat Channel will allow it to monitor the potential for impacts to the Boat Channel from the landfill.
ES-3S	Yes	ES-3S is a shallow groundwater monitoring well located approximately 300 feet outside the northwestern border of the inactive landfill. It is included in the network because it is located near the northwest corner of the landfill, and it monitors the shallow water-bearing zone. In addition, its location between the landfill and the Boat Channel will allow it to monitor the potential for impacts to the Boat Channel from the landfill.

(matrix continues)

Monitoring Network Matrix (continued)

Monitoring Well ID	Include in Monitoring Network	Rationale
ES-4D	Yes	ES-4D is a deep groundwater monitoring well located approximately 350 feet outside the northern border of the inactive landfill. It is included in the network because it is located northwest of the landfill, and it monitors the deep water-bearing zone. In addition, its location between the landfill and the Boat Channel will allow it to monitor the potential for impacts to the Boat Channel from the landfill.
ES-5S	Yes	ES-5S is a shallow groundwater monitoring well located approximately 400 feet outside the northern border of the inactive landfill. It is included in the network because it is located directly between the northern border of the landfill and the Boat Channel so it will monitor the potential for impacts to the Boat Channel from the landfill..
ES-6D	No	ES-6D is a deep groundwater monitoring well located approximately 150 feet north of the inactive landfill. It is not included in the network because it is located in the same direction from the landfill as ES-4D, which is in the network and monitors the same water-bearing zone.
ES-7D	Yes	ES-7D is a deep groundwater monitoring well located approximately 150 feet outside the eastern border of the inactive landfill. It is included in the network because it is located on the eastern side of the landfill, and it monitors the deep water-bearing zone.
ES-7S	Yes	ES-7S is a deep groundwater monitoring well located approximately 150 feet outside the eastern border of the inactive landfill. It is included in the network because it is located on the eastern side of the landfill, and it monitors the shallow water-bearing zone.
ES-8D	No	ES-8D is a deep groundwater monitoring well located approximately 150 feet south of the inactive landfill. It is not included in the network because it is located close to and in the same direction from the landfill as ES-11D, which is part of the network and monitors the same water-bearing zone.
ES-8S	No	ES-8S is a shallow groundwater monitoring well located approximately 150 feet south of the inactive landfill. It is not included in the network because it is located close to and in the same direction from the landfill as ES-11S, which is part of the network and monitors the same water-bearing zone.
SMW-10	No	SMW-10 is a shallow groundwater monitoring well located approximately 150 feet north of the inactive landfill. It is not included in the network because it duplicates the coverage of ES-13S, which is part of the network and monitors the same water-bearing zone.
SMW-9	No	SMW-9 is a shallow groundwater monitoring well located approximately 150 feet north of the inactive landfill. It is not included in the network because it duplicates the coverage of ES-5S, which is part of the network and monitors the same water-bearing zone.