

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**SUPPLEMENTAL SHEET FOR REGULAR MEETING OF MARCH 20-21, 2008**

Prepared on March 13, 2008

**ITEM NUMBER: 25**

**SUBJECT: Direct Staff Whether to Pursue Removing the Beneficial Use Designation (Basin Plan Amendment) and Whether to Consider Institutional Controls as Part of the Site Closure Strategy**

**DISCUSSION:**

The responsible parties for the solvent discharge from the former Vapor Cleaners located at 951 Del Monte Avenue in Monterey (site) submitted letters requesting that this item be delayed until July 2008. This supplemental sheet provides Mr. Quinones' letter dated March 11, 2008 (Attachment 1), the City of Monterey's (City) letter dated March 12, 2008 (Attachment 2), and Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff's response letter to the City and Mr. Quinones dated March 14, 2008 (Attachment 3). Attachment 2 also includes the City's February 29, 2008 letter request for the Central Coast Water Board to postpone the agenda item to the July 2008 meeting.

Reason for Not Postponing

As described in detail in Attachment 3, Central Coast Water Board staff does not support postponing this agenda item because:

1. The Central Coast Water Board must comply with State Water Resource Control Board (State Water Board) Order WQ 2006-0010 (State Board Order);
2. Mr. Quinones and the City will benefit from knowing the outcome of the Central Coast Water Board's decision;
3. More site characterization must occur before a site closure decision can be made; and
4. This item has already been delayed twice without any clear benefit to discussion of institutional controls or investigation progress.

Staff Report Clarification

In this supplemental sheet, Central Coast Water Board staff provides clarification to the staff report as follows:

1. This agenda item requests Central Coast Water Board direction on removing the municipal drinking water beneficial use designation for site groundwater and use of institutional controls, to comply with the State Board Order, not the Central Coast Water Board's decision regarding site closure.

2. Pages 2 and 8 of the staff report should reflect Central Coast Water Board staff's recommendation as Option 1.a.i. or Option 1.a.ii.

1. *If the Central Coast retains the MUN use:*

- a. *Require the Dischargers to proceed with characterization and cleanup. Direct Staff to apply the water quality objective [e.g. Department of Health Services maximum contaminant level (MCL)] rather than background (i.e., apply State Water Board Resolution No. 92-49) as the cleanup goal.*

- i. *If cleanup proceeds to reduce waste constituent concentrations below or at the MCLs, the Executive Officer would be able to close the case and no institutional controls will be needed because the Site would have unrestricted use.*

or

- ii. *If cleanup proceeds to reduce waste constituent concentrations near but above the MCLs **and** Staff determine that there is no current threat to human health or the environment, the Central Coast Water Board would determine whether closure is appropriate and would require institutional controls since the Site would not have unrestricted use.*

Central Coast Water Board staff recommends Option 1.a.i. or Option 1.a.ii., not Option 1.b. – to pursue a site containment zone.

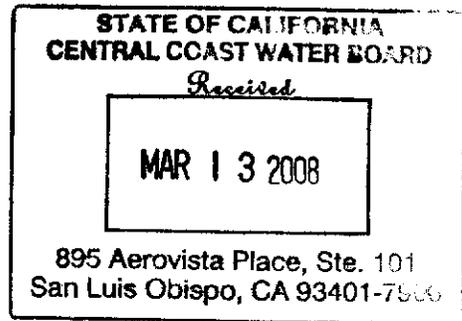
3. The site is a typical groundwater cleanup case located in the Central Coast Region. The site is not unique because of the type of waste discharged, media impacted, or coastal location. The Central Coast Water Board should not apply preferential treatment for this site because other dischargers in our region are regulated in a similar fashion and face the same technological (investigation and cleanup) and financial challenges.

## ATTACHMENTS

1. Mr. Quinones Letter dated March 11, 2008 (received via email on March 12, 2008)
2. City Letter dated March 12, 2008
3. Central Coast Water Board letter dated March 14, 2008

March 11, 2008

Jeffery S. Young, Chairperson  
Board Members, Each of Them  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401



**Subject: Agenda Item 25 Central Coast Board Consideration of State Water Resource Control Board Remanded Evaluation of Beneficial Use Designation.**

Dear Central Coast Board Members:

I ask you for a continuance of our appearance before the Central Coast Water Quality Control Board (Central Coast Board), which was scheduled for March 21, 2008 by Central Coast Board staff. Various Interested Parties have just now been appraised of Central Coast Board staff plans and characterization of the items at issue in this case. Namely the State Water Resources Control Boards designation of the site's beneficial uses to you the Central Coast Board members and State Water Resources staff stating no beneficial ground water source at this site. As well as Mr. Darrin Pholemus head of the Calif. Department of Water Quality stating (Dec. 13, 2006 Board meeting) the site should be closed, and respond to several potential proposals for institutional controls relevant to the site at 951 Del Monte Avenue. We would like to be able to work with the Board staff to review technical information and evaluate what is needed to implement institutional controls.

It has taken considerable time for all responsible parties to get together. Now that we are working together we can move forward at an acceptable pace for the Board staff.

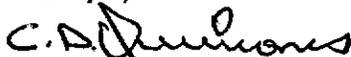
After evaluation of over twenty years of data dating back to 1987, reasonable options such as institutional controls including deed restrictions, deed restrictions for City owned property, and a well prohibition zone should go a long way towards safeguarding the environment and public health, especially in light of the documented fact that there is no sustainable groundwater resources at the site.

Being a senior citizen and a small business owner I personally do not have either the economic resources or the extra time to move at the pace in which the Central Coast Board staff is just now asking with the release of the staff report that are only just being delivered to the Interested Parties in this case. Being self employed means I am responsible for the day to day operations of a business which requires long hours, and puts a tremendous amount of strain on what little time I do have for myself. My workweek is usually six days, and if equipment repair or maintenance is needed I have a seven-day week.

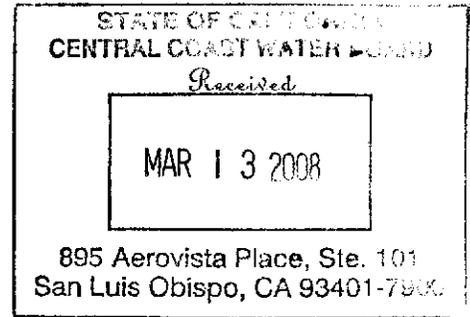
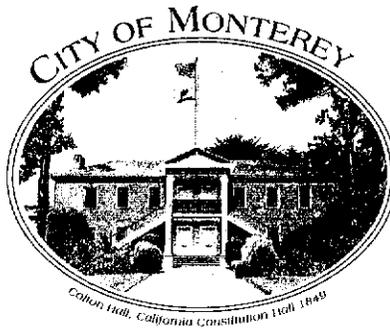
Within the next 30 days we want to characterize the three requests of the Regional Boards letter from Oct. 3, 2008, and how to reach those goals. The next 30 days would be implementing our approach. The final 30 days would be the time needed to prepare this information for the Regional Board meeting.

I am asking that you be equitable by granting me and the City of Monterey's request for continuance of the deadlines set by Central Coast staff, so that we may have the opportunity to properly prepare and accurately represent the issues at hand before you, the Central Coast Water Board.

Thank you,

  
Curtis D. Quimones

Supplemental Sheet Item No. 25  
Attachment 1  
Ltr dtd 3/11/08



Mayor:  
CHUCK DELLA SALA

Councilmembers:  
LIBBY DOWNEY  
JEFF HAFERMAN  
NANCY SELFRIDGE  
FRANK SOLLECITO

City Manager:  
FRED MEURER

March 12, 2008

Roger Briggs  
Executive Officer  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Subject: Former Vapor Cleaners Site, 951 Del Monte Avenue, March 21 Agenda Item 25

Dear Mr. Briggs:

This letter is in response to the February 11, 2008 Staff Report regarding the former Vapor Cleaners Site ("Site"), agenda item 25 on the Regional Board's March 21 agenda. As you know, Item 25 follows up on State Board Order WQ-2006-0010, which directed that the Regional Board consider deed restrictions or other institutional controls and/or a Basin Plan amendment to support closure of the Site. Staff generally has recommended the institutional control approach rather than the Basin Plan amendment approach to the closure of this site.

City of Monterey staff concur that institutional controls should provide an appropriate basis for closing this site. Based upon City staff's evaluation to date of the available technical information, we believe that deed restrictions on certain City-owned properties should be sufficient to support site closure, and that a broader well-prohibition ordinance suggested in the Staff Report is probably unnecessary. However, we recognize that additional technical evaluation needs to be performed to support these conclusions, and we intend to work with staff to reach an appropriate resolution.<sup>1</sup>

The City is concerned, however, that the description of the Site contained in the Staff Report could leave the Board with an inaccurately negative impression of the Site and its current status. This letter briefly summarizes the cleanup history of the Site and the available monitoring data and describes the reasons why the City currently recommends that the institutional controls be limited to deed restrictions on City-owned properties alone.

<sup>1</sup> Because the City recognizes that additional technical work is needed, we previously requested that this matter be continued to the July Regional Board meeting in Watsonville. See Attachment A, February 29 letter. We respectfully request that the requested continuance be granted by the Board.

As recognized in the Staff Report, the former Vapor Cleaners facility closed approximately eight years ago. A soil vapor extraction system was operated in 1990 and 1991 that reduced soil vapor concentrations by over 90%. Then, in 2002, significant quantities of contaminated soil and groundwater were removed from the site, responding to the discovery of five previously unknown USTs.

The Staff Report generally discounts the extensive soils cleanup undertaken in 2002 as not being "targeted" at the PCE contamination. This characterization, however, understates the scope, nature and resulting benefits of the 2002 cleanup. Specifically, approximately 1200 cubic yards of the most contaminated soils were removed from an approximately 40 by 70 foot area of the Site, together with the associated groundwater. By way of comparison, the overall Site is approximately 50 by 130 feet in size, so nearly half the area of the Site was excavated. The location of the 2002 soils removal is shown in Attachment B (Figure 4 to April 18, 2006 Remediation Testing and Design Report).<sup>2</sup>

As described in Attachment C (October 28, 2005 Remediation Testing and Design Report, page 3), "The excavation extended to depths of 8-, 12- and 15-feet below grade. The deeper portions of the excavation were focused on those areas with the highest levels of remaining contamination . . . ." This excavation took place in an area where the groundwater bearing zone ranges from 20- to 25- feet below grade, a depth just above the level where bedrock is encountered. *Id.* In other words, the excavation averaged approximately half the depth to bedrock in the areas where it was performed.

This excavation was very effective in reducing the sources of PCE, as demonstrated by the more than 85% reduction in groundwater concentrations in MW-7 during the subsequent several years. See Attachment C, Figure 1. Because extensive soils removal has already taken place, and in light of the fact that the residual contamination appears to be limited to City-owned properties, additional soils removal or other active remediation would not be cost effective.

The groundwater monitoring data also show that elevated groundwater concentrations of PCE (i.e. above the 5 ppb MCL) generally occur only directly under the Site, which is now owned by the City of Monterey and dedicated to open space uses (see Attachment D, exhibit of City and State owned lands; See Attachment E April 18, 2006 Remedial Testing and Design Report, Table 2). Moreover, the Site is entirely surrounded by lands owned by the City of Monterey and the State of California, also in open space uses. It is on this basis that the City of Monterey concludes that deed restrictions on City-owned properties should be sufficient to support site closure.<sup>3</sup>

<sup>2</sup> In order to make a focused presentation, only the cover pages and referenced pages are included in the Attachments to this letter. It is the City's understanding that all of the reports referenced in this letter have previously been provided to the Regional Board, and will be included in the record of these proceedings. To ensure completeness of the record, however, the City also anticipates providing copies of the key reports by the Monday, March 17 deadline.

<sup>3</sup> Regional Board Staff have also suggested that potential future desalination plants could change groundwater movement patterns in a way that would increase the risk from the Site. However, as show by Attachment F (map of potential desalination sites), the nearest proposed

That being said, the City recognizes that additional technical work needs to be performed to support this conclusion before the Regional Board can approve site closure. Specifically, during the requested continuance period, the City proposes to work with Mr. Quinones, the discharger, to prepare a technical report that synthesizes the existing information regarding the Site for the focused purpose of evaluating the appropriate nature and scope of institutional controls. If additional data is needed to support these conclusions, the report will also recommend specific actions to obtain the needed information. In particular, we will address the statement on page 14 of the Staff Report that "further characterization and confirmation sampling of groundwater near El Estero Lake and Monterey Bay is necessary . . . ."<sup>4</sup>

We understand that Mr. Quinones also has requested that the Basin Plan be amended to de-designate the groundwater under the site and in the immediate area as a drinking water source. We would agree based upon the expert evidence provided, including the State Board staff's own evaluation, that this aquifer is not a viable source of drinking water, and that redesignation would be appropriate. Attachment G (August 15, 2006 SWRCB Technical Report prepared by Dennis Parfitt, Division of Water Quality). However, given that consideration of a less administratively cumbersome alternative (institutional controls) has been directed by the State Board, redesignation may not be needed so long as the lack of potential municipal uses at the Site is fully considered in the site closure decision. Given Mr. Quinones' interest in pursuing a redesignation, and the Staff Report's lack of any new information suggesting actual or potential municipal uses at the site, the City requests that the Regional Board defer making a decision on this question now (Staff Report, page 2, option 2 for complying with State Board Order requirement 1).

The City also notes that the Staff Report is internally inconsistent on whether a containment zone would need to be designated in order to support site closure based upon institutional controls. On page 2 of the Staff Report, staff recommends what it labels option 1.a.ii, which is site closure based upon institutional controls, and does not recommend what it labels option 1.b, which would include establishment of a containment zone. Later in the Staff Report, including in the conclusion on 15, this recommendation is less clear. In any event, the State Board order directed consideration of institutional controls without mention of a containment zone designation. In the particular circumstances of the Site, where it is acknowledged that the aquifer is not an actual or potential drinking water source, and where the Site and the surrounding properties are all in public use as open space, the additional administrative steps of a containment zone designation would appear unnecessary.

Staff recommendation 1.a.ii on page 8 also inappropriately prejudices the standard for closure based upon institutional controls, specifically that waste constituent

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facility is over a mile distant, so the City does not believe that this is a material concern in the specific circumstances presented by the Site.

<sup>4</sup> Because the City intends to cooperate fully in undertaking these next steps, and there is no evidence that the contamination poses an eminent threat to the environment or human health, additional formal enforcement measures, such as a new CAO, would be premature and unnecessary.

concentrations be "near but above the MCLs." The reference to "near" the MCLs is unclear, and in any event the appropriate inquiry should be whether the proposed institutional controls (and any additional measures to be developed) will ensure protection of human health and the environment.

Finally, Staff has expressed concern over the precedential effect of a site closure based on institutional controls. To begin with, that is what the State Board has already directed the Regional Board to consider. In any event, the City doubts that other dischargers will be eager to request what has been accomplished at this Site, which is the transfer of the property and all of the surrounding properties into public ownership for open space purposes, in a situation where extensive soils removal has already occurred and the affected aquifer is known to be unusable for municipal purposes. The City's requested approach, taken as a whole, is not likely to create an attractive precedent, and certainly not one that the Regional Board will have difficulty distinguishing in the future.

In sum, we look forward to working with the Regional Board and its staff to bring this matter to a proper resolution under the parameters established by the State Board.

Sincerely,



Chuck Della Sala  
Mayor

C: City Manager  
Director Plans, Engineering and Environmental Compliance  
City Attorney  
Housing and Property Manager  
City Engineer  
Mr. Quinones  
Karyn Steckling, RWQCB



February 29, 2008

Mayor:  
CHUCK DELLA SALA

Councilmembers:  
LIBBY DOWNEY  
JEFF HAFERMAN  
NANCY SELFRIDGE  
FRANK SOLLECITO

City Manager:  
FRED MEURER

Roger Briggs  
Executive Officer  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

Subject: Former Vapor Cleaners Site, 951 Del Monte Avenue – Conceptual Institutional Controls

Dear Mr. Briggs:

This letter is in response to your October 3, 2007 letter (signed by John Robertson) regarding the above-entitled. As you know, your letter followed up on State Board Order WQ-2006-0010, which directed that the Regional Board consider deed restrictions or other institutional controls and/or a Basin Plan amendment to support closure of the Vapor Cleaners Site in Monterey. Your letter requested the City to consider deed restrictions on the subject property (951 Del Monte Avenue), deed restrictions on other nearby City owned properties, and the adoption of a broader well prohibition ordinance. It also requested, but did not specify the nature of, additional investigations to determine whether the contamination plume poses health risks in these areas. Your letter did not discuss the option of pursuing a Basin Plan amendment.

Subsequent correspondence identified a target date for bringing this matter to the Board at the next meeting in Salinas, which will be held on March 21. Although progress has been made in addressing your requests, as discussed below, at this point we unfortunately do not believe that it will be possible to resolve all of the technical and policy issues raised by your request in time to prepare an item for that meeting. Accordingly, we respectfully request that this matter be rescheduled for the July 11 meeting to be held in Watsonville.

City staff agree that institutional controls are an appropriate basis for closure of this site, and would recommend to the City Council that deed restrictions be adopted for 951 Del Monte, at minimum. It also appears that the encumbrance of other City-owned properties may well be needed, but staff believes that its recommendation to the council should be based on technical information showing that such restrictions are in fact needed. A broader well prohibition ordinance affecting non-City properties raises both the necessity issue as well as policy issues since third parties would be affected. Monterey County may also need to become involved as your letter indicates. All of this will require further technical and policy evaluation. From the opinions of experts who have been involved in this project, it's likely that the contamination is contained within the City owned properties. However, without knowing what your agency's expectations are with respect to the additional investigations that may be required, and the resulting basis for the actual scope and nature of the institutional controls, we are not yet prepared to make a detailed recommendation to our City Council regarding these measures.

Since his operations were the source of the contamination and the City is only a subsequent purchaser, Mr. Quinones is the party that we will be looking towards to provide the "additional investigations" called for in measure 2 and definition of the "aquifer characteristics" called for in measure 3 and any other issues relating to the definition of the contamination or technical measures to be taken. We have been in discussions with Mr. Quinones regarding these issues, but progress towards resolution has been somewhat irregular. At this time, it appears that there is considerable information about the hydrogeology of the subject site and the status of contamination in the area. Mr. Quinones and his team of experts need additional time to synthesize the existing information that is available, and for City staff to work with your staff to further define the scope of appropriate institutional controls, including deed restrictions and a potential well prohibition zone. Once this has been accomplished, we will have the information that we need to make a decision and recommendation to our City Council that we can present for approval by your agency.

Mr. Quinones also has requested that the Basin Plan be amended to de-designate the groundwater under the site and in the immediate area as a drinking water source. We would agree based upon the expert evidence provided (including the Board's 2006 Technical Report prepared by Mr. Parfitt) that this aquifer is not a viable source of drinking water. Although the institutional control approach may be a more efficient pathway to site closure, we are informed that Mr. Quinones remains interested in exploring that option as well.

Thank you for your continued consideration of this matter and please do not hesitate to contact me if you have any questions or concerns.

Sincerely,



Fred Meurer  
City Manager

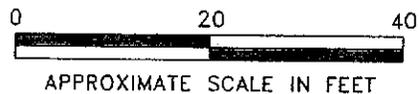
- c: City Attorney
- Director Plans, Engineering and Environmental Compliance
- Housing and Property Manager
- ✓ City Engineer
- Mr. Duke Quinones
- Karyn Steckling, RWQCB

# Groundwater Levels Measured on March 13, 2006

Asphalt Bike Path

Abandoned Railroad Tracks

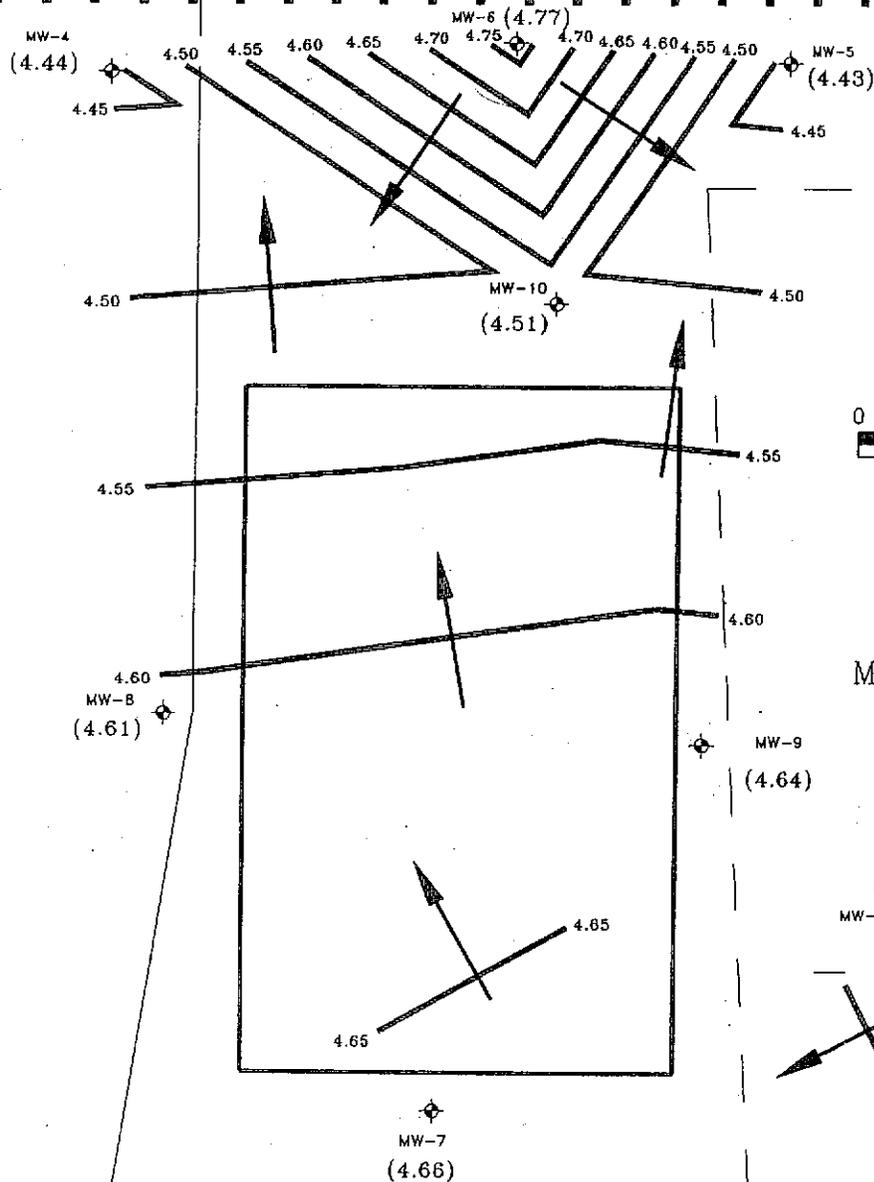
City Park (turf)



Mohr Import Autos  
(asphalt car lot)

**LEGEND**

- (3.84) MW-6 (Groundwater Elevation, feet amsl)
- Fence
- Groundwater Contour and Flow Direction



Former Vapor Cleaners

Asphalt Sidewalk

Del Monte Avenue

**ATTACHMENT B**

FIGURE 4 - Groundwater Contours  
Former Vapor Cleaners  
951 Del Monte Avenue  
Monterey, California

Remediation Testing and Design  
P.O. Box 1356  
Santa Cruz, California 95061-1356  
Phone: (831) 458-1612 Fax: (831) 458-1509

Designed by: HEW

Job number: 2K0123-6

Rev. Date: April 4, 2006

File Name: GWE-0306.DWG

Sheet 1 of 1

The temporary, very high levels of PCE detected in MW-7 were due to the fact that groundwater flow directions change up to 180-degrees between wells and sampling events, indicating that dispersion and diffusion are the primary chemical mass transfer processes. Since there is no single, consistent groundwater flow direction, there is no advective "flushing" that commonly occurs at most other sites. In this case, groundwater moves back and forth which prevents "flushing" and causes stagnation. This condition allowed groundwater concentrations to approach PCE saturation levels within zones of relatively low soil concentrations.

If a pool of DNAPL existed at this site, then the groundwater concentrations of total VOCs and PCE would remain relatively constant at very high levels near the saturation point. This, however, is not the case at this site where the very high PCE concentrations in MW-7 were only a temporary condition. The plot of total VOCs and PCE in MW-7 groundwater depicted on the attached Figure 1 shows that the levels of the target contaminants have declined by 85-percent in the three years following the excavation of the vadose zone and groundwater saturated soil source area. The seasonal high concentrations of these contaminants in MW-7 occur during the Fall. The peak Fall concentrations are declining by approximately one-half every year. This high rate of contaminant decline in groundwater would be impossible if a pool of DNAPL existed at this site. To the contrary, the significant and consistent declines of the target groundwater contaminants in MW-7 clearly shows that the vast majority of the PCE source in soil and groundwater has been removed and natural attenuation is an efficient and effective end-stage groundwater remediation method.

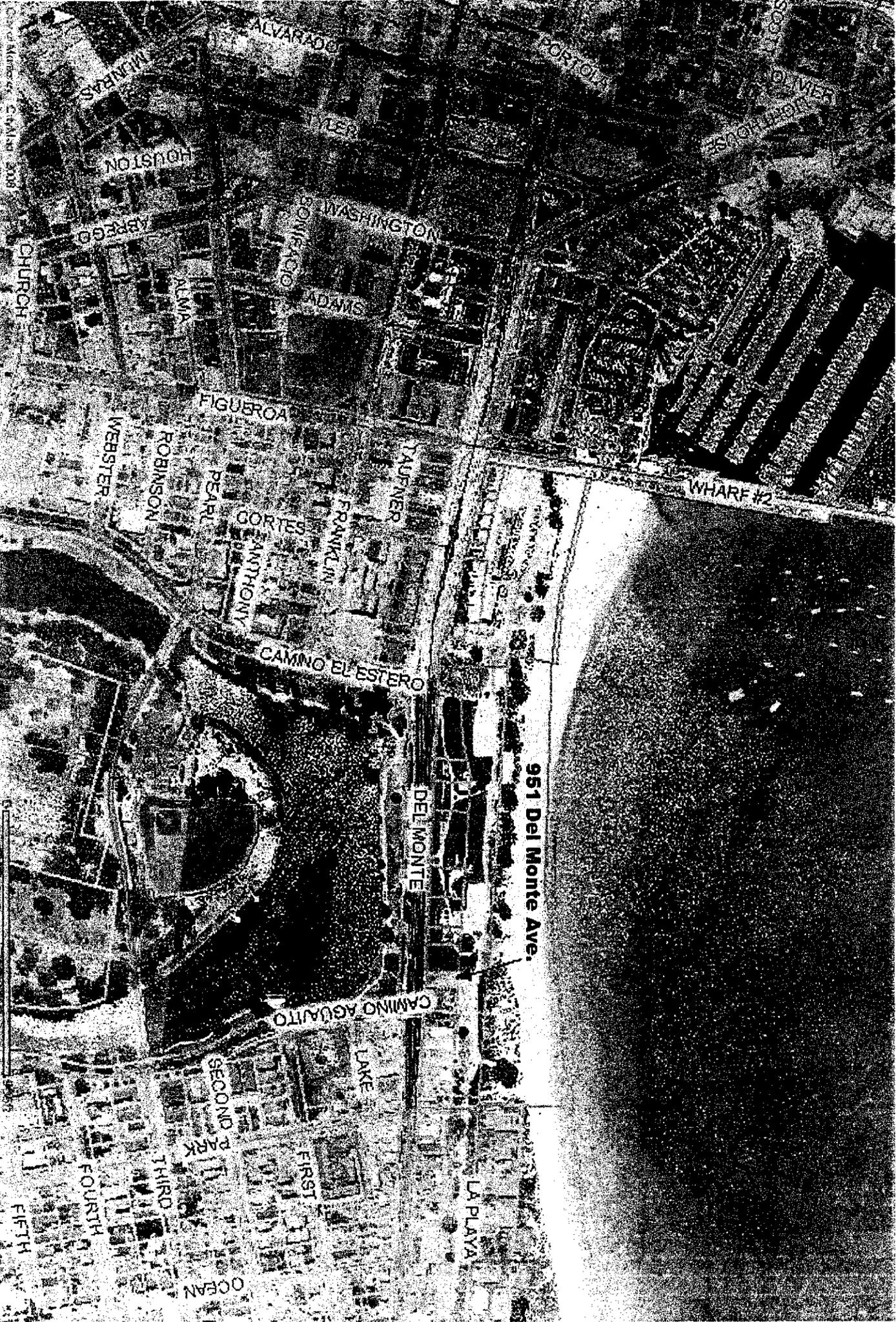
Every reference to a pool of DNAPL and/or a pool of contamination is a fabrication not supported by the evidence in the record and should be stricken from the subject memorandum.

### ISSUE #3

From the fourth paragraph on page 6 of the subject memorandum

*Petitioner cannot now claim that a soil-only cleanup satisfies these terms. The Central Coast Water Board has stated that no groundwater cleanup took place. Therefore, the requested rescission is unwarranted.*

The contention that there has been no groundwater cleanup is false. The depth to groundwater at the site ranges from approximately 3- to 6-feet below ground and the total depth of the groundwater bearing zone ranges from 20- to 25-feet below grade. In October and November 2002, a total of 1,200-cubic yards of contaminated soil weighing approximately 1,940-tons were removed from the site. The excavation extended to depths of 8-, 12- and 15-feet below grade. The deeper portions of the excavation were focused on those areas with the highest levels of remaining contamination based on field readings of organic vapors, therefore, the most highly contaminated portion of the groundwater bearing zone was physically removed. Based on the facts in the record, nearly half of the groundwater bearing zone within the footprint of the excavation area was physically removed. Physical removal of a contaminated groundwater bearing zone is the only remediation technique that removes 100-percent of the contaminants within the remediated volume. The soil excavation project also included the pumping and disposal of approximately 9,600-gallons of contaminated groundwater. These facts that are contained within the record are unambiguous proof that significant groundwater remediation was



CITY AND STATE OWNED LANDS

ATTACHMENT D

**TABLE 2 - Summary of Chlorinated Solvent Results**  
**Former Vapor Cleaners, 951 Del Monte Avenue, Monterey, California**

Sample ID	Date	pH	ORP	COND	DO	Concentrations in micrograms per liter (ug/L), parts per billion					
						PCE	TCE	Cis-1,2-DCE	Trans-1,2-DCE	Vinyl chloride	Total VOCs
MW-4	03/13/06	7.18	-196	4,200	0.90	<1.0	<1.0	<1.0	1.7	<1.0	1.7
	09/29/05	7.33	135	4,300	0.65	<1.0	<1.0	<1.0	2.1	1.0	3.1
	03/31/05	7.15	-179	3,000	0.65	<1.0	<1.0	1.7	2.1	2.6	6.4
	09/09/04	7.55	-317	6,600	0.45	<1.0	<1.0	1.3	<1.0	1.6	2.9
	03/16/04	7.58	-255	4,700	0.45	<1.0	<1.0	<1.0	2.0	2.1	4.1
	06/25/03	7.51	-172	8,100	0.20	<1.0	<1.0	1.8	1.8	7.4	11.0
	09/30/02	7.30	-273	8,300	0.15	<1.0	<1.0	4.2	1.5	11	16.7
	03/31/02	7.40	-315	7,500	NA	<0.5	<0.5	2.0	1.4	8.6	12.0
	03/06/01	6.90	-211	3,710	0.17	<1.0	<1.0	25	24	53	102
	08/11/00	7.22	-86	10,200	0.16	<0.5	<0.5	35	7.5	16	58.5
	05/25/00	7.41	-55	19,980	0.11	<0.5	<0.5	24	6.5	32	62.5
	02/15/00	~	~	~	0.69	<0.5	<0.5	30	8.8	23	61.8
	12/21/99	7.47	-43	10,800	0.17	<1.0	<1.0	29	6.0	32	67.0
	09/24/99	7.59	-49	10,500	0.22	<0.5	<0.5	27	6.2	15	48.2
	06/14/99	~	-104	11,700	0.15	<2.0	<2.0	26	4.9	13	43.9
	03/10/99	7.62	-114	12,750	0.12	<2.5	<2.5	47	6.1	<2.5	53.1
	12/23/98	~	~	~	~	<2.5	<2.5	30	<2.5	11	41
	06/08/92	~	~	~	~	<5.0	<5.0	NA	5.1	<5.0	5.1
	03/04/92	~	~	~	~	<0.4	<0.4	NA	1.2	20	21.2
	12/10/91	~	~	~	~	<0.4	<0.4	NA	1.7	20	21.7
	08/28/91	~	~	~	~	<0.5	<0.5	<0.5	1.2	10	11.2
	05/31/91	~	~	~	~	<0.5	0.5	27	0.8	<1.0	28.3
	02/21/91	~	~	~	~	<0.5	<0.5	2.2	<0.5	<1.0	2.2
	11/19/90	~	~	~	~	<0.5	<0.5	8.8	<0.5	<0.5	8.8
	07/03/90	~	~	~	~	<0.5	0.6	7.0	<0.5	<0.5	7.6
	01/15/90	~	~	~	~	<0.5	1.2	13	<0.5	<0.5	14.2
	03/28/89	8.30	~	15,600	~	<0.5	9.0	NA	2.0	<1.0	11.0
	09/28/88	~	~	~	~	<0.5	39	240	<0.5	<1.0	279
	06/18/88	~	~	~	~	1,700	<500	NA	<500	<1,000	1,700

**TABLE 2 - Summary of Chlorinated Solvent Results**  
**Former Vapor Cleaners, 951 Del Monte Avenue, Monterey, California**

Sample ID	Date	pH	ORP	COND	DO	Concentrations in micrograms per liter (ug/L), parts per billion					
						PCE	TCE	Cis-1,2-DCE	Trans-1,2-DCE	Vinyl chloride	Total VOCs
MW-5	03/13/06	7.47	-314	4,800	0.29	<1.0	<1.0	5.7	5.4	10	21.1
	09/29/05	7.46	-1	4,400	0.19	<1.0	<1.0	1.0	1.9	1.7	4.6
	03/31/05	7.33	-315	4,000	0.22	<1.0	<1.0	6.1	3.7	6.3	16.1
	09/09/04	7.48	-350	5,700	0.14	<1.0	<1.0	10	9.8	17	36.8
	03/16/04	7.60	-370	3,500	0.16	<1.0	<1.0	8.0	4.8	7.2	20.0
	06/25/03	7.48	-284	4,900	0.13	<1.0	<1.0	11	6.6	9.7	27.3
	09/30/02	7.30	-345	5,300	0.13	<1.0	<1.0	17	13	25	55
	03/31/02	7.31	-336	5,400	NA	<0.5	<0.5	21	20	25	66
	09/27/01	7.54	-20	5,400	0.19	1.2	3.1	17	17	61	99.3
	08/11/00	7.33	-241	5,300	0.17	<0.5	<0.5	36	34	31	101
	05/25/00	7.48	-186	10,810	0.04	0.73	4.0	29	25	28	86.73
	02/15/00	~	~	~	0.39	0.76	1.1	17	17	34	69.86
	12/21/99	7.42	-191	7,600	2.17	<0.5	0.7	16	13	21	50.7
	09/24/99	7.67	-233	5,800	0.24	<0.5	0.5	13	11	24	48.5
	06/14/99	~	-245	6,650	0.22	<0.5	0.84	16	10	17	43.84
	03/10/99	7.74	-265	6,600	0.14	<0.5	<0.5	17	9.1	14	40.1
	12/23/98	~	~	~	~	<0.5	<0.5	17	7.2	16	40.2
	08/28/91	~	~	~	~	<0.5	2.5	25	<0.5	17	44.5
	05/31/91	~	~	~	~	<0.5	2.3	18	4.8	1.9	27.0
	02/21/91	~	~	~	~	<0.5	2.7	17	6.5	30	56.2
	11/19/90	~	~	~	~	<0.5	2.6	20	7.9	22	52.5
	07/03/90	~	~	~	~	<0.5	2.6	14	6.2	<0.5	22.8
	01/15/90	~	~	~	~	<0.5	2.8	24	6.7	<0.5	33.5
03/28/89	~	~	~	~	<10	<10	NA	<10	<20	<20	
09/28/88	~	~	~	~	<0.5	8.1	25	<0.5	<0.5	33.1	
06/19/88	~	~	~	~	<5	10	NA	<5	<10	10	

**TABLE 2 - Summary of Chlorinated Solvent Results**  
**Former Vapor Cleaners, 951 Del Monte Avenue, Monterey, California**

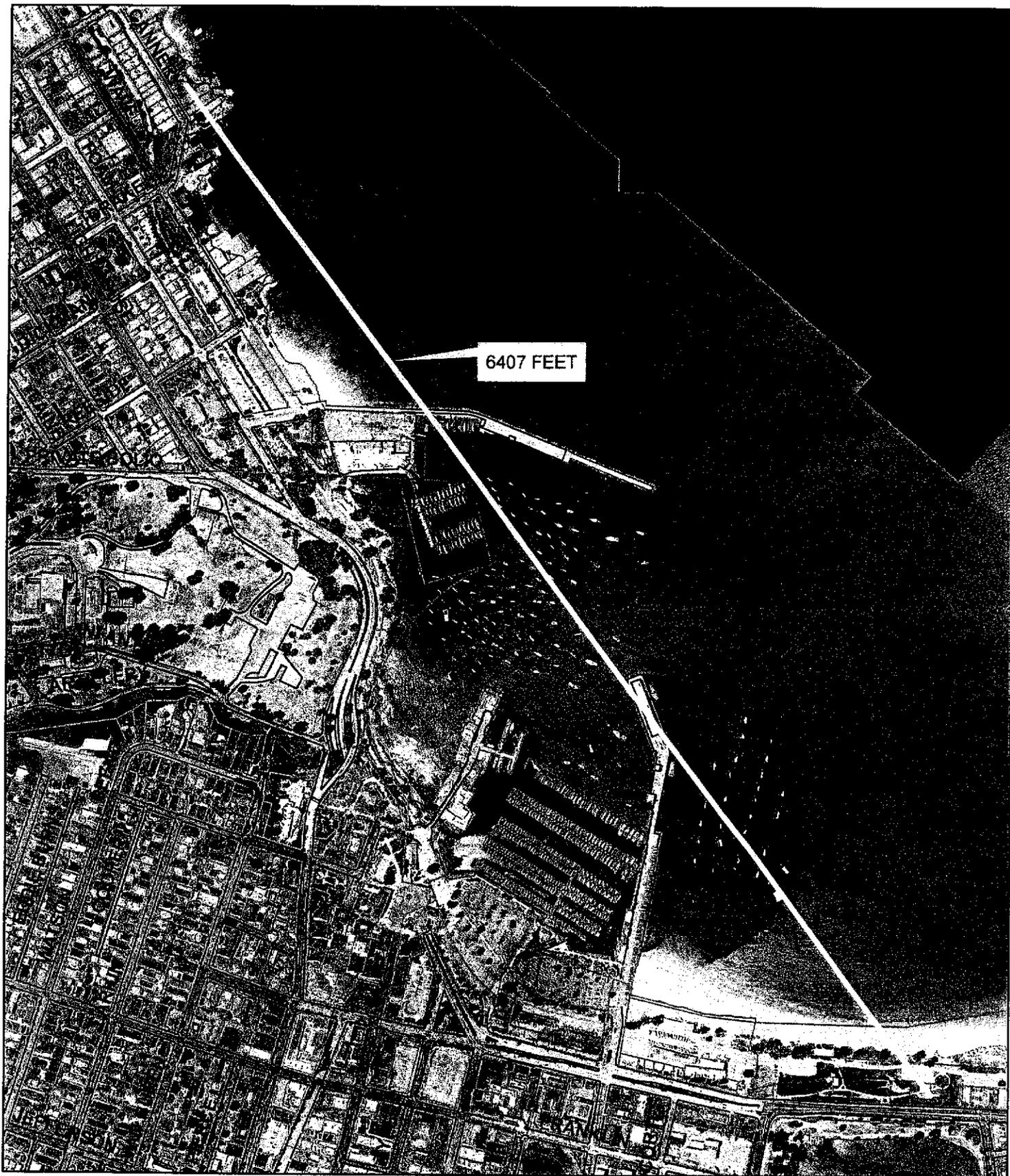
Sample ID	Date	pH	ORP	COND	DO	Concentrations in micrograms per liter (ug/L), parts per billion					
						PCE	TCE	Cis-1,2-DCE	Trans-1,2-DCE	Vinyl chloride	Total VOCs
MW-6	03/13/06	6.86	-126	820	2.79	17	4.2	51	6.2	46	124.4
	09/29/05	6.80	54	890	4.91	< 50	< 50	16,000	770	3,500	20,270
	03/31/05	6.87	-175	650	2.67	16	2.3	28	4.8	17	68.1
	09/09/04	7.03	-238	1,500	4.25	< 10	230	7,900	1,200	7,000	16,330
	03/16/04	6.75	-295	650	0.66	< 10	< 10	1,000	120	370	1,490
	06/25/03	6.77	-155	1,550	2.95	1,200	< 500	10,000	1,400	4,200	16,800
	09/30/02	6.73	-229	2,300	3.00	480	1,300	31,000	2,400	3,700	38,880
	03/31/02	6.87	-256	820	NA	< 100	130	5,900	560	910	7,500
	09/27/01	6.97	17	3,500	NA	920	3,500	29,000	3,700	2,900	40,020
	03/06/01	6.90	-99	NA	0.66	10	13	37	15	120	195
	08/11/00	7.28	-232	3,600	0.15	3,300	6,300	1,300	680	640	12,220
	05/25/00	7.12	-111	2,790	0.10	100	780	700	220	470	2,270
	02/15/00	~	~	~	1.76	75	160	110	83	64	492
	12/21/99	7.55	-201	4,300	0.15	1,100	2,200	720	360	450	4,830
	09/24/99	7.60	-154	3,400	0.17	1,200	1,100	130	74	94	2,598
	06/14/99		-140	1,850	0.11	5.2	240	71	51	120	487.2
	03/10/99	7.16	-102	1,045	0.15	12	12	45	7.6	28	104.6
	12/23/98	~	~	~	~	110	1,500	1,100	360	530	3,600
	10/07/98	~	~	~	~	< 10	5,100	2,100	800	2,300	10,300
	08/31/98	~	~	~	~	< 100	4,300	3,100	760	1,400	9,560
	06/23/98	~	~	~	~	< 5	140	230	44	110	524
	03/24/98	~	~	~	~	42	< 5	< 5	< 5	< 5	42
	10/07/97	7.34	~	3,500	~	520	2,600	980	400	1,100	5,600
	05/09/97	7.04	~	1,600	~	34	770	620	150	410	1,984
	06/08/92	~	~	~	~	24	290	NA	370	130	814
	03/04/92	~	~	~	~	640	310	NA	3.3	13	966
	12/10/91	~	~	~	~	< 40	430	NA	73	83	586
	08/28/91	~	~	~	~	2,000	2,200	3,800	< 250	< 250	8,000

**TABLE 2 - Summary of Chlorinated Solvent Results**  
**Former Vapor Cleaners, 951 Del Monte Avenue, Monterey, California**

Sample ID	Date	pH	ORP	COND	DO	Concentrations in micrograms per liter (ug/L), parts per billion					
						PCE	TCE	Cis-1,2-DCE	Trans-1,2-DCE	Vinyl chloride	Total VOCs
MW-7	03/13/06	NA	-188	1,430	0.21	9,000	2,800	2,300	<200	240	14,340
	09/29/05	7.04	10	2,500	0.20	19,000	5,600	4,300	<200	330	29,230
	03/31/05	7.17	-76	1,290	0.15	16,000	2,400	2,400	<500	<500	20,800
	12/17/04	7.19	-130	4,800	0.22	34,000	3,100	1,600	<500	<500	38,700
	09/09/04	7.17	-147	3,200	0.11	47,000	2,900	2,000	2,900	<500	54,800
	07/21/04	7.12	-160	4,000	0.22	23,000	3,600	3,000	<500	900	30,500
	03/16/04	7.17	-200	1,750	0.16	37,000	4,000	2,500	<1,000	<1,000	43,500
	12/08/03	7.40	-333	4,800	0.15	63,000	3,700	1,500	<500	<500	68,200
	09/30/03	7.27	-281	4,300	0.28	100,000	4,900	2,900	<1,000	1,000	108,800
	06/25/03	7.24	-165	5,000	0.16	63,000	3,600	2,600	<2,000	<2,000	69,200
	12/11/02	7.46	-285	7,600	0.37	170,000	6,100	5,100	<2,500	<2,500	181,200
MW-8	03/13/06	NA	-254	1,450	0.20	9.7	34	110	40	490	683.7
	09/29/05	6.78	-289	2,400	0.24	<5.0	41	300	69	210	620
	03/31/05	7.02	-270	1,150	0.23	<10	10	150	440	520	1,120
	12/17/04	6.91	-245	1,800	0.27	3.1	2,300	2,400	370	570	5,643.1
	09/09/04	6.83	-240	5,000	0.20	<1.0	310	2,100	260	950	3,620
	07/21/04	6.76	-265	1,470	0.55	<10	<10	120	30	760	910
	03/16/04	6.82	-310	860	0.22	<20	72	440	68	1,600	2,180
	12/08/03	7.06	-319	7,100	0.22	<10	150	1,500	200	1,500	3,350
	09/30/03	6.83	-370	3,700	0.22	<20	<20	170	46	1,600	1,816
	06/25/03	6.91	-190	4,100	0.15	<20	<20	<20	490	2,800	3,290
	12/11/02	7.51	-330	11,200	0.08	<20	29	1,600	150	120	1,899
MW-9	03/13/06	6.68	-301	2,200	0.20	30	120	390	42	100	682
	09/29/05	6.90	-283	4,500	0.16	<5.0	21	420	32	16	489
	03/31/05	6.92	-305	3,800	0.18	<1.0	7.7	250	16	72	345.7
	12/17/04	7.17	-286	6,000	0.31	<1.0	1.3	25	9.8	20	56.1
	09/09/04	7.04	-276	4,900	0.14	<1.0	3.2	29	5.0	6.1	43.3
	07/21/04	6.94	-332	6,500	0.26	<1.0	1.7	12	2.0	1.6	17.3
	03/16/04	6.85	-350	3,900	0.13	<1.0	<1.0	8.1	1.6	1.1	10.8
	12/08/03	7.32	-385	4,300	0.10	<0.5	1.6	46	12	8.6	68.2
	09/30/03	7.13	-343	4,700	0.23	<1.0	1.6	31	6.5	8.3	47.4
	06/25/03	6.96	-190	5,600	0.15	<1.0	1.2	13	2.5	3.2	19.9
	12/11/02	7.63	-305	5,000	0.20	<1.0	1.5	62	10	<1.0	73.5
MW-10	03/13/06	NA	-308	1,590	0.19	<5.0	<5.0	340	100	1,500	1,940
	09/29/05	7.07	103	4,600	0.12	<5.0	<5.0	66	79	290	435
	03/31/05	7.00	-328	1,540	0.19	<10	<10	4,500	660	4,600	9,760
	12/17/04	7.34	-295	6,100	0.27	<1.0	3.9	41	47	490	581.9
	09/09/04	7.21	-291	5,800	0.11	<10	<10	1,900	670	5,000	7,570
	07/21/04	7.14	-281	6,300	0.20	<1.0	1.9	950	570	5,600	7,121.9
	03/16/04	7.10	-370	3,100	0.11	<100	85	20,000	2,900	15,000	37,985
	12/08/03	7.36	-383	5,200	0.10	1.9	5.8	220	39	190	456.7
	09/30/03	7.34	-375	5,100	0.12	<1.0	1.7	840	150	980	1,971.7
	06/25/03	7.23	-192	5,800	0.15	1.0	2.3	3,500	600	3,800	7,903.3
	12/11/02	7.52	-311	6,700	0.11	100	76	47	8.4	43	274.4

ORP = Oxidation-Reduction Potential in millivolts  
COND = Conductivity measured in micromhos/cm<sup>2</sup>  
DO = Dissolved oxygen measured in milligrams per liter  
< 5.0 = not detected at or above method reporting limit

PCE = tetrachloroethene  
TCE = trichloroethene  
DCE = dichloroethene  
Soil excavation for Stoddard remediation conducted Oct-Nov 2002.  
Vapor extraction system operated onsite August 1990 to July 1991.



6407 FEET



**CITY OF MONTEREY  
DEPARTMENT OF PUBLIC WORKS**

Requested By: TR	Distance to Nearest Desalination Site  <b>ATTACHMENT F</b>
Drawn By: ckm	
Date: 03-07-2008	
Scale: As Shown	

OCC FILE A-1740

8/15/2006

TECHNICAL REPORT  
PETITION OF MR. CURTIS D. QUINONES  
SWRCB/OCC FILE A-1740

Prepared by:

Dennis Parfit, CEG 1223

Division of Water Quality

RE: SWRCB/OCC FILE A-1740, PETITION OF MR. CURTIS D. QUINONES

This report addresses the three issues raised by petitioner and outlined in the March 24, 2006 request for technical evaluation from the Water Board Office of Chief Counsel:

1. Beneficial Uses
2. Biodegradation
3. Environmental Risk

The specific questions posed by OCC are italicized and then followed by my response.

#### BACKGROUND

The subject site is located about 200 feet from the edge of Monterey Bay (Figure 1) in an area that was historically near the edge of an estuary. Circa 1880 or earlier, a broad dike (to accommodate a railroad and Del Monte Avenue) was constructed across the confluence of the estuary with the bay creating the 20-acre El Estero Lake. Presently, the lake functions to moderate storm water runoff from a 4.5 square mile ephemeral, urbanized watershed and is used as a source of irrigation water in the summer and fall for the adjacent park and cemetery.

A dry cleaning establishment operated at the site continuously for about 80 years. In January 1987, when workers were servicing a water main located on city property immediately adjacent to petitioner's site, a strong chemical odor (later confirmed to be PCE) was discovered in the sandy soil at a depth of about 18 inches. In 2001 five petroleum USTs were removed from the site. Soil borings were drilled and monitor wells were constructed to characterize the extent and magnitude of fugitive petroleum hydrocarbons and PCE. The data generated indicated an apparent second source area of PCE located near the center of the site about 70 feet south of the release discovered in 1987.

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The geology at the site is relatively simple; about a 22 to 24 foot thickness of fine-to-coarse sand with minor amounts of silt and clay overlying a wave cut terrace of non-water bearing bedrock. The hydrology however, is complex; over 80% of the aquifer is below mean sea level (msl), the water surface of the lake is maintained at an elevation of about 2 to 3 feet msl, the tidal range in Monterey Bay is about -1.5 feet msl to over 6 feet msl, and the water table at the site varies from about 3 feet msl in the fall to about 4.5 feet msl in the spring. With the available water level elevation and water quality data, it can be inferred that net groundwater flow at the site is to the bay and the lake in the winter and spring (due to groundwater mounding from infiltrating rainfall) and from the bay to the lake in the summer and fall (due in part to the withdrawal of about 13,000,000 gallons [40 acre feet] from the lake for landscape irrigation).

### BENEFICIAL USES

*The Petitioners argue that the Central Coast Water Board incorrectly identified the groundwater basin and beneficial uses that must be protected for groundwater beneath the Site. Petitioners also argue that groundwater meets the criteria for de-designation pursuant to State Water Board Resolution No. 88-63, which is incorporated as part of the Basin Plan.*

*What beneficial uses are designated for the groundwater at the Site?*

*"Groundwater throughout the Central Coastal Basin ... is suitable for agricultural water supply, municipal and domestic supply, and industrial use."<sup>1</sup>*

*Does groundwater meet the criteria set forth as exemptions in Resolution No. 88-63?*

Petitioner asserts that groundwater at the site is non-potable (saline-to-brackish) and meets the 3,000 ppm total dissolved solids (TDS) criteria of Resolution No. 88-63 exempting the groundwater at the site as a source of drinking water<sup>2</sup>. The record shows that the TDS<sup>3</sup> of groundwater sampled from site monitor wells varies spatially, seasonally, and historically and has ranged from a high of about 30,000 ppm<sup>4</sup> for

<sup>1</sup> Chapter 2, Section 1 (at page II-1) of the Central Coast Region Water Quality Control Plan.

<sup>2</sup> The Regional Board's response to the petition is silent on this issue. The record indicates the Regional Board granted an exemption in 1990 to a site located near the western shore of the lake. The site is the location of a former gas and electric plant and is contaminated with TPHg, TPHd, BTEX, PNA's, heavy metals, and oil.

<sup>3</sup> Most of the TDS data are derived from electrical conductivity (EC) measurements collected during well sampling events. TDS = EC \* 0.6

<sup>4</sup> Sea water has a TDS of about 34,000 ppm.

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groundwater from well MW-3 in 1987 to a low of about 400 ppm for groundwater from well MW-6 in 2004. The variability is caused by a combination of factors that include the geometry, character, and position of the aquifer between the bay and the lake, seasonal precipitation patterns, changing land use, and monitor well construction.

The data show that concentrations of TDS are typically lower in the spring and higher in the fall<sup>5</sup>. This seasonal pattern of fluctuating concentrations is inferred to be a response to the influx of winter rainfall and summer and fall seawater intrusion induced by withdrawals from the lake. The data also show a general decreasing TDS trend for both the maximum fall concentrations and minimum spring concentrations. This declining trend is inferred to be a response to the conversion of the site from commercial land use (with largely impermeable ground cover) to open space (and consequent unimpeded infiltration of rainfall) in 2001.

Monitor well construction, i.e., the portion of the aquifer screened by a well, is also a factor in the measured TDS concentrations. It has long been known that coastal aquifers exhibit strong salinity gradients due in large part to the difference in the densities of salt water and fresh water<sup>6</sup>. This phenomenon is apparent when evaluating data obtained from wells MW-4, MW-5, and MW-6 (see Figure 1). Wells MW-4 and MW-5 are screened from the bedrock contact to about four to five feet below the water table. Well MW-6 is screened from about five feet above the contact to near the water table. While these wells are equidistant from the bay, the TDS concentrations of groundwater samples from well MW-6 have consistently been less than 3,000 ppm (400 ppm to 2,600 ppm, mean = 1,300 ppm, n=15) while the TDS concentrations of groundwater samples from wells MW-4 and MW-5 have typically been three to five times greater (1,800 ppm to 12,000, mean = 4,700 ppm, n=27). These data indicate that the saltwater/fresh water transition zone is about eight to ten feet above the bedrock contact. Thus, at the location of these wells, groundwater in the upper half of the aquifer (about 4 to 12 feet bgs) qualifies as a source of drinking water per Resolution No. 88-63 while the groundwater below about 12 feet bgs does not.

Resolution No. 88-63 specifies that water sources which do not produce an average sustained yield of 200 gallons per day are exceptions to "Sources of Drinking Water." In this particular case, a domestic supply well (with a 20 foot sanitary seal) constructed at the site would likely be capable of producing greater than 500 gallons per day. However, the water produced would likely have a TDS concentration of 5,000 to 10,000 ppm.

<sup>5</sup> About 40 percent of the TDS measurements obtained in March, April, and May exceed 3,000 ppm (mean concentration = 3,200 ppm) while about 60 percent of the measurements obtained between July and December exceed that concentration (mean concentration = 3,300 ppm).

<sup>6</sup> eg. Walton, W.C., *Groundwater Resource Evaluation*, McGraw-Hill, San Francisco, pp. 194-200, 1970.  
Todd, D. K., *Groundwater Hydrology*, 2<sup>nd</sup> ed., John Wiley and Sons, New York, pp. 496-502, 1980.

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BIODEGRADATION

*The petitioners contend that the water quality objectives at the Site will be met within a reasonable period of time and specifically that applicable maximum contaminant levels will be met within approximately a decade due to biodegradation.*

*If no active remediation is undertaken, how soon will biodegradation or natural attenuation result in achievement of water quality objectives and other applicable water quality standards?*

Petitioners' estimate of the time that it will take to meet WQOs is based on water quality data obtained from the analyses of groundwater samples from wells MW-6 (the replacement well for MW-1) and MW-7. These wells, due to their overly long screen intervals (15 feet for MW-6 and MW-7 and 20 feet for MW-1), produce groundwater samples that are negatively biased; i.e., a vertical composite sample of groundwater. With regard to dissolved-phase PCE and degradation by-products (TCE, 1,2-DCE, and vinyl chloride) detected in groundwater samples from these wells, the reported concentrations are analogous to the above discussion of TDS concentrations in site groundwater. It can be reasonably inferred from the record that DNAPL PCE is present in the interval from the aquifer/bed rock contact to about five to six feet above the contact in the vicinity of these wells and that shallow groundwater present in the upper half of the aquifer likely meets WQOs<sup>7</sup>. While the data suggest that the DNAPL is not wide spread and of limited mass, moving groundwater that comes in contact with the DNAPL will contain concentrations of PCE greater than WQOs for decades if not a century or more.

*Are active remediation methods feasible at the Site?*

Soil excavation and removal of the upper foot or two of the bedrock surface in the areas around monitor wells MW-6 and MW-7 is the only feasible, short term, active remedial alternative.

*Would natural attenuation rather than active remediation comply with the requirements of Resolution No. 92-49?*

<sup>7</sup> Reported PCE concentrations in groundwater samples from well MW-1 (completed to bedrock with a 20 foot screen) before it was destroyed in 1991 and replaced with well MW-6, ranged from 23.5 mg/l to 85 mg/l (17% to 60% of PCE's solubility - about 140 mg/l); concentrations in samples from well MW-7 (completed to bedrock with a 15 foot screen) have ranged from 16 mg/l to 170 mg/l (14% to 120% of the PCE solubility). These samples are composites of clean shallow groundwater and deeper contaminated groundwater flowing through the DNAPL source zone. This dilution effect is particularly evident when one compares the reported PCB concentrations (<0.01 mg/l to 2 mg/l) in samples from well MW-6 (screened to 5 feet above the bedrock contact) with those for samples from MW-1. A groundwater sample obtained in November 2001 from a temporary well installation (SB-8, screened from about 5 feet to 15 feet bgs - about 5 feet above the bedrock contact) located about 40 feet north of MW-7, had a reported "very strong HVOC odor," a "sheen ... indicative of the presence of non-aqueous phase PCB," and a PCE concentration of 240 mg/l (Soil and Groundwater Investigation Report, RTD, June 5, 2002). Reported concentrations in excess of a chemical's solubility is an indication that a non-aqueous phase of the chemical was present in the sample.

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With regard to the drinking water beneficial use, yes. There is no reasonable expectation that groundwater beneath the site will ever be used as a source of drinking water<sup>8</sup>. The natural remediation alternative, regardless of the length of time needed to achieve drinking water standards, is the preferred option.

### ENVIRONMENTAL RISK

*The petitioners claim that waste remaining at the Site poses no environmental risk because, among other things, the waste is not migrating to adjacent water bodies.*

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*Could the remaining waste affect the beneficial uses of other waters?*

In April 1987, a soil gas survey was conducted to aid in directing future investigations relating to the discharge discovered in January<sup>9</sup>. The survey showed that detectable concentrations of PCE were present in soil gas from Monterey State Beach to the north to near the edge of the lake to the south. In December 1987, monitor well MW-2 was installed near the beach and well MW-3 was installed across Del Monte Avenue near the lake (see Figure 1). Analyses of groundwater samples obtained from MW-2 in September 1988 and in January and July 1990, had reported concentrations (0.6 ppb to less than 10 ppb) of PCE and/or its degradation products, TCE and 1,2-DCA. Analyses of eight groundwater samples obtained from MW-3 between December 1987 and February 1991 reported non-detect for all constituents. The two wells were abandoned in August 1991<sup>10</sup>.

The beneficial uses of El Estero Lake identified in the Central Coast Basin Plan are:

- Municipal<sup>11</sup>
- Groundwater recharge<sup>11</sup>
- Water contact recreation<sup>11</sup>
- Non-contact water recreation
- Cold freshwater habitat
- Warm freshwater habitat
- Spawning and reproduction and/or early habitat
- Commercial and sport fishing

<sup>8</sup> California Water Well Standards (Department of Water Resources Bulletin No.94-50) would restrict a domestic water supply well (with a minimum 20 foot sanitary seal) constructed at the site to producing the saline groundwater present in the lower two to four feet of the aquifer. A municipal supply well (with a minimum 50 foot sanitary seal) would be restricted to production from the non-water bearing bedrock.

<sup>9</sup> Soil Gas Survey, Vapor Cleaners Property, Monterey, California. Terratech, Inc. May 19, 1987.

<sup>10</sup> The record indicates that all involved in the investigation at that time agreed the wells served no useful purpose.

<sup>11</sup> The lake water was tested for total coliform and fecal coliform in November 1997. The analyses showed a total coliform value of 10,462 colonies per 100ml and that for fecal coliform at 823 colonies per 100ml. The drinking water standard for fecal coliform is less than one colony per 100ml. The source of the coliform is likely a combination of urban runoff and the local shore bird population. The City has posted signs adjacent to the lake banning water contact recreation - "No Swimming or Wading Allowed".

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The beneficial uses of the bay identified in the California Ocean Plan are:

- Industrial
- Water contact recreation
- Non-contact water recreation
- Aesthetic enjoyment
- Navigation
- Commercial and sport fishing
- Mariculture (the cultivation of marine organisms for food)
- Rare and endangered species
- Marine habitat
- Fish migration
- Fish spawning
- Shellfish harvesting

Of these beneficial uses, water contact recreation, commercial and sport fishing, mariculture, marine habitat, and shellfish harvesting in the bay could potentially be affected by the wastes remaining at the site. The USEPA National Ambient Water Quality Criteria, Saltwater Aquatic Life Protection, lowest observed effect levels for the constituents of concern are:

	ACUTE	CHRONIC
PCE	10,200 ppb	450 ppb
TCE	2,000 ppb	----
1,2-DCE	24,000 ppb	----
Vinyl chloride	----	----

---- level not listed.

*Is monitoring needed to ensure that the discharge does not affect other waters?*

As a part of the initial investigation in 1987, two monitoring wells were installed adjacent to the bay and the lake (MW 2 and MW 3 respectively). A 1991 quarterly report to the Regional Board stated that contaminant levels in MW 3 were non-detect and low levels (less than 10 ppb) were periodically detected in MW 2 after over three years of monitoring. Per the 1991 quarterly report recommendation, MW 2 and MW 3 were subsequently destroyed without objection by the Regional Board.

The findings of low and non-detect contaminant levels away from the immediate source area are not surprising. The inherent hydraulic dynamic caused by the unending ebb and flow of the tide creates a condition where groundwater flow to either the bay or the lake can be viewed as being metered, episodic pulses at those times of the cycle when the hydraulic gradient at the site outweighs the last high tide. Considering the site's history

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8/15/2006

and hydrology, current site conditions are likely at or near stasis and will remain so for the foreseeable future.

The rainfall that yearly percolates to the water table at the site creates a barrier to the vapor inhalation and dermal contact exposure pathway; the ingestion exposure pathway is non-existent. Any contaminant transport in the pulse groundwater discharges to either the bay or the lake can be inferred to occur over a diffuse area in the sublittoral zone at elevations less than about -5 feet msl thus negating any potential exposure of the beach-going public. Considering the absence of any plausible human exposure scenario, continued monitoring of the site would serve no useful purpose.



# California Regional Water Quality Control Board

## Central Coast Region



Linda S. Adams  
Secretary for  
Environmental Protection

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Arnold Schwarzenegger  
Governor

March 14, 2008

Mr. Curtis D. Quinones  
Vapor Cleaners, Inc.  
P. O. Box 1534  
Monterey, CA 93942-1534

City of Monterey  
Attn: Mr. Fred Meurer  
City Hall  
Monterey, CA 93940

Dear Responsible Parties:

### **SITE CLEANUP PROGRAM: FORMER VAPOR CLEANERS, 951 DEL MONTE AVENUE, MONTEREY, MONTEREY COUNTY – MARCH 20-21, 2008 BOARD MEETING**

This letter: 1) provides background information regarding communications between Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff, the City of Monterey (City), and Mr. Quinones; 2) responds to the City's and Mr. Quinones' requests for postponement of a pending Central Coast Water Board meeting agenda item; and 3) provides information regarding Central Coast Water Board meeting procedures. Based on available information, including materials provided by the City and Mr. Quinones, we have decided to bring this item to the Central Coast Water Board for its consideration at the March 20-21, 2008 meeting in Salinas.

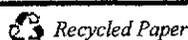
#### **1. Background**

In December 2006, the State Water Resources Control Board (State Water Board) issued Order WQ 2006-0010 (State Board Order). Along with other requirements, the State Board Order requires the Central Coast Water Board to consider using institutional controls as part of a site closure strategy (e.g., deed restrictions) at the cleanup site at 951 Del Monte Avenue in Monterey (Site). The City is the current Site owner.

#### Discussions with the City and Mr. Quinones, 2006 to 2007

The Central Coast Water Board's April 13, 2007 response letter to Assemblyman Abel Maldonado (copies sent to Mr. Quinones and City) stated that we originally scheduled to bring the State Board Order requirements to the July 6, 2007 Central Coast Water Board meeting. On April 20, 2007, Mr. Hans Herb (Mr. Quinones' attorney) notified our office that he would be unavailable to make the July 6, 2007 meeting because of a

*California Environmental Protection Agency*



Supplemental Sheet Item No. 25  
Attachment 3  
CCWB Ltr dtd 3/14/08

scheduled trial. For this reason, we rescheduled the item to the December 7, 2007 meeting.

From January 2007 to about July 2007, Karyn Steckling of my staff, tried to coordinate a conference call with various City staff to discuss whether the City would allow institutional controls on the Site. Because of scheduling conflicts and turnover in key City personnel, this call did not happen. The City responded by asking Central Coast Water Board staff to submit a written request outlining the information necessary, to aid in the City's response to the request.

We sent a letter on October 3, 2007, requiring the City provide its position regarding usage of institutional controls as part of a closure strategy. The October 3, 2007 letter required, via California Water Code Section 13267, the City consider (1) recording a deed restriction on the Site, (2) recording deed restrictions on other, adjacent City-owned properties, and (3) adopting a well prohibition zone ordinance. We planned to use the information regarding the City's position to prepare a Staff Report for the Central Coast Water Board's decision on the matter. Additionally, the October 3, 2008 letter (copied to Mr. Quinones) indicated that we planned to take the State Board Order requirements to the December 7, 2007 Central Coast Water Board meeting.

The City did not provide the required information in time to bring the issue to the Central Coast Water Board for the December 7, 2007 meeting, and the City requested postponing the issue until the March 20-21, 2008 meeting. In a letter dated October 23, 2007 to the City and Mr. Quinones, we agreed to postpone the item to the March 20-21, 2008 meeting, allowing additional time for the City to prepare a response.

#### City's February 29, 2008 letter

On March 3, 2008, we received the City's February 29, 2008 letter (City's February Letter). The City's February Letter explained that while the City has made progress towards a response to our October 3, 2007 letter, it will not be able to provide a response before the scheduled March 20-21, 2008 meeting. The City requested the Central Coast Water Board postpone this item to the July 11, 2008 meeting in Watsonville. The City's February Letter explained that City staff generally agrees that institutional controls would be appropriate for the Site, but City staff needs additional technical information before bringing the recommendation to the City Council for concurrence.

#### Further Discussions with the City and Mr. Quinones, March 2008

In a March 7, 2008 teleconference, my staff spoke with City staff and Mr. Quinones, discussing the City's and Mr. Quinones' request to postpone the item until the July meeting in Watsonville. Prior to the teleconference, the City and Mr. Quinones had reviewed the Staff Report on this issue, prepared for the March 20-21, 2008 meeting. My staff requested the City and Mr. Quinones 1) provide a rationale for again postponing the item, and 2) submit a list of tasks that each proposed to accomplish prior to the July Board meeting, should this latest postponement request be granted.

City's March 12, 2008 Letter

In response to our March 7 teleconference request, the City sent a letter on March 12, 2008 (City's March Letter). The City's March Letter reiterated the request to postpone the item to July, such that the City could perform additional technical work to support site closure using institutional controls. This letter did not include a detailed list of tasks to accomplish before July. In addition, the City's March Letter provided a response to information provided in the Staff Report.

Mr. Quinones' March 11, 2008 Letter (received March 12, 2008)

Mr. Quinones March 11, 2008 letter (Mr. Quinones' Letter) also requested postponement of the item to allow more time for him to prepare information to present to the Central Coast Water Board regarding institutional controls.

**2. Staff's Response to Postponement Request**

We will bring this item to the Central Coast Water Board for its consideration at the March 20-21, 2008 meeting in Salinas. We made this determination based on the following reasons:

- a. Central Coast Water Board's direction regarding this matter and other related matters will assist our staff and other parties in moving forward on this site. Further delays do not serve the interests of the City, Mr. Quinones, or the Central Coast Water Board. We will provide the Central Coast Water Board with copies of this letter, the City's February and March Letters, and Mr. Quinones' Letter. This allows the Board to be aware of the requests for delay, the supporting rationale, and related issues.
- b. The State Board Order requires the Central Coast Water Board only to "consider" institutional controls as a site closure strategy. The State Board Order does not require institutional controls as a closure strategy. The need for and type of institutional controls will be addressed in the future and will depend, in part, on the Central Coast Water Board's direction. We agree with the City that more technical information is needed for the City to proceed with implementing institutional controls. Board direction will provide some clarity in this area.
- c. Although City staff has not obtained the City Council's formal determination regarding this issue, the City did state in the February Letter, "City staff agree[s] that institutional controls are an appropriate basis for closure of this site..." This information alone will assist the Central Coast Water Board in considering what direction to provide on this matter.
- d. The Central Coast Water Board's decision regarding institutional controls will help the City Council evaluate institutional controls.
- e. The March item requests Central Coast Water Board direction on removing the municipal use designation for groundwater and use of institutional controls, not a decision regarding site closure.

- f. No matter what the Central Coast Water Board determines regarding removing the municipal use designation and/or usage of institutional controls, further characterization will be necessary at the Site.
- g. The City and Mr. Quinones will actually benefit by obtaining the Central Coast Water Board's position regarding both matters first because the Board's decision may better define the scope of further characterization. For example, if the Board directs staff to develop a Basin Plan amendment to remove the municipal use designation, this would likely reduce the extent of characterization needed.
- h. As the Background Section indicates above, Mr. Quinones and the City have known that we have been required to bring these matters to the Central Coast Water Board since the State Board issued the State Board Order on December 13, 2006. Furthermore, Mr. Quinones and the City have known that we would bring both matters to the Board at the March 20-21, 2008 meeting since our October 13, 2007 letter. We do not agree with the City or Mr. Quinones that additional time is needed before the Central Coast Water Board considers both matters.

### **3. Board Meeting Information**

#### Written Response

We will include the City's February and March Letters, and Mr. Quinones' Letter in a supplemental submission to the Central Coast Water Board members. If either Mr. Quinones or the City want to provide additional written responses, you must submit them to this office **by noon on March 18, 2008**, in order for us to have time to provide your written response to the Board Members at the meeting (as stated in the Conduct for Meeting and Hearing Procedures portion of the March 20-21, 2008 agenda). Additionally, you must submit the full report referenced as Attachment C (October 28, 2005 Remediation Testing and Design Report, page 3) in the City's March Letter. This report has not been previously submitted to the Central Coast Water Board, and is not currently part of the record.

#### Board Meeting Written and Verbal Comments

Additionally, you may provide verbal comments at the meeting in Salinas on March 20-21, 2008. If you decide to provide verbal comments at the meeting, the Central Coast Water Board requests that you also submit those comments in writing beforehand. You must submit these written comments to us **as soon as possible**. The Central Coast Water Board allows speakers three minutes for verbal comments. If you would like to request additional time for yourself or a representative, you must submit your request to us **as soon as possible**. The Central Coast Water Board Chair decides whether to

grant additional time requests, and we will let you know if your request has been approved.

If you have questions, please contact: **Karyn Steckling at (805) 542-4642 or ksteckling@waterboards.ca.gov** or Sheila Soderberg at (805) 549-3592.

Sincerely,



Roger W. Briggs  
Executive Officer

S:\Site Cleanup Program\Regulated Sites\Monterey Co\City of Monterey\951 Del Monte - Vapor Cleaner\Correspondence\City Response letter 03.13.08.doc

cc:

Mr. Hans W. Herb, Law Offices of Hans W. Herb  
Mr. Robert Giattino, Remediation Risk Management, Inc.  
Mr. Howard Whitney, Remediation Testing and Design, Inc.  
Mr. Tim Reeves, City of Monterey  
Mr. W.E. Reichmuth, City of Monterey Department of Public Works  
Mr. Mr. Rick Marvin, City of Monterey Housing and Property Management  
Mr. Cory Welch, Monterey County Health Department  
Ms. Elizabeth Karis, Monterey County Health Department  
Ms. Kathy Thomasberg, Monterey County Water Resources Agency  
Ms. Frances McChesney, Office of Chief Counsel, State Water Board