

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Ralph Lambert)  
MEETING DATE: April 13, 2016

**ITEM:** 10

**SUBJECT:** **Prosperity Cleaners, Marinwood Plaza, 187 Marinwood Avenue, San Rafael, Marin County** – Status Report on Draft Remedial Action Plan and Proposed Response

**CHRONOLOGY:** February 2014 – Site Cleanup Requirements adopted  
August 2014 – Site Cleanup Requirements amended

**DISCUSSION:** The purpose of this status report is to seek Board feedback on the proposed response to the draft Remedial Action Plan (RAP) submitted for this dry cleaner spill site. The site's contamination and the draft RAP have generated significant community interest, which warrants this approach.

*Background:* The Prosperity Cleaners site is located in the Marinwood Plaza shopping center in Marinwood, north of San Rafael. Releases of tetrachloroethene (PCE) from past dry cleaning operations have impacted soil, soil vapor, and groundwater. As a result of interim mitigation measures, human and ecological contaminant exposure is being controlled to acceptable risk levels.

Board staff has been overseeing site investigation and cleanup for several years. To guide necessary work, the Board adopted a site cleanup requirements order in early 2014 and amended that order later that year. Site investigations have identified two PCE "hot spots": one under the dry cleaner building and another at the eastern edge of the site. A groundwater plume containing elevated levels of PCE extends over 1,900 feet east of the site, under Highway 101 and across the Silveira Ranch. A soil vapor plume surrounds the source areas, extending toward but not reaching residences in the nearby Casa Marinwood complex.

The current landowner, Marinwood Plaza, LLC, has implemented interim cleanup and mitigation actions at the site, including in-situ treatment of the eastern hot spot and wellhead treatment for an impacted supply well at Silveira Ranch. Cleanup beneath the dry cleaner building has been delayed because of the continued use of the existing building and tight soil conditions. Unfinished work includes:

- Cleanup of the dry cleaner building hot spot
- Vapor intrusion mitigation onsite
- Full delineation of the offsite groundwater plume
- Groundwater cleanup to meet the 2014 order's cleanup levels
- Soil vapor and groundwater monitoring to document cleanup effectiveness

*Draft RAP:* Marinwood Plaza, LLC, submitted a draft RAP on December 29, 2015, in compliance with the submittal deadline in Task 6 in the 2014 order. Task 6 required submittal of an acceptable draft RAP by January 1, 2016, and specified the evaluations and recommendations to be included in the draft RAP. The draft RAP as submitted proposes demolition of the building containing the former dry cleaner and excavation of the underlying impacted soils that act as a continuing source of pollution. Cut-off trenches would be installed along several utility lines to block soil vapor travel along preferential pathways. The extent of the offsite groundwater plume would be delineated. Monitored natural attenuation (MNA) is proposed to address residual soil vapor and groundwater contamination following source removal; this involves reliance on natural degradation processes to remove these residuals. Additional soil vapor wells and groundwater monitoring wells are proposed to verify the effectiveness of source removal and MNA. Lastly, vented vapor barriers are proposed for future new construction to prevent vapor intrusion if monitoring at the time indicates they are needed.

We conclude that the draft RAP contains several necessary elements consistent with Task 6 requirements: proposals for soil excavation beneath the dry cleaner building, vapor intrusion mitigation measures, offsite groundwater plume delineation, and future monitoring. However, the draft RAP does not fully comply with Task 6 and contain all elements described in that task. Notably, it is deficient in that it does not evaluate alternative approaches to groundwater cleanup, and it fails to provide evidence that MNA will be effective in protecting human health and restoring the beneficial uses of the groundwater in a reasonable time.

*Stakeholder Input on Draft RAP:* Due to the high level of community interest in this site, Board staff has provided multiple opportunities for public comment on the draft RAP. We circulated a fact sheet on the draft RAP to Marinwood residents and other interested parties and provided a 38-day public comment period that ended on February 22. We also held a February 10 community meeting in Marinwood to inform residents about the draft RAP and solicit comments.

We received comments from 33 individuals including Marin County Supervisor Damon Connolly, nearby residents, and Silveira Ranch representatives (Appendix A). The comments raised several issues: adequacy of the proposed soil excavation, adequacy of the proposed MNA approach to restoring groundwater, health risk to nearby residents from soil vapors, and whether perceived deficiencies in the draft RAP warrant its rejection. Our responses to those comments are included in Appendix B.

*Staff Response to Draft RAP:* The staff has several options for responding to a draft RAP: it can approve it, reject it, or partially-approve it. We do not plan to *approve* this RAP due to the above-noted deficiencies. We could *reject* the RAP due to these deficiencies. However, RAP rejection would result in delays in implementing necessary cleanup proposals included in the RAP. According to Task 7 of the order, final remedial actions proposed in the RAP should not start until after Board approval. Task 4A of the order allows the Board to require more interim remedial actions but only if there is a current or imminent threat to human health. Based on



**Appendix A**

**COMMENTS RECEIVED**

## COMMENT CARD

Marinwood Plaza Remedial Action Plan 2/10/16

Name Wayka Bartolacelli

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

Email Waykamoves@comcast.net

Comments on the Remedial Action Plan \_\_\_\_\_

Question: Will the sewer  
Laterals or sewer main  
be at all affected or  
be involved in the remediation  
or cleanup process?  
ie. will they need to be  
replaced?

Continue on back as needed

ATTN: RALPH LAMBERT

**Bill McNicholas**

---

**From:** "Nextdoor Lucas Valley/Marinwood" <reply@rs.email.nextdoor.com>  
**Date:** Thursday, February 18, 2016 10:11 AM  
**To:** <billmcn@pacbell.net>  
**Subject:** Re: Marinwood RAP

 Marian Blanton, Lucas Valley/Marinwood

Effects of toxic plume reaching Casa Marinwood should be addressed for any proposed corrective action, as well as possibility that plume might spread further toward other residences to the north of Marinwood Plaza, Mr. Lambert. Health of residents as well as property values in a heavily inhabited section are also relevant factors. We are disappointed that no mention has been made in Report suggesting needed action to clean up widespread toxicity in our area.

Please look at FACTS on the ground, again.

Original post by Charles Bergeman from Lucas Valley/Marinwood (10 replies):

I just received an email from Supervisor Damon Conolly regarding the proposed plan to cleanup the hazardous waste from the cleaners at Marinwood Plaza.

I must say, I am dissapointed in the comments...

Feb 17 in Crime & Safety to Lucas Valley/Marinwood

[View or reply](#)

[Thank](#) · [Private message](#)

Not interested in following this discussion?

You received this update because you replied or thanked this post. [Stop receiving immediate updates on this post](#)

You can also reply to this email or use Nextdoor for [iPhone](#) or [Android](#)

This message is intended for billmcn@pacbell.net.  
[Unsubscribe](#) or [adjust your email settings](#)

Nextdoor, 760 Market Street, Suite 300, San Francisco, CA 94102

**From:** [Charles Bergeman](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Prosperity Cleaners Toxic Waste Cleanup  
**Date:** Sunday, February 21, 2016 9:04:36 PM

---

I am a resident of Casa Marinwood. I have lived here for close to 18 years. I have raised my child here, living in close proximity to the Cleaners.

I believe they should address the plume encroaching on Casa Marinwood to the west of the plaza with equal vigilance to the effort to the east. The longer it takes to address the encroachment of the plume toward Casa Marinwood, the greater possibility that our homes will be at risk.

In addition, as long as this remains an open issue, our property values will be impacted, and we are liable for disclosure of the issue prior to sale of our homes.

This, in addition to the potential health risk, posed by the plume, contribute to a growing concern by the residents of Casa Marinwood. We can't let this issue languish any longer in debate, we want to see a plan that addresses the concerns of the residents of Casa Marinwood.

I reject the current plan as it has no defined start date, nor does it satisfactorily address the area to the west of the cleaners.

Please consider this request in evaluating any new plan submitted to address the cleanup of Prosperity Cleaners Toxic Waste.

Regards,  
Charles

Charles Bergeman  
107 Grande Paseo  
San Rafael, CA 94903

**From:** [Bill Blackburn](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert_Ralph@Waterboards)  
**Subject:** Marinwood Plaza  
**Date:** Wednesday, February 17, 2016 8:39:48 AM  
**Attachments:** [image001.png](#)

---

Hi, we wish to add our concerns regarding the RAP submitted by the owners of Marinwood Plaza. It is obvious to us that they do not have the best interests of the residents of Casa Marinwood at heart. We ask that the plan be amended to address the immediate health hazard present due to the toxic plume created by the former cleaners. We also ask that the contaminated soil be removed to the depth of 35 feet and that the work commence as soon as possible. Thank you for your time and attention to this extremely important health issue. My family has lived at 17 Grande Paseo in Casa Marinwood for the past 21 years and would like to see our community be a healthy and desirable place for families to thrive.

Bill Blackburn  
Dixie Terra Linda Little League  
Board Director  
Player Agent  
Sponsorship Chair  
415-302-0197





CALIFORNIA REGIONAL WATER  
FEB 08 2016  
QUALITY CONTROL BOARD

**From:** mgblanton <mgblanton@saber.net>

**Date:** January 21, 2016 4:30:51 PM PST

**To:**

reply+GQ2TOMZUHEZF64DSN5SHKY3UNFXW4X2QJ5JVIXZSGA2TKNJRG4Y

Q====@marinwood.nextdoor.com

**Subject: Toxic waste at Prosperity Cleaners Site, Marinwood Plaza**

Let's not follow in footsteps of Flint, Michigan, "kicking the can down the road" on cleanup action for environment in this location until future developer must pay for necessary action before being given permission to develop the old site. How many years will people living in situ face unknown health consequences of breathing toxic air? And do we know that Marinwood Mkt., the first new commercial operation in that location for 10 years, will not ultimately fail because our government refused to solve the problem with public funding?

Governor Brown is presently negotiating necessary spending/saving actions at the State level for the next fiscal period. CSD has the responsibility to weigh in on local allocations. Let's clean up toxic waste in Marinwood Plaza, now. Ours is one of the wealthiest counties in the U.S. There has to be a County fiscal solution, here.

Thanks for listening to someone so old she won't be around to see the Marinwood Plaza restored.

Marian Blanton *MKB*  
155 Roundtree Blvd.  
San Rafael, CA 94903

(415) 479-7446

(Unable to send above message to email address below, listed in water board information for citizen input re: toxic waste in Marinwood Plaza posted on neighborhood email site. Please find a way to forward my message for Feb. meeting. Thanks)

[Ralph.Lambert@waterboards.ca.gov](mailto:Ralph.Lambert@waterboards.ca.gov).

[Ralph.Lambert@waterboards.ca.gov](mailto:Ralph.Lambert@waterboards.ca.gov).

ATTN: *rlambert@waterboards.ca.org*  
*\* bwolfe*

**From:** [Bill McNicholas](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Qustion and Comment Submission  
**Date:** Thursday, February 18, 2016 11:08:01 AM

---

Ralph,

The following is comment and question from Marion Blanton, Round Tree, Marinwood for submission for the Prosperity Cleaners RAP comments. Please forward reply to me and I will forward to her through NextDoor.

Thanks,

Bill McNicholas  
415-491-4102  
(F)415-491-1556  
[billmcn@pacbell.net](mailto:billmcn@pacbell.net)

 [Marian Blanton](#), [Lucas Valley/Marinwood](#)

Effects of toxic plume reaching Casa Marinwood should be addressed for any proposed corrective action, as well as possibility that plume might spread further toward other residences to the north of Marinwood Plaza, Mr. Lambert. Health of residents as well as property values in a heavily inhabited section are also relevant factors. We are disappointed that no mention has been made in Report suggesting needed action to clean up widespread toxicity in our area.

Please look at FACTS on the ground, again.

## COMMENT CARD

Marinwood Plaza Remedial Action Plan 2/10/16

Name Gina Catena

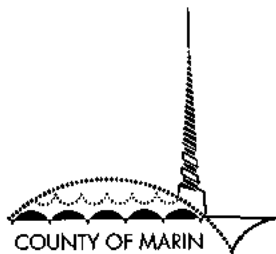
Affiliation Marinwood Resident

Address 26 Grande Paseo  
San Rafael CA 94903

Email gina.cat@gmail.com

### Comments on the Remedial Action Plan

soil  
Given the movement of PLEES  
and ground water contamination,  
please also test water  
and soil samples further  
west - past Casa Marinwood,  
and also north & south of  
the shopping center.  
Continue on back as needed Thank you.



## BOARD OF SUPERVISORS

February 10, 2016

2<sup>ND</sup> VICE PRESIDENT  
Damon Connolly  
1<sup>ST</sup> DISTRICT

Katie Rice  
2<sup>ND</sup> DISTRICT

Kathrin Sears  
3<sup>RD</sup> DISTRICT

PRESIDENT  
Steve Kinsey  
4<sup>TH</sup> DISTRICT

VICE PRESIDENT  
Judy Arnold  
5<sup>TH</sup> DISTRICT

Matthew H. Hymel  
COUNTY ADMINISTRATOR  
CLERK OF THE BOARD

Marin County Civic Center  
3501 Civic Center Drive  
Suite 329  
San Rafael, CA 94903  
415 473 7331 T  
415 473 3645 F  
415 473 6172 TTY  
[www.marincounty.org/bos](http://www.marincounty.org/bos)

Ralph Lambert  
California Regional Water Quality Control Board, San Francisco Bay Region  
1515 Clay St., Suite 1400  
Oakland, CA 94612

### RE: Comments on RAP Proposal for Marinwood Plaza

Please accept these comments in connection with the California Regional Water Quality Control Board's (Regional Water Board) review of the Remedial Action Plan (RAP) submitted by Geologica dated December 29, 2015.

The issue of PCE left behind by the drycleaner formerly located at Marinwood Plaza has drawn on for an unacceptable period of time given the health and safety risks to the community. Reports dating back to 2007 have shown elevated concentrations of PCE around the property, but it was not until February, 2014 that the Regional Water Board issued an order demanding a cleanup plan on a timeline independent from the redevelopment of the site. Since that time, further reports have provided additional information on the scale and extent of contamination, both in terms of soil vapor to the west of Marinwood Plaza towards the Casa Marinwood neighborhood, and in terms of groundwater contamination at Silveira Ranch on the eastern side of Highway 101.

I am pleased that we are now at a point in the process where we are reviewing a proposed plan for cleanup, and I appreciate that the Regional Water Board is seeking public comment, including holding a hearing in the Marinwood area.

The cleanup order issued in February, 2014 calls for a Remediation Action Plan for *"eliminating unacceptable threats to human health and restoring beneficial uses of water in a reasonable time, with 'reasonable time' based on the severity of impact to the beneficial use."*

It goes on to specifically identify the elements that must be covered in the RAP, including recommended final remediation action; recommended final cleanup levels; feasibility of alternative measures for final remedial cleanup; and implementation tasks and time schedules.

My chief concerns that must be addressed in any final RAP accepted by the Regional Water Board are that:

1. The RAP as submitted does not include a concrete and appropriately urgent timeline; any final RAP must contain identifiable deadlines for each step of the process and **cannot be tied to the redevelopment of the site**
2. The plan must provide a lasting solution that fully addresses the source of contamination
3. The cleanup levels must be set to a stringent standard for commercial and residential safety
4. The groundwater treatment at Silveira Ranch must meet the environmental and health and safety standards required of that property

**1.) Concrete Timeline for Work**

The greatest frustration throughout this process has been the years of inaction and incomplete action. In the meantime, the risks and collateral damage to the community have been unacceptable and undefined.

The most important aspect of any approved RAP is that cleanup of the source of contamination is fully completed in a timely manner. Tying any form of action to redevelopment is unacceptable to the community from a health and safety perspective. Any cleanup plan must have a concrete timeframe to go along with any timelines for specific actions.

**2.) Full Excavation Treating the Entire Source of Contamination**

Excavation of the source of the contamination seems to be the most effective approach to a complete and timely correction of the issue. However I am concerned that the proposed excavation may not account for the entirety of the source of contamination.

Figure 17 shows the proposed area for excavation –this appears not to include the “Eastern Hot Spot,” an area where it is believed that PCE from the former drycleaner was disposed of that has consistently shown dramatically elevated levels of PCE since it was first detected and report. I question whether this cleanup process can be fully completed without excavating this soil that has consistently shown high levels of contamination.

**3.) Ensuring Stringent Cleanup Levels**

It is important that the cleanup levels and standards called for in the proposed plan, as identified in Table 8, are well-established and scientifically verified to be safe for both residential and commercial exposure.

**4.) Groundwater at Silveira Ranch is Safe for All Uses on An Appropriate Timelines**

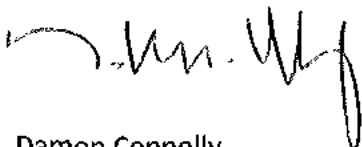
It is important that the issue of groundwater contamination at Silveira Ranch is addressed in a manner that will ensure that groundwater is fit for all uses required by the ranch and the property in a timely manner.

The proposal of “Monitored Natural Attenuation” is based on treating the source of the contamination –with excavation, per this proposal –and then monitoring the water in the future to ensure that the concentration of PCE in the water is reduced over time.

Given that the plan states that *“additional groundwater quality investigation is required to delineate the northern and eastern extent of VOC impacts to groundwater,”* the extent to which the Silveira groundwater is affected is still unknown. The plan also acknowledges that MNA will have *“low short term effectiveness.”* I question whether MNA is an adequate solution that would provide results on a timeline that fits within the needs of the Silveira Ranch and property.

Thank you for your consideration of these comments. I look forward to listening to further comments from members of the public at the February 10, 2016 public hearing, and continuing to work with you to get this issue resolved.

Sincerely,



Damon Connolly

February 12, 2016

Mr. Bruce Wolfe  
Executive Officer  
brucewolfe@waterboards.ca.org  
SFBRWQCB  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

**COMMENTS: REMEDIAL ACTION PLAN FORMER PROSPERITY CLEANERS  
MARINWOOD PLAZA SHOPPING CENTER 187 MARINWOOD AVENUE  
CASE #21S0053**

Mr. Wolfe:

I am providing specific and general comments on the Remedial Action Plan (RAP) to be submitted by Marinwood Plaza, LLC (discharger) to the San Francisco Bay Regional Water Quality Control Board (Board) as required by Board Order R2-2014-0007 (Order). These comments are being submitted on behalf of the residents of the Marinwood community and as a member of the Save Marinwood Plaza Now Oversight Committee. The comments below are focused on the soil and soil vapor remedial actions proposed in the RAP. We have submitted additional comments focused on groundwater issues in a separate letter.

- **Pg 24, Section 5.4, Risk Evaluation for Onsite and Offsite Receptors-** The Order requires a risk evaluation not a "conceptual" risk evaluation. No detailed risk evaluation has been made to show the potential impacts to residents of Casa Marinwood, Silvera Ranch, potential ecological receptors or future residents of the proposed redevelopment of the Site. The RAP is deficient because it does not comply with the requirements of the Order.
- **Pg 28, Section 6.4, Potential Remedial Actions for Soils - Subsection: Excavation and Off-Site Disposal:** Excavation and off-site disposal would rapidly reduce VOCs and soil vapors. This approach should be applied to source area and at the eastern hot spot. Excavation at the source should include the liquor store area. It would rapidly reduce VOCs and reduce the chances for further spread of VOCs. It should not be predicated on site redevelopment. Deed restrictions should be placed on the Marinwood Plaza property to advise new owners and tenants of the pollution issue unless the site is completely remediated.
- **Pg 34, Section 7.3, Recommended Final Soil Vapor/Indoor Air Remedial Actions:** MNA program for soil vapors proposed after VOC source reduction measures. MNA is not an appropriate strategy to remediate PCE soil vapors. PCE soils vapors are resistant to natural breakdown (Cleaner & Launderer August 2011). Reduction of PCE Soil Vapors using MNA has low effectiveness. The last cleaners closed in 2005, 10 years ago, and soil vapors still exist. How long will it take to remediate? Soil vapor extraction (SVE) could dramatically reduce the concentrations of soil vapors at the soil vapor sites. Migration of soil vapors are proposed to be addressed with utility corridor cutoff barriers on the Eastern side of Marinwood Ave. This will reduce migration on the eastern side of Marinwood Ave but not the western side where no utility cutoff barriers are proposed. Then MNA is proposed to continue further remediation on both the eastern and western sides of Marinwood Ave.
- **Pg 37, Section 8.1.1.3 Soil Excavation Procedures:** VOC contamination at the Site based on soil and groundwater data, the depth of excavation needs to be deeper than the 15' proposed in the RAP. VOCs are present in deeper soil and groundwater that will off-gas soil vapors and continue to contaminate groundwater. Vapor monitoring wells need to be situated wherever residential units are proposed for future development.

### **Problems with using MNA alone to remediate non-excavated areas of the Sites:**

- PCE and its daughter compounds are resistant to natural breakdown due to the aerobic and pH neutral soil and water chemistry at the Site.
- Laboratory data reported for groundwater samples collected at the Silveira property show that PCE is not degrading beyond DCE.
- Chlorinated VOCs volatilize to vapor very easily.
- VOC vapors can travel long distances through soil, especially along preferential pathways such as the backfill of underground utility trenches.
- Natural degradation of VOCs does not readily occur in aerobic soils like those at the Site. Typically chemical oxidizing agents must be added to chemically degrade VOCs. Consequently, the MNA remedial strategy for elimination of groundwater contamination proposed in the RAP is not appropriate because it will not be effective. The RAP does not propose an alternative approach in the event the MNA approach fails.
- The extent of the groundwater contaminant plume east of the Site has not been delineated, consequently, the discharger has not completed the remedial investigation (RI) tasks (Task 2 and Task 3) outlined in the Order. Because the RAP is based on the results of the RI, the RAP submitted by the discharger is incomplete and should be rejected.
- Dry cleaner operations began at the Site in approximately 1965 and ended in 2005. MNA has not remediated the contaminated areas in approximately 50+ years? How long will it take; hundreds of years?

### **SUMMARY:**

The RAP should be rejected for the following reasons:

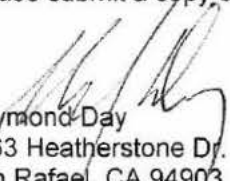
1. MNA alone will not work for soil vapors after proposed source excavation. The Site was first used by a dry cleaner 50 years ago and high concentrations of VOCs are still present. MNA has not worked.
2. Site Remediation Cleanup Levels are targeted for Commercial/Industrial use while the site is being marketed as a Redevelopment Area clearly for housing. The RAP should meet the residential Cleanup Levels described in the Order.
3. Remediation needs to be done at all spots exceeding residential standards;
4. The RAP does not meet requirements of the Order, Task 6d of the Order. The Order provides that the RAP feasibility study meet EPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA.
5. There is an inadequate extent and depth(15') of excavation proposed at the VOC source areas.
6. The RAP essentially leaves remediation to future owners by doing incomplete and inadequate cleanup of contaminants and does not meet the intent of the Order;
7. The potential health risk from soil vapors to residents of Casa Marinwood is understated due to inadequate investigation and an incomplete risk evaluation.
8. Deed restrictions need to be placed on the Site to notify residents, new owners and commercial users of the pollution and remediation measures that need to be accomplished if full remediation is not completed.
9. The timeline for remediation should commence with acceptance of the RAP to comply with the Order. Unnecessary delay will continue to put residents and other receptors at risk.

### **References:**

1. EPA-Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water
2. Cleaner and Launderer August 2011- The Unbalanced Cost of PCE Spills
3. USEPA MNA Directive 2012

4. The Interstate Technology and Regulatory Council( ITRC 2007)
5. EPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA 1988
6. San Francisco Bay Regional Water Quality Control Board Order R2-2014-007
7. EPA- A Citizen's Guide to Dry Cleaner Cleanup. August 2011

Please submit a copy of these comments to the Board for their review. Thank you.

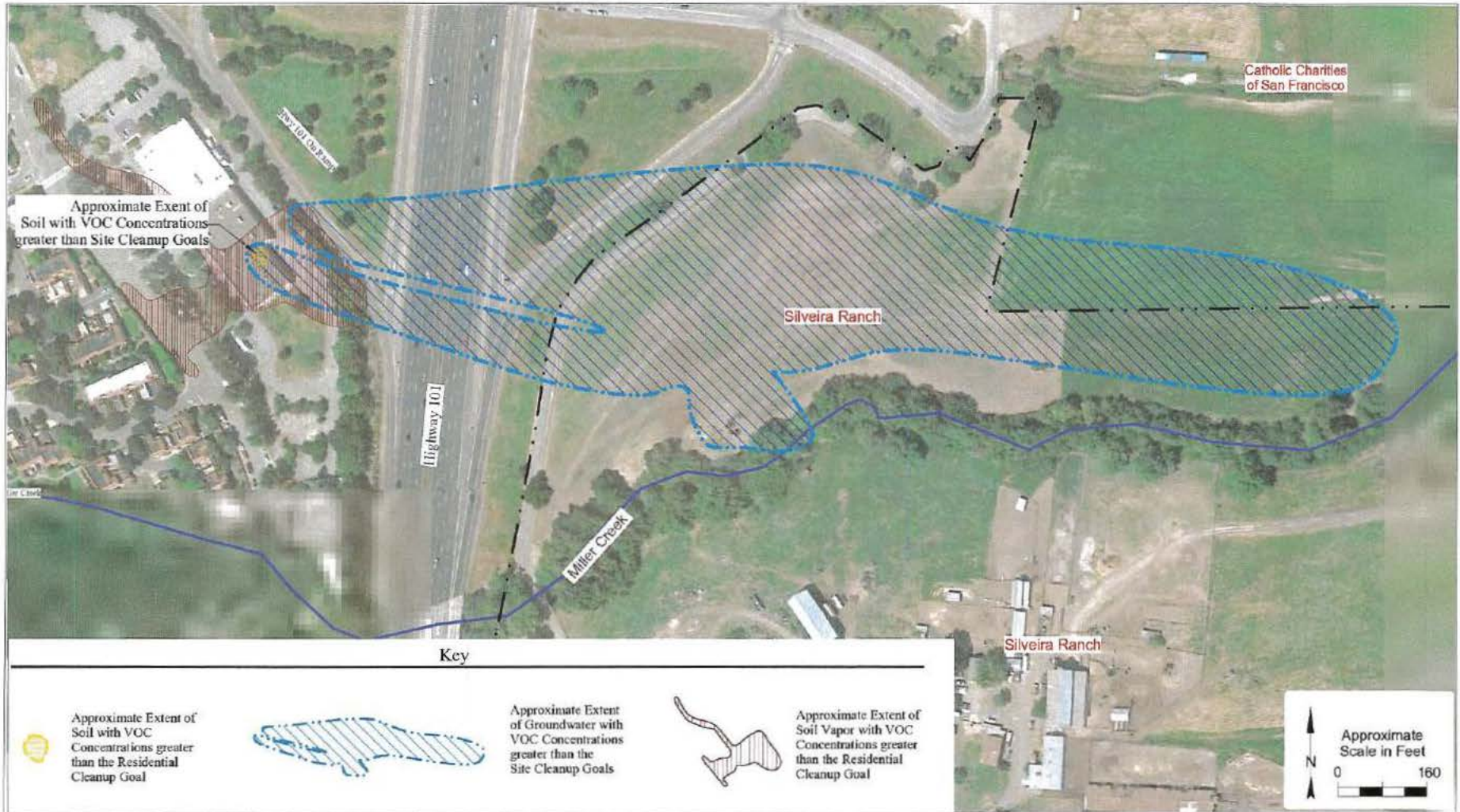


Raymond Day  
2663 Heatherstone Dr.  
San Rafael, CA 94903  
Member, Save Marinwood Plaza Now  
Oversight Committee



**MARINWOOD PLAZA PROSPERITY CLEANERS  
REMEDIATION ACTION PLAN (RAP)  
PUBLIC COMMENT MEETING**

**February 10, 7:30-9:30PM  
Mary E. Silveira School Multipurpose Room  
375 Blackstone Dr., San Rafael**



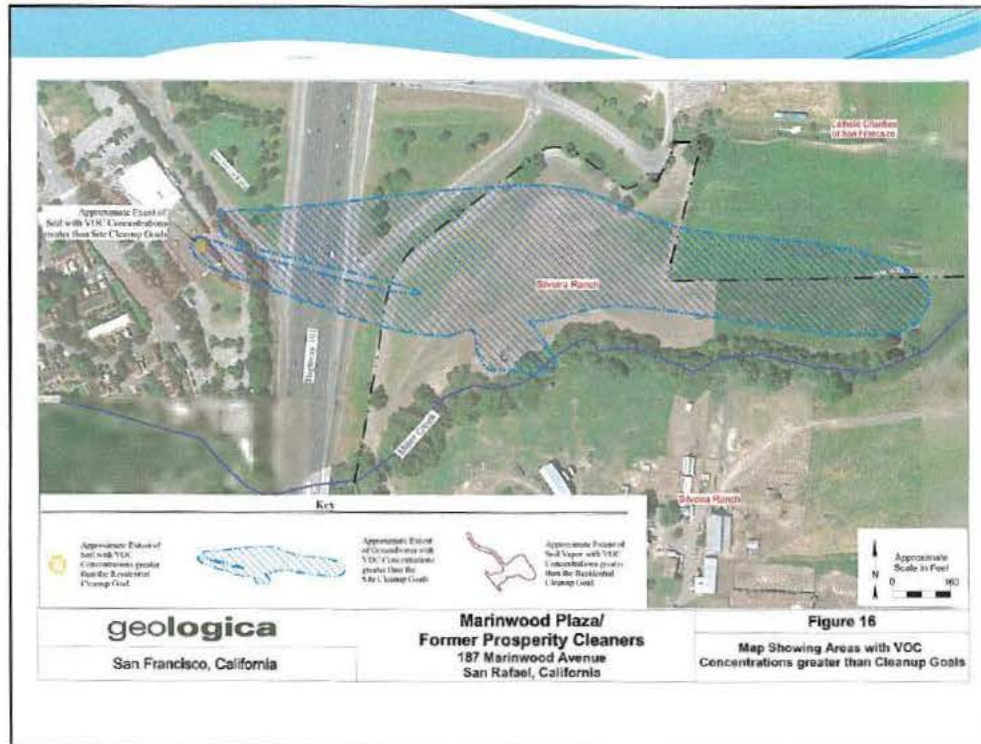
**geologica**

San Francisco, California

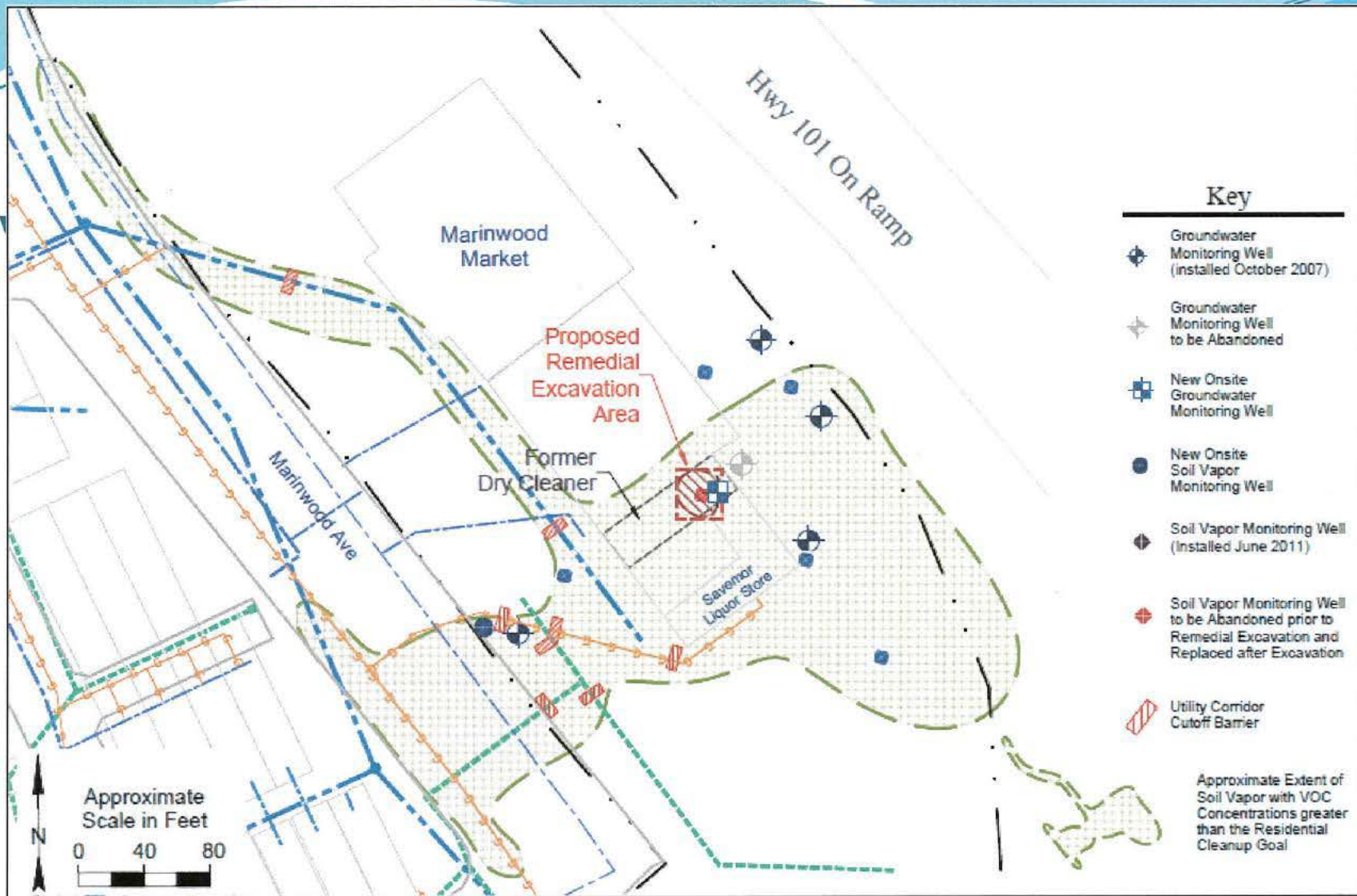
**Marinwood Plaza/  
Former Prosperity Cleaners**  
187 Marinwood Avenue  
San Rafael, California

**Figure 16**

**Map Showing Areas with VOC  
Concentrations greater than Cleanup Goals**



There are absolutely no data showing that the plume doesn't extend considerably farther than shown on the map. It is typical for contaminant plumes from dry cleaners to travel long distances in groundwater. The documented extent of the plume is approximately 2,000 feet from the dry cleaner.



**geologica**

San Francisco, California

**Marinwood Plaza/  
Former Prosperity Cleaners**  
187 Marinwood Avenue  
San Rafael, California

**Figure 17**

**Map Showing Soil and  
Soil Vapor Remedial Action Areas**



## **Volatile Organic Compounds(VOC) SOIL VAPORS**

- **MNA- Monitored Natural Attenuation**
  - Relies on natural processes to achieve site-specific Cleanup Levels in the Order. Marinwood LLC (discharger) has proposed using this approach after excavation and treatment of an area where the cleaners was located and along with a series of cut-off barriers along utility lines on either side of Marinwood Ave.
  - MNA is a slow process and is considered a passive approach to remediation.
  - Dry cleaners had operated from approx 1965 to 2005, approx 40 yrs . The Site was abandoned for 10 yrs. A total of 50 years has passed. Has MNA worked?

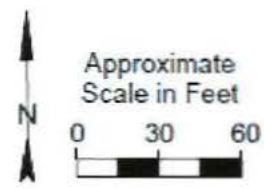


**Key**

- Groundwater Monitoring Well (installed October 2007)
- Soil Vapor Monitoring Well (Installed June 2011)
- 34 Analyte concentration in soil vapor micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )
- 410 Analyte concentration greater than Site Cleanup Level

Only analytes detected in one or more or more soil vapor samples posted

Constituent	Residential Site Cleanup Levels
Tetrachloroethene (PCE)	210
Trichloroethene (TCE)	300
cis-1,2-dichloroethene (cis-DCE)	3,700



**geologica**

Oakland, California

**Marinwood Plaza/  
Former Prosperity Cleaners**  
187 Marinwood Avenue  
San Rafael, California

**Figure A-10**  
VOC Detections in  
Soil Vapor Monitoring Wells  
November 2015

SVM-1	
PCE	410
Benzene	5.6
n-Hexane	130
n-Heptane	85
Chloroform	17

SVM-2	
PCE	780,000
TCE	31,000
cis-DCE	200,000
trans-DCE	8,400

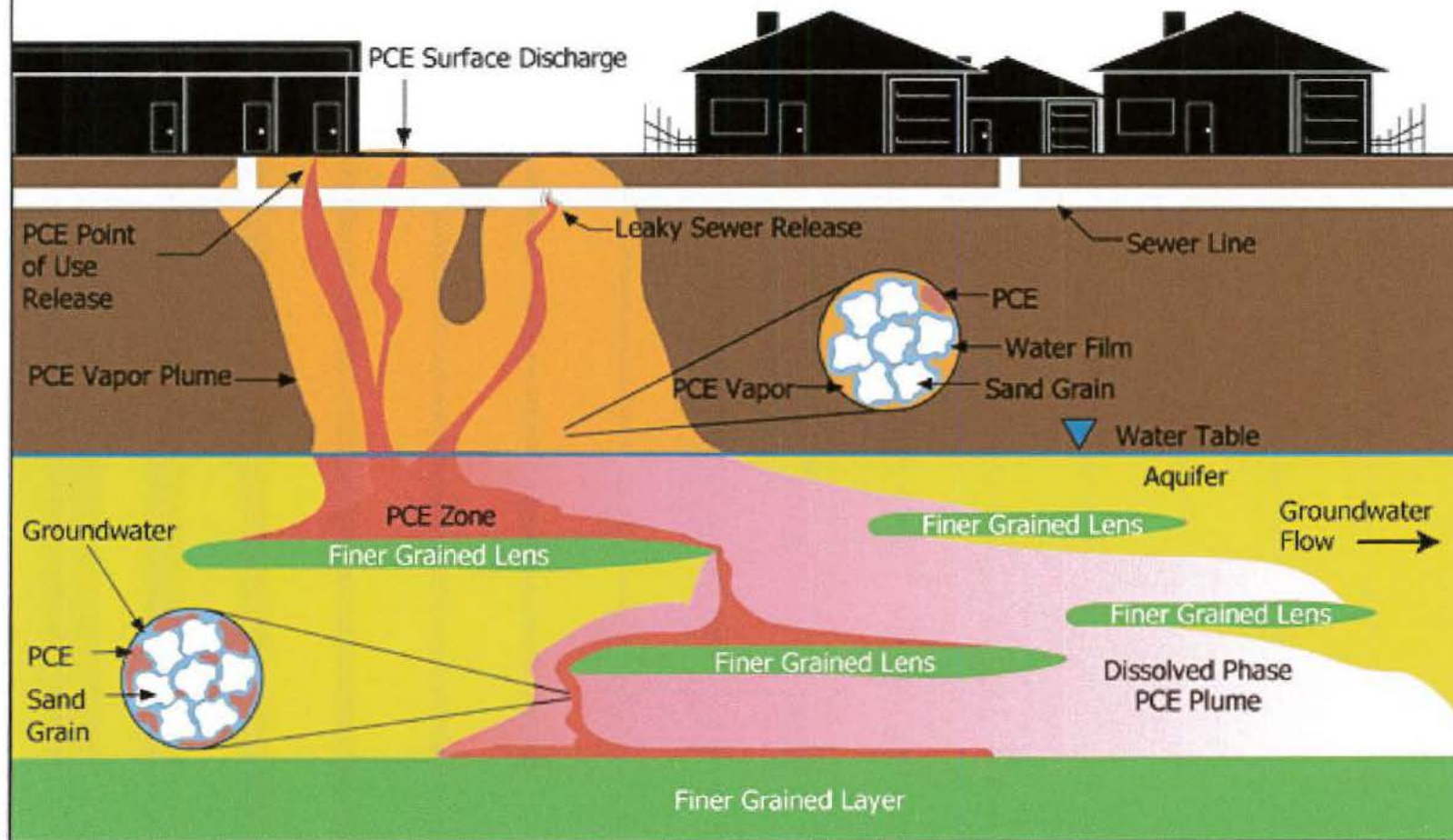
SVM-4	
PCE	34

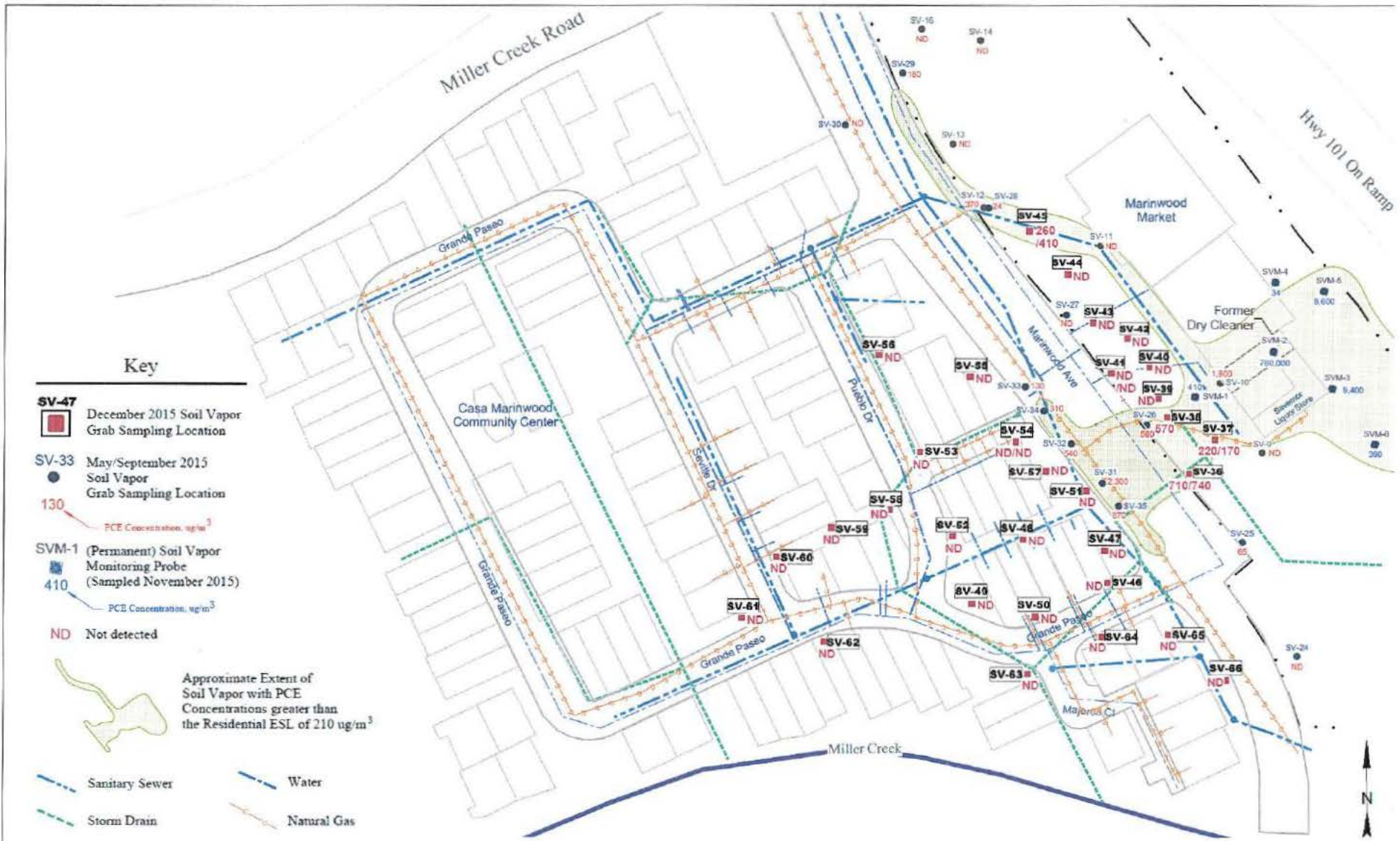
SVM-5	
PCE	8,600
TCE	3,100
cis-DCE	570

SVM-3	
PCE	9,400

SVM-6	
PCE	390
TCE	170
cis-DCE	59

# The PCE Challenge





**geologica**

San Francisco, California

**Marinwood Plaza/  
Former Prosperity Cleaners**  
187 Marinwood Avenue  
San Rafael, California

**Figure 1**

**Summary of 2015  
Soil Vapor Sampling Results**





# SUMMARY

- 1. MNA alone will not work for soil vapors after source excavation. Site was first used by dry cleaners 50 years ago and high concentrations of VOCs are still present. MNA has not worked.**
- 2. Site Cleanup Levels for Soil Vapors are targeted for Commercial/Industrial use while Site is being marketed as a Redevelopment Area( clearly for housing & mixed use).**
- 3. Remediation needs to be completed at all areas exceeding Residential Cleanup Levels to make safe for all people including pregnant women and children.**
- 4. The RAP does not meet Remedial Investigation and Feasibility requirements of the Order, Item 6d and EPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA.**
- 5. Inadequate extent of excavation(10'-12') of the VOC source area. Geologic probes have found contaminants at 45'.**
- 6. Several points in the RAP say remediation will be accomplished when redevelopment occurs. Essentially leaving full remediation to future owners. This does not meet the intent of the Order to remediate the Site.**
- 7. The potential health risk from soil vapors to residents of Casa Marinwood is understated due to inadequate investigation and an incomplete risk evaluation.**
- 8. Deed restrictions need to be placed on the Site to notify residents, new owners and commercial users of the pollution and remediation measures that need to be accomplished if full remediation is not completed.**
- 9. The Timeline for remediation should commence with the Board approval of the RAP to comply with the Order. Unnecessary delay will continue to put residents and other receptors at risk.**

From: **John Elliott** jelliottpaints@hotmail.com  
Subject: **Toxins at Our Doorstep**  
Date: Today at 11:30 AM  
To: **Lambert, Ralph@Waterboards** Ralph.Lambert@waterboards.ca.gov  
Cc: **Ray Day** murphy1978y@comcast.net, **Bill McNicholas** billmcn@pacbell.net, **Bruce.wolfe@waterboards.ca.gov**, **Glenn Nishinaga** Glenn.Nishinaga@calbt.com

To: [Ralph.Lambert@waterboards.ca.gov](mailto:Ralph.Lambert@waterboards.ca.gov)

Cc: [murphy1978y@comcast.net](mailto:murphy1978y@comcast.net), [billmcn@pacbell.net](mailto:billmcn@pacbell.net),  
[Bruce.wolfe@waterboards.ca.gov](mailto:Bruce.wolfe@waterboards.ca.gov)

Subject: **Marinwood Plaza Remedial Action (CASE #21S0053)**

Attn: **Mr. Bruce Wolfe, Executive Officer**  
**San Francisco Bay Regional Water Quality Control Board**

At our community meeting at Mary Silvera School on Feb. 10, I was astonished both at the extent and depth of the the toxic chemicals left behind in Marinwood Plaza,

and by the superficial efforts proposed for their remediation.

Both of these are the direct productss of a faceless ownership with, evidently, little interest in the health or future of our community.

Please reject the "RAP", which seems designed only to project this repellent and dangerous situation into our future.

Thank you,

**John Elliott**  
**2650 Las Gallinas Ave**  
**San Rafael, CA. 94903**

Sent 2-16-16 via email

Please accept the attached presentation as a comments in regard to the proposed Marinwood Plaza RAP.

I would like to emphases that the RAP should be not accepted as it is because:

1. The proposal from Geologica to implement a MNA program for onsite and offsite groundwater does not have enough data (chemical, geochemical, geologic and hydrogeologic) to proof that **favorable conditions for** Natural Attenuation in this specific site are present, and they did not have any study about **time frame**
2. I think that the water board should challenge the Soil Vapor test in Casa Marinwood since those test were intentionally done in the wrong places, and it did not follow the path of the utility line where they found a measurement of 2300 ug/l . It is very suspicious that after see a high measurement such as 2300 ug/l at 50 ft from Casa, suddenly everything disappear as they get to Casa Marinwood.

Best Regards,  
Elizabeth Geler

- Characterization of sites impacted by chlorinated solvents such as tetrachloroethene (PCE) and trichloroethene (TCE) initially emphasizes determination of contaminants of concern (COCs) and evaluation of site geologic and hydrogeologic conditions.
- Following this first phase, additional site characterization often focuses on evaluation of attenuation mechanisms including biodegradation to ultimately lead to an effective corrective action.
- Chemical and geochemical data including the concentrations of contaminants, daughter products, and terminal electron accptors (dissolved oxygen, nitrate, iron, sulfate, etc.) obtained during site characterization provide the first two lines of evidence to evaluate the feasibility of bioremediation as a remedial alternative. While providing valuable information, both are somewhat indirect approaches to assess biological activity. The most direct avenue to evaluate biodegradation as a treatment mechanism is to directly quantify the microorganisms or biological processes responsible for biodegradation of the contaminants of concern. Following is a breakdown of the CENSUS targets available for evaluating biodegradation of chlorinated ethenes.

# Natural attenuation processes

By Elizabeth Geler

PhD in Material Science (electrochemistry)

Member of The Clean up Marinwood Plaza

Now Oversight Committee

# From Geologica proposal

Monitored Natural Attenuation (MNA)

Groundwater monitoring will be conducted to demonstrate that natural attenuation is occurring over time (primarily via source elimination, offgassing, and/or dilution and ongoing reductive dechlorination).

# MNA (monitored natural attenuation)

Refers to demonstrate that natural attenuation processes to achieve site-specific remedial objectives within a **time frame** that is reasonable compared to other methods.

# Natural attenuation processes

The “natural attenuation processes” include a variety of physical, chemical, or biological processes that, **under favorable conditions**, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil and ground water. These in-situ processes include, biodegradation, dispersion, dilution, sorption, volatilization, and chemical or biological stabilization, transformation, or destruction of contaminants.

# Conditions for PCE biodegradation

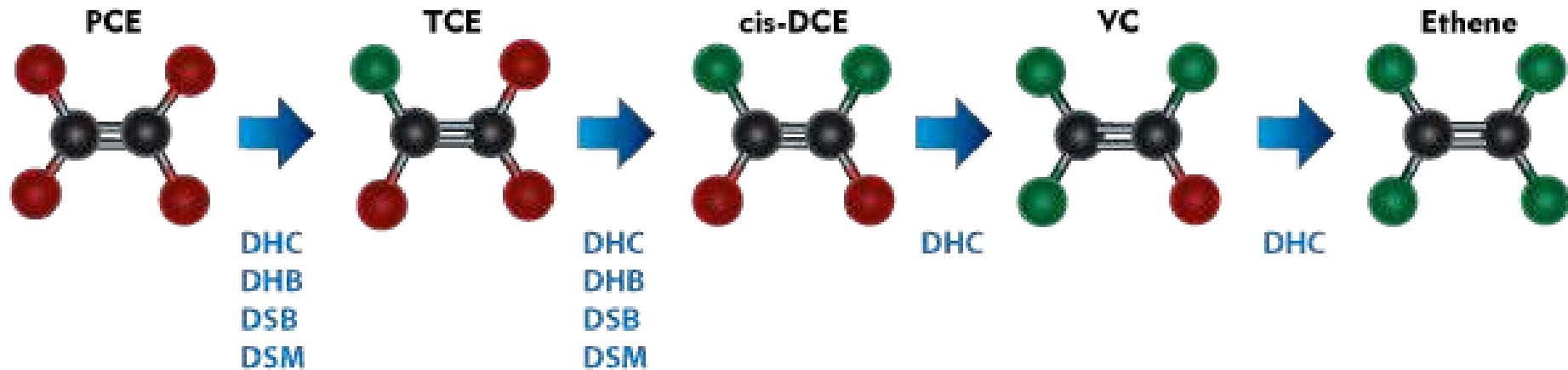
Characterization of sites impacted by PCE and TCE:

- Determination of contaminants and evaluation of site geologic and hydrogeologic conditions. **(no complete data)**
- Evaluation of attenuation mechanisms including biodegradation to ultimately lead to an effective corrective action. **(proposal does not present this information)**
- Chemical and geochemical data including the concentrations of contaminants, daughter products, and terminal electron acceptors (dissolved oxygen, nitrate, iron, sulfate, etc.) **(no data)**

**This information provide the evidence to evaluate bioremediation and Natural Attenuation**



The most direct way to evaluate biodegradation and Natural Attenuation is to quantify the microorganisms or biological processes responsible for biodegradation of the contaminants of concern.



DHC Dehalococcoides is a bacteria capable of complete dechlorination of PCE and/or TCE to ethene. Absence of DHC suggests dechlorination of DCE and VC is improbable and accumulation of daughter products is likely.

# Conclusion

The proposal from Geologica to implement a MNA program for onsite and offsite groundwater does not have enough data (chemical, geochemical, geologic and hydrogeologic) to prove that **favorable conditions for** Natural Attenuation in this specific site are present, and they did not have any study about **time frame**.

**From:** [Christina Gerber](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Marinwood Prosperity Cleaners Cleanup  
**Date:** Monday, February 22, 2016 7:50:25 PM

---

Greetings Ralph Lambert,

I am concerned that my voice and those of another 149 plus Marinwood residents concerned about scientific and technical inadequacies of the Prosperity Cleaners RAP seemed to have been dismissed as uninformed.

While I understand the RWQCB seems to concur with our technical findings, the preferred path is to accept the incomplete and insufficient RAP and try to make it work. If the report is technically inadequate according to EPA's CERCLA guidelines and does not even meet the letter or spirit of the February 14, 2015 Executive Order, how can you possibly accept it?

Please reject the RAP and order an Interim Remediation while a new RAP is being created.

Please be responsible and respectful to us residents who are asking for our right to live a healthy life!

Kind regards,

--

Christina Gerber  
Casa Marinwood Resident  
9 Seville Drive  
San Rafael CA 94903

415 479-7911

**From:** [Robert Graham](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Comments on Marinwood Plaza Toxic Waste Plume  
**Date:** Monday, February 22, 2016 5:12:27 PM

---

Hi Ralph:

Per the Regional Waterboard fact sheet provided at the public meeting on the 10th of his month, I wish to submit written comments to the record for consideration by the board.

The Remedial Action Plan submitted by the property owners on the 29th of December should be rejected. Furthermore, interim cleanup measures should be required immediately and without delay of any kind. It's my belief that any and all means should be employed in remediation, which may include building tear-down, road work, and other possibly disruptive efforts. It's frustrating that a plume like this has been allowed to spread for so long. This highly acute situation has gone on too long and more than constitutes grounds for immediate /expedited cleanup requirements by the RWB of known hotspots etc.

When it comes to the RAP, I'm disappointed that it doesn't meet the following criteria:

- <> Adhere to EPA standards.
- <> Include a hard start and completion date, or at least measurable milestones.
- <> Meet the CA Waterboard's own standards.
- <> Doesn't even include a complete site analysis, where there are many unanswered questions as to the full scope of the contamination, especially as it pertains to Casa Marinwood.
- <> Provide for proper analysis or remediation of the contamination on the Silveira Ranch property.
- <> Ensure a reasonable level of remediation, since it relies heavily on MNA, which is wholly inappropriate for this type of contamination.

Please help our community enforce reasonable standards in ensuring the water quality and overall environmental wellness in Marinwood by rejecting this RAP, as it does come up very short indeed.

Sincerely,  
Robert Graham  
2647 Las Gallinas Ave, San Rafael, CA  
(Marinwood resident since 2013)

**From:** [David Green](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards.org); [Callaway, Chris](#)  
**Subject:** Fwd: Last night  
**Date:** Thursday, February 11, 2016 10:05:18 AM

---

Damon asked me to forward this to you. I did appreciate that you folks were willing to come out to a moderately hostile crowd, though I'm sure you have had to endure much worse. As a PhD chemist I easily get frustrated when lay people make outrageous inflammatory statements that are not helpful in moving the process forward.

Regards,

Dave

----- Forwarded message -----

**From:** **David Green** <[dcgr99@gmail.com](mailto:dcgr99@gmail.com)>  
**Date:** Thu, Feb 11, 2016 at 9:11 AM  
**Subject:** Last night  
**To:** "Connolly, Damon" <[DConnolly@marincounty.org](mailto:DConnolly@marincounty.org)>

Where to start? First, thanks for doing this as ultimately getting all this out on the table will be positive. Unfortunately the delays and Susan's lack of leadership has contributed to a climate of suspicion and mistrust, only a small amount of which is warranted and could easily be blamed on bureaucratic incompetence.

Couple of things that I'm not sure of. I thought that the Cleaners for years were just a drop off/pick up for clothes including dry cleaning and that actual dry cleaning was done offsite. Why important? Because I think folks need to know how long this problem has literally been underground. I believe it has been way more than 11 years, but maybe I'm wrong.

Second, somehow we need to convince people that dealing with the hotspots and demolition and cleanup of the Cleaners now does not prejudice the need for future work. That's what I heard the Project Manager from the "Water Board" say. If true, I'd vote with getting on with it.

Third, there needs to be a better map of the problem that is both horizontal and vertical. With it, a model(s) of how the PCE, which is a water insoluble compound, migrates and the impact of different soil make up affects the movement. That is a very non-trivial challenge but putting some parameters around it would be helpful and keep the "Bozo" faction from scaring people that PCE is going to drift into their condo in Casa Marinwood.

Fourth, the Hoyyts need to get real. This is not going to be cheap, no matter what. They need to make some reasonable representation that they will work with the government and the community to reach a rational conclusion. That doesn't mean zero PCE in the ground or zero PCE in the water of the Silveira wells, but within "safe" guidelines which IMO are way overly conservative. (the less than super articulate toxicologist actually did a pretty good job).

OK, enough. Each of these points could be developed into quite a lengthy commentary, but you don't need that, and I don't have the time.

Again, you are living with the legacy of Susan's attempted manipulation of this issue and doing the best you can with a horrible situation politically. Fortunately, not so horrible in terms of real safety and risk to health.

Cheers,

Dave

**Bill McNicholas**

---

**From:** "BELLE" <bellejacopi@aol.com>  
**Date:** Sunday, February 21, 2016 12:45 PM  
**To:** <Billmcn@pacbell.net>; <Murphy1978y@comcast.net>  
**Subject:** case 21S0053

Dear Mr. Wolfe,

Me and my young family own a unit in Casa Marinwood. It has been brought to my attention that there is a large issue concerning the the old dry cleaners across the street. Apparently the levels of toxicity are under rated and exceed the normal legal standards and desperately need to be addressed. The toxins are running along the utility pipes at 35 ft. under the ground and effecting the the groundwater which it extremely important.

As a citizen and taxpayer I demand that this issue be addressed fully and that more testing be done around all edges of Casa Marinwood, not just across the street. I know several residents that have come down with cancer. How can you sleep at night knowing that small children are sleeping and running around and drinking the toxic levels of ground water?

Please, please, please make sure that you and your committees dig deeply into a full research and ground testing to make sure that the children of the future generations won't be effected by this horrific mistake.

Thanks,

Belle Jacopi  
415-265-1194  
Bellejacopi@aol.com

**From:** [Susan Lewis](mailto:Susan.Lewis@pacbell.net)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards.ca.gov)  
**Cc:** [billmcn@pacbell.net](mailto:billmcn@pacbell.net)  
**Subject:** Fwd: Marinwood RAP  
**Date:** Wednesday, February 17, 2016 10:35:23 AM

---

(I am resending as the first email didn't go through. Thanks, Sue.)

> Begin forwarded message:

>

> From: Susan Lewis <suelewis@mac.com>

> Subject: Marinwood RAP

> Date: February 17, 2016 at 10:33:11 AM PST

> To: [atralph.lambert@waterboards.ca.gov](mailto:atralph.lambert@waterboards.ca.gov)

> Cc: [billmcn@pacbell.net](mailto:billmcn@pacbell.net)

>

> Ralph Lambert

> Regional Water Quality Control Board

> San Francisco Bay Region

> 515 Clay St., Suite 1400

> Oakland, CA 94612.

>

> Dear Mr. Lambert,

>

> I am a resident of Casa Marinwood, and I am very concerned about the slowness and lack of attention that our neighborhood has received in the proposed plan to remove the hazardous waste from the cleaners at Marinwood Plaza.

>

> Geologica found a measurement of soil vapor of 2300 ug/l of PCE within 50 feet of Casa Marinwood, a measurement that is ten times higher than the PCE measurement acceptable for residential areas. Because PCE vapor generally travel along utility lines, the explanation from Geologica is that the high number was the result of sampling taken along these lines. During the same testing period, some measurements were taken inside the Casa Marinwood complex, and no PCE was found in the soil vapor. However, none of the Casa Marinwood samples were taken along utility lines!

>

> I respectfully request that the Casa Marinwood neighborhood be retested – along utility lines this time.

>

> In addition, the entire cleanup effort should be planned and implemented at a much faster rate than is currently the case. The PCE problem was discovered in 2007 – nine years ago! As Supervisor Damon Connelly says in his email to concerned residents: "We must ensure that this process is taken care of once and for all with both finality and urgency."

>

> Thank you for your attention to this matter.

>

> Sincerely,

> Susan Lewis



February 19, 2016  
California Regional Water Quality Control Board  
Re: Remediation Action Plan for Marinwood Plaza

Regional Water Board:

As a concerned resident of the Marinwood neighborhood, I have three questions:

1. Who are the owners and/or directors of the Marinwood Plaza? A cursory property search has turned up the following entities:
  - Marinwood Plaza LLC
  - Marinwood Plaza II LLC
  - Hoytt Enterprises LLC
  - Taper Family Enterprises LLC
  - Apro LLC
  - Convenience Retailors LLC
2. Does Wells Fargo Bank or any of their subsidiaries have an ownership interest in Marinwood Plaza?
3. Does Wells Fargo Bank or any of their subsidiaries have a lien on Marinwood Plaza?

Sincerely yours,



Jim Maloney  
185 Cobblestone Drive, San Rafael, CA. 94903  
jmaloney185@yahoo.com

February 10, 2016

Mr. Bruce Wolfe  
Executive Director  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street Suite 1400  
Oakland, CA 94612

Mr. Wolfe,

We, the residents of Marinwood, California, have the following concerns and comments with regard to the Remedial Action Plan for Prosperity Cleaners, Marinwood Cleaners, 187 Marinwood Avenue, Case #21S0053, San Rafael, CA 94903 (RAP) submitted by Geologica on behalf of the property owners, Marinwood Plaza, LLC. The RAP is required by San Francisco Bay Regional Water Quality Control Board (Board) Order R2-2014-0007 (Order).

1. The Mission Statement of the Water Quality Control Board informs us that its responsibility to the citizens of California is, "To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations." Requirements in the Order for the Site include similar language to that found in the Mission Statement. Based on our review of the proposals included in the RAP, it does not meet the standards of your Mission Statement or the Order. The Board is obligated to act in accordance with their Mission Statement and the terms of the Order.
2. Task 2 and Task 3 of the Order require Marinwood Plaza, LLC (termed the "discharger") to conduct a remedial investigation (RI) that delineates the lateral and vertical extent of contaminants in groundwater. The RAP submitted to the Board clearly states that the extent of the groundwater contaminant plume in groundwater east of Hwy 101 has not been delineated. Because USEPA CERCLA guidance mandates that the RAP be based on the results of the RI, and the RI has not been completed, the findings and conclusions included in

conform to our agreement at the aforementioned meetings to have a firm start date in the RAP.

5. Section 6.3 of the RAP implies that natural attenuation will cause a decrease in VOC concentrations in offsite groundwater within a reasonable amount of time. Existing data indicate that the primary mechanism of decreased contaminant concentration in groundwater with distance from the source is probably dilution. The RAP implies that treatment of onsite soil will eliminate the VOCs in groundwater. The RAP does not address the length of time required for the reduction of VOC's in the soil and does not appear to meet the criteria in Section 1.3 of the referenced USEPA document. In addition, neither soil or groundwater data demonstrate that breakdown of VOCs to ethane will occur naturally or that the contaminant plume in groundwater is receding. As noted above in Section 2 of our comments the Discharger has not yet defined the lateral or longitudinal extent of the groundwater contaminant plume. Complete delineation of the plume is the first and an absolute mandatory requirement prior to evaluation of any site for the application of NMA. Because no monitoring wells have been installed east of Hwy 101, none of the groundwater data collected there using grab sampling can be repeated or verified. These data provide only a snapshot in time, and do not provide any information about the temporal behavior of the contaminant plume. Repeatable and representative groundwater monitoring data derived from a robust network of appropriately located wells is necessary to evaluate any proposed groundwater remediation strategy. Based on the incomplete status of the groundwater investigation and the data available, MNA cannot be considered an appropriate or applicable groundwater remediation strategy for this Site.

6. PCE does not readily decompose in an aerobic environment like that at the Site. Tables 3C & 3D in the RAP show that there is limited breakdown of PCE to other VOCs at the Site only at those locations where chemical additives have been applied. Essentially no breakdown of DCE to vinyl

chloride or ethane is occurring within the groundwater contaminant plume east of the Site. This is a common occurrence at sites with similar subsurface chemistry, and is termed a "DCE stall". Data developed by the discharger shows that VOCs at the Site are producing highly toxic vinyl chloride and are not degrading to nontoxic ethane. Because VOCs are clearly not degrading beyond DCE absent the application of chemical additives, MNA is not an appropriate remedial strategy for groundwater east of the Site.

7. The Feasibility Study (FS) included in the RAP is totally inadequate and does not comply with US EPA Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, 1988", as specifically required by the Order. The FS does not list or evaluate active ground water remediation (other than wellhead treatment for the Silveira Ranch well) options or any chemical or biological remediation options for offsite groundwater east of the Site. None of the remedial technologies that have been used successfully to remediate similar VOC contamination in the Silicon Valley area were included in the FS. This is a fatal flaw in this document, and requires rejection of the FS and the RAP by the Board.

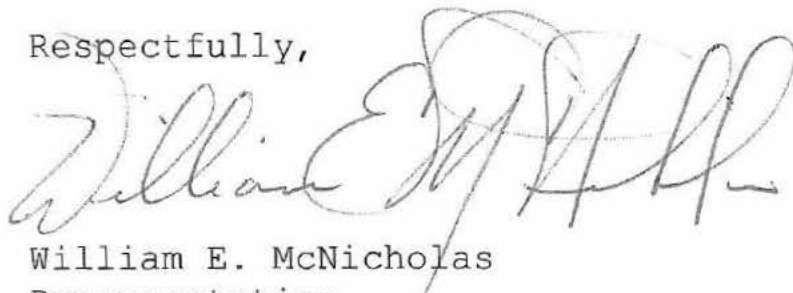
An evaluation of the remedial approach based on geologic and laboratory analytical data for soil and groundwater samples submitted by the discharger indicates that in the absence of some form of active remediation toxic VOCs in groundwater will persist and the contaminant plume will continue to spread for many decades to come. It appears that cleaning operations began at the Site almost 50 years ago, yet significant concentrations of the PCE used as dry cleaning fluid are documented in the groundwater contaminant plume east of the Site. Implementation of active groundwater remediation east of the Site including Silveira Ranch and the adjacent St. Vincent School for Boys property is a necessity to ensure cleanup and restore beneficial uses of this high quality water. Millions of gallons of groundwater that meet drinking water standards have

been contaminated by the illegal discharge of VOCs at the Site. Given the scarcity of drinking water supplies, the growing water demand from California's expanding population, recurring drought, and impending loss of other water sources due to predicted climate change, the Board has the responsibility to require restoration and protection of this valuable resource.

8. We request that our comments on the RAP and the attached supporting signatures be provided to the the Board for their review and consideration.

We request that the Board reject the RAP because it fails to comply with the terms of the Order. The RAP is based on an incomplete remedial investigation, which is contrary to all US EPA guidance and current standards of practice for environmental investigations and cleanups. As described above, the FS is fatally flawed because it is woefully incomplete and substantially deviates from the USEPA guidance that the Order requires. The NMA approach proposed for remediation of the groundwater contaminant plume is not applicable because none of the requirements for NMA are met. The remedial investigation required by Tasks 2 and 3 of the Order has not been completed because the groundwater contaminant plume east of Hwy 101 has not been delineated and no groundwater monitoring has occurred. The vertical and lateral extent of groundwater contamination from contaminants discharged at the Site remains unknown. Millions of gallons of high quality drinking water have been contaminated by VOCs discharged at the Site and the proposals in the RAP are wholly inadequate to clean up this pollution.

Respectfully,



William E. McNicholas  
Representative

Cleanup Marinwood Plaza Now Oversight Committee  
And Marinwood Community

References:

- 1) Regional Water Quality Control Board Order R2-2014-0007.
- 2) Geologica Remedial Action Plan Case #21S0053.
- 3) USEPA Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water dated September 1998.
- 4) USGS Microbial Degradation of Chloroethane in Ground Water Systems, 8/15
- 5) Interstate Technical and Regulatory Cooperation Work Group in SITU Bioremediation Word Task 9/99.
- 6) EPA-A Citizen's Guide to Dry Cleaner Cleanup, EPA 543F-11-013, 8/11.
- 7) Enviro Forensics-The Unbalanced Cost PCE Spills 8/11.
- 8) California State Water Resources Control Board Mission Statement.
- 9) EPA Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA 10/88.

2 copy

Mr. Bruce Wolfe  
Executive Officer  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street  
Oakland, CA

Dear Mr. Wolfe,

The Cleanup Marinwood Plaza Now Oversight Committee is submitting the following questions that have been gathered in discussions with the Community.

**Soil:**

1. Previously it's been disclosed that contamination at the source areas extends to a depth of at least 35 feet. The RAP proposes excavating soil to a depth of only 12 feet beneath the building and leaving the remaining contamination in place. What happens to the deeper contamination that you propose to leave? Won't that continue to contaminate groundwater, as it's doing now, and as noted in the Board Order?

**Soil:**

2. Soil was sampled at only a few locations at the Eastern Hot Spot to verify soil contamination after treatment in 2011. Why is the RAP not proposing to excavate in this area to verify that soil contamination above cleanup standards is not present?

**Soil:**

3. The RAP estimates that approximately 45 cubic yards of soil will be excavated based on very limited information. What will happen if the soil contamination turns out to be much more extensive.

**Soil Vapor:**

1. We understand that contaminated soil vapor is moving preferential pathways along buried utility lines. When Geologica tested for soil vapor in the Casa Marinwood neighborhood, it located the underground utilities but avoided them during your testing. If they were concerned about damaging utility lines as they claim, why didn't they use passive soil vapor sampling that has commonly been used for investigations at other sites?

**Soil Vapor:**

2. Absolutely no contaminated soil vapor was reported at Casa Marinwood, which is not surprising because Geologica did not sample the contaminant pathways where the vapor is moving. When will Geologica conduct a valid soil vapor investigation at Casa Marinwood?

**Soil Vapor:**

3. Once Geologica blocked the pathways for soil vapor at the Site per the RAP, where will the contaminated soil vapor that is present adjacent to Casa Marinwood go; into the houses?

**Groundwater:**

1. Why did Geologica submit a feasibility study that does not follow EPA guidance as required by the Board Order?

**Groundwater:**

2. Why did Geologica develop a remedial action plan when they haven't yet completed the remedial investigation?

**Groundwater:**

3. Why hasn't Geologica installed any monitoring wells east of Hwy 101?

**Groundwater:**

4. Why hasn't Geologica conducted any groundwater monitoring east of Hwy 101?

**Groundwater:**

5. Why was MNA the only remedial approach considered in the feasibility study?

**Groundwater:**

6. How can NMA be seriously considered when the extent of groundwater contamination is unknown?

**Groundwater:**

7. How can you possibly evaluate whether the groundwater plume is stable or shrinking if you don't know how far it goes?

**Groundwater:**

8. Given that dry cleaning fluid (PCE) is present a considerable distance east of Hwy 101, what evidence exists that supports the complete breakdown of PCE to non-toxic compounds?

**Groundwater:**

9. Why were remedial approaches that are commonly used to cleanup VOC contamination in groundwater at sites in Silicon Valley not evaluated in the feasibility study?

**Groundwater:**

10. Why did the owners think it's OK to contaminate millions of gallons of valuable drinking water and then walk away without cleaning it up, leaving it to Mother Nature?

**MTBE:**

1. What is the source of the MTBE detected in MW3, MW4, and Silveira Well?



**Market Testing:**

1. Where are the test results for both in ground and above ground for the Marinwood Market that were required prior to occupying building? The Market owners claim that the testing was done and the results were okay, but he does not know who and when.

Please forward answers to Bill McNicholas, [billmcn@pacbell.net](mailto:billmcn@pacbell.net), and he will distribute to the community.

Sincerely,

William E. McNicholas  
For Cleanup Marinwood Plaza Now Oversight Committee  
And the Marinwood Community

February 11, 2016

Mr. Bruce Wolfe  
Executive Director  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street Suite 1400  
Oakland, CA 94612

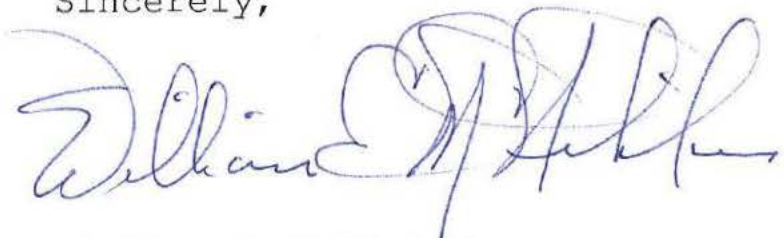
Mr. Wolfe,

A public comments/questions concerning Prosperity  
Cleaners, Case #21S0053.

1. Geologica, Marinwood Plaza LLC Geologist, stated after the community meeting last evening that the owner, Marinwood Plaza LLC, said to go ahead and demolish the buildings without a buyer in accordance with the timeline in the RAP, yet the RAP states that the demolition of the site is dependent on the Plaza being purchased. Please confirm which is the case?
2. What is your response to the fact that the RAP was submitted with a Remedial Investigation that is not complete and compliance with the Order and EPA CERCLA requirement? Based on this, the RAP should be rejected.
3. What is your response to the fact that the RAP was submitted with a Remedial Action Plan when a completed Remedial Investigation is incomplete? Based on this, the RAP should be rejected.

I look forward to your prompt and thorough response.

Sincerely,



William E. McNicholas  
29 Unionstone Drive  
San Rafael, CA 94903-1311  
415-491-4102  
billmcn@pacbell.net

**From:** [Bill McNicholas](mailto:Bill.McNicholas@waterboards.ca.gov)  
**To:** [Whyte, Dyan@Waterboards](mailto:Whyte.Dyan@Waterboards.ca.gov)  
**Cc:** [Hill, Stephen@Waterboards](mailto:Hill.Stephen@Waterboards.ca.gov); [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards.ca.gov); [Meillier, Laurent@Waterboards](mailto:Meillier.Laurent@Waterboards.ca.gov); [Ray Day](mailto:Ray.Day@waterboards.ca.gov); [Elizabeth Geler](mailto:Elizabeth.Geler@waterboards.ca.gov); [Renee Silveira](mailto:Renee.Silveira@waterboards.ca.gov); [Ann Moran](mailto:Ann.Moran@waterboards.ca.gov); [Bill Blackburn](mailto:Bill.Blackburn@waterboards.ca.gov); [Rosina Wilson](mailto:Rosina.Wilson@waterboards.ca.gov); [Damon Connolly](mailto:Damon.Connolly@waterboards.ca.gov); [Chris Calloway](mailto:Chris.Calloway@waterboards.ca.gov)  
**Subject:** Re: 2/22/16 Meeting  
**Date:** Monday, February 22, 2016 5:43:49 PM

---

Dyan,

To you and your staff, please accept our apologies from Cleanup Marinwood Plaza Now Oversight Committee and the Marinwood Community of Stephen Nestel's email. It does not represent the atmosphere or working environment that we established in our meeting today. It is his opinion and he is submitting it to be included in the comments before closure today.

Thanks for understanding.

Bill McNicholas  
Cleanup Marinwood Plaza Now Oversight Committee  
and Marinwood Community  
415-491-4102  
(F)415-491-1556  
billmcn@pacbell.net

**From:** [Stephen Nestel](mailto:Stephen.Nestel@waterboards.ca.gov)  
**Sent:** Monday, February 22, 2016 4:56 PM  
**To:** [Bill McNicholas](mailto:Bill.McNicholas@waterboards.ca.gov)  
**Cc:** <mailto:Dyan.Whyte@waterboards.ca.gov> ; <mailto:Stephen.Hill@waterboards.ca.gov> ; <mailto:ralph.lambert@waterboards.ca.gov> ; <mailto:Laurent.Meillier@waterboards.ca.gov> ; [Ray Day](mailto:Ray.Day@waterboards.ca.gov) ; [Elizabeth Geler](mailto:Elizabeth.Geler@waterboards.ca.gov) ; [Renee Silveira](mailto:Renee.Silveira@waterboards.ca.gov) ; [Ann Moran](mailto:Ann.Moran@waterboards.ca.gov) ; [Bill Blackburn](mailto:Bill.Blackburn@waterboards.ca.gov) ; [Rosina Wilson](mailto:Rosina.Wilson@waterboards.ca.gov) ; [Damon Connolly](mailto:Damon.Connolly@waterboards.ca.gov) ; [Chris Calloway](mailto:Chris.Calloway@waterboards.ca.gov)  
**Subject:** Re: 2/22/16 Meeting

Dear Dyan Whyte, Ralph Lambert and Stephen Hill,

I am sorry that I did not make it to the meeting today. I am very disappointed that the voices of 150 plus Marinwood residents concerned about scientific and technical inadequacies of the Prosperity Cleaners RAP seemed to have been dismissed as uninformed. Our committee has studied the materials for months, consulted experts and was careful to responsibly make people aware of the issues of clean up.

While I understand the RWQCB seems to concur with our technical findings, the preferred path is to accept the incomplete and insufficient RAP and try to make it work. If the report is technically inadequate according to EPA's CERCLA guidelines and does not even meet the letter or spirit of the February 14, 2015 Executive Order, how can you possibly accept it?

The student handed in the paper late, did not complete his labs, offered unscientific conclusions or follow guidelines of order. The RAP deserves an "F". Please do not give this a "good effort , try harder". This is not kindergarten. People's lives are at stake.

What particularly stinks in the injection of political pressure from former Supervisor Susan Adams and Representative Marc Levine as was relayed in this clip. <https://youtu.be/6jH0NlYrNQ> . Susan Adams told the community repeatedly that Marinwood Plaza had been "remediated". It was at best a misstatement and led to a voter revolt. It might have been a misstatement too in October 2015 when the board claimed no contact with politicians on the Marinwood Plaza project.

How do you think the community will receive news of the special treatment of Marinwood Plaza once again? There has been no active remediation since 2011! Do you think the community will sit idle?

We want to believe you are here to help us, however it seems than only the "discharger" is getting preferential treatment. Our options are limited. Please reject the RAP and order an Interim Remediation while a new RAP is being created.

Respectfully,

Stephen Nestel  
Marinwood, CA  
415.448.6099

On Mon, Feb 22, 2016 at 4:30 PM, Bill McNicholas <[billmcn@pacbell.net](mailto:billmcn@pacbell.net)> wrote:

Dyan,

Ray and I thank you, Ralph, and Steven for meeting with us to discuss our package. In addition we appreciate your enlightening us on the procedures and your views on the next steps in moving forward with the Marinwood Plaza Cleanup. We look forward to seeing the proposals/solutions and meeting with you and your staff in the near future. Please email me with a couple of times and dates for future meetings. We are available to answer any questions concerning our package.

We have marked out calendar for the April 13, 2016 RWQCB meeting with the Marinwood Plaza RAP on the agenda.

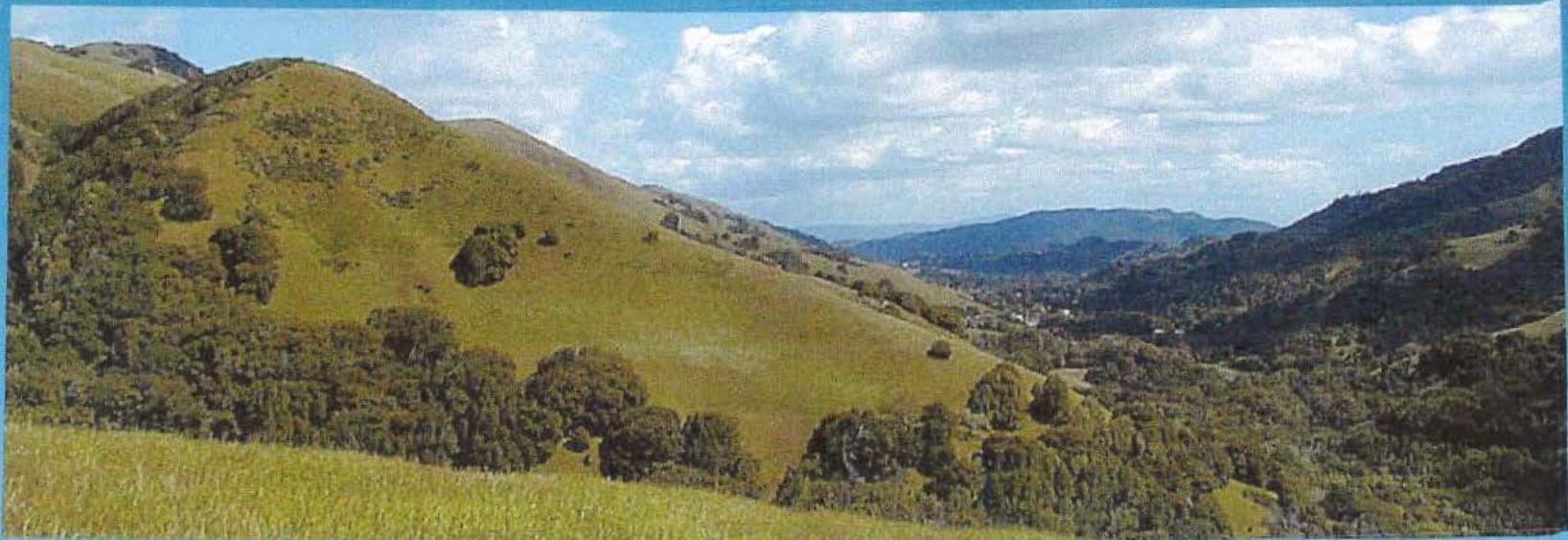
Thanks,

Bill McNicholas  
Cleanup Marinwood Plaza Now Oversight Committee.  
[415-491-4102](tel:415-491-4102)  
(F)[415-491-1556](tel:415-491-1556)  
[billmcn@pacbell.net](mailto:billmcn@pacbell.net)

# Clean Up Marinwood Plaza Now!

## Oversight Committee

Local citizens for a clean environment and  
healthy homes



## MISSION OF WATER QUALITY CONTROL BOARD

“To preserve, enhance, and restore the quality of California’s water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure pure water resource allocation and efficient use, for the benefit of present and future generations.



# Remedial Action Plan Timeline

Figure 19 - Proposed Remedial Action Implementation Schedule

Activity	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
<b>Soil Remedial Actions</b>																							
Preliminary Activities (including building demolition by others)		XXXX	XXXX	XXXX	XXXX	XXXX	XXXX																
(Optional) Pre-excavation Disposal Profiling							XXXX																
Soil Excavation (following building demolition)								XXXX	XXXX														
Confirmation Sampling & Analysis								XXXX	XXXX														
Iterative Excavation/Confirmation Sampling								XXXX	XXXX														
Transport & Disposal								XXXX	XXXX														
Backfilling									X														
Reporting										XXXX													
<b>Groundwater Remedial Actions</b>																							
Preliminary Activities									XXXX														
New On-Site Groundwater Monitoring Well Installation (following building demo)										XXXX													
Additional Offsite Groundwater Investigation to Delineate Plume Extent		XXXX	XXXX	XXXX	XXXX																		
New Off-Site Groundwater Monitoring Well Installations						XXXX																	
Silveira Well Treatment System O&M		X			X			X			X			X			X				X		
Groundwater Quality Monitoring		X			X			X			X			X			X				X		
Laboratory Testing		XX			XX			XX			XX			XX			XX				XX		
Reporting			XXXX			XXXX			XXXX			XXXX			XXXX			XXXX				XXXX	
<b>Soil Vapor / Indoor Remedial Actions</b>																							
Preliminary Activities									XXXX														
New On-Site Soil Vapor Monitoring Well Installation (after building demolition)										XXXX													
Soil Vapor Quality Monitoring		X			X			X			X			X			X				X		
Laboratory Testing		XX			XX			XX			XX			XX			XX				XX		
Reporting			XXXX			XXXX			XXXX			XXXX			XXXX			XXXX				XXXX	
Utility Corridor Cutoff Barriers		XXXX																					
Vapor Barrier and Venting Systems																							
<b>Request for Closure</b>																						XXXX	XXXX

\* Schedule starts on Regional Board approval of the RAP.



Key

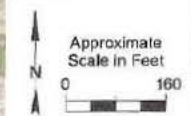
Approximate Extent of Soil with VOC Concentrations greater than the Residential Cleanup Goal



Approximate Extent of Groundwater with VOC Concentrations greater than the Site Cleanup Goals



Approximate Extent of Soil Vapor with VOC Concentrations greater than the Residential Cleanup Goal



**geologica**

San Francisco, California

**Marinwood Plaza/  
Former Prosperity Cleaners**  
187 Marinwood Avenue  
San Rafael, California

**Figure 16**

Map Showing Areas with VOC Concentrations greater than Cleanup Goals



## The RWQCB Order Requirements of 2/14/2014:



- **Conduct Remedial Investigation (RI) delineating the lateral and vertical extent of contaminants in the groundwater.**
- **Remedial Action Plan states that the contaminant plume east of the freeway has not been delineated.**
- **US Environmental Protection Agency Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) guidance mandates that RAP be based on the results of the RI.**
- **RI has not been completed. Therefore RAP is invalid.**
- **Regional Water Quality Control Board (RWQCB) must reject the RAP.**

# RAP Feasibility Study



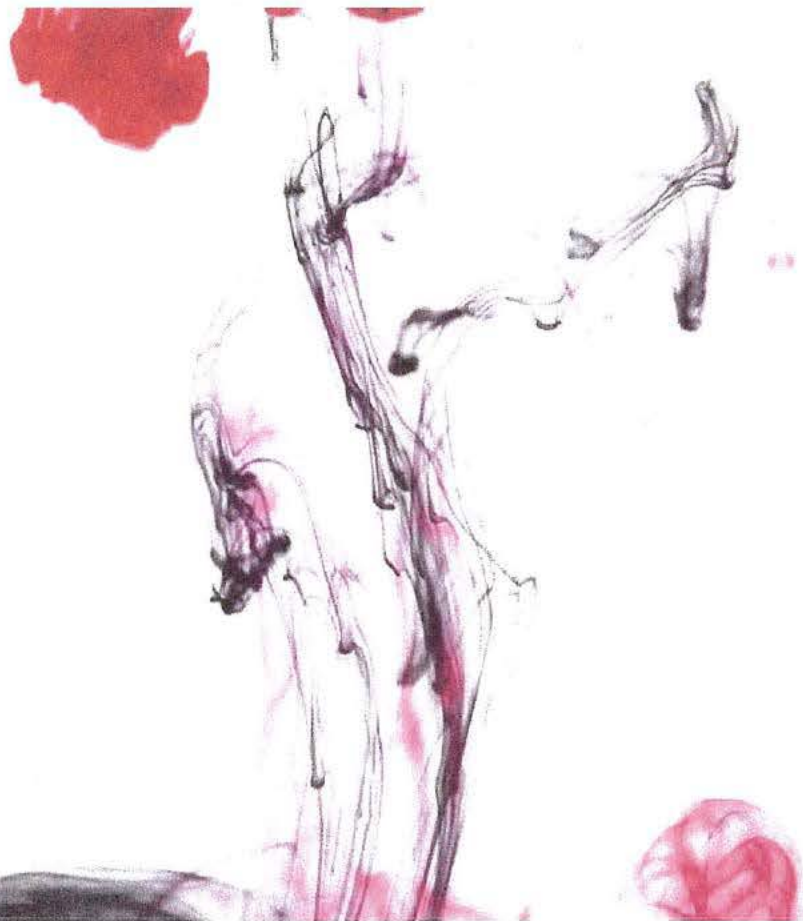
- Does not comply with USEPA CERCLA and as specifically required by order.
- Does not list of evaluated active groundwater remediation options for offsite groundwater east of site.
- Alternate successful remedial technologies used in Silicon Valley not included in RAP.
- Active groundwater remediation east of the site is a necessity to ensure cleanup and restore beneficial uses of this high quality water.
- Millions of gallons of water meeting drinking water standards have be contaminated by the discharge of Volatile Organic Compound (VOC) at the site.

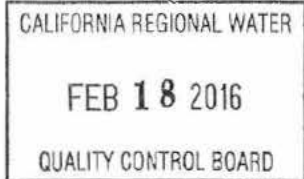
# SUMMARY

- Request the RWQCB reject the RAP.
- Incomplete remedial investigation.
- FS is incomplete deviates from USEPA guidance and Order requirements.
- Proposed Monitored Natural Attenuation (MNA) is not applicable since it does not meet the requirements.
- RI not completed for plume and monitoring. Vertical and lateral extent of groundwater unknown.
- No plans to cleanup plume.



**We are counting on you.**





February 14, 2016

Ralph Lambert  
California Regional Quality Control Board, San Francisco Bay Region  
1515 Clay St., Suite 1400  
Oakland, Ca94612

Dear Sir,

I am thankful that the process is moving forward and hopefully the PCE can be cleaned up and the community will no longer be subjected to the dangers which the Marinwood Community now faces each day. The Remedial Action Plan (RAP) has been submitted by Geologia on December 29, 2015.

The purpose of the plan is to "eliminate unacceptable threats to human health and restoring beneficial uses of water in a reasonable time":

The problem first to be identified with the RAP is that there is no timeline. Next the timeline must not be tied to the redevelopment of the site. Further the clean-up levels must be set to a stringent standard for both commercial and residential levels. The treatment at Silvera Ranch must meet the environmental, health and safety standards required of that property.

I hope to hear more from you and members of the public at the next public hearing.

Sincerely,

*Ann Moran*  
Ann Moran

Board Member of Casa Marinwood

*19 Grande Peseo*

**From:** [Kim](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Marinwood Plaza Comments  
**Date:** Tuesday, February 16, 2016 5:52:58 PM

---

Please assure that the remediation of the toxic waste from the drycleaners is full and complete, not partial. Please make sure it is done now without regard to any future development of the space. Please protect the Silveira ranch and their cows to the maximum extent. Please make sure the toxins do not enter Casa Marinwood.

Thank you,  
Kim Natuk  
30 year resident of Marinwood

**From:** [Bill McNicholas](mailto:Bill.McNicholas@pacbell.net)  
**To:** [Whyte, Dyan@Waterboards](mailto:Whyte.Dyan@Waterboards.ca.gov)  
**Cc:** [Hill, Stephen@Waterboards](mailto:Hill.Stephen@Waterboards.ca.gov); [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards.ca.gov); [Meillier, Laurent@Waterboards](mailto:Meillier.Laurent@Waterboards.ca.gov); [Ray Day](mailto:Ray.Day@Waterboards.ca.gov); [Elizabeth Geler](mailto:Elizabeth.Geler@Waterboards.ca.gov); [Renee Silveira](mailto:Renee.Silveira@Waterboards.ca.gov); [Ann Moran](mailto:Ann.Moran@Waterboards.ca.gov); [Bill Blackburn](mailto:Bill.Blackburn@Waterboards.ca.gov); [Rosina Wilson](mailto:Rosina.Wilson@Waterboards.ca.gov); [Damon Connolly](mailto:Damon.Connolly@Waterboards.ca.gov); [Chris Calloway](mailto:Chris.Calloway@Waterboards.ca.gov)  
**Subject:** Re: 2/22/16 Meeting  
**Date:** Monday, February 22, 2016 5:43:49 PM

---

Dyan,

To you and your staff, please accept our apologies from Cleanup Marinwood Plaza Now Oversight Committee and the Marinwood Community of Stephen Nestel's email. It does not represent the atmosphere or working environment that we established in our meeting today. It is his opinion and he is submitting it to be included in the comments before closure today.

Thanks for understanding.

Bill McNicholas  
Cleanup Marinwood Plaza Now Oversight Committee  
and Marinwood Community  
415-491-4102  
(F)415-491-1556  
billmcn@pacbell.net

**From:** [Stephen Nestel](mailto:Stephen.Nestel@waterboards.ca.gov)  
**Sent:** Monday, February 22, 2016 4:56 PM  
**To:** [Bill McNicholas](mailto:Bill.McNicholas@pacbell.net)  
**Cc:** <mailto:Dyan.Whyte@waterboards.ca.gov> ; <mailto:Stephen.Hill@waterboards.ca.gov> ; <mailto:ralph.lambert@waterboards.ca.gov> ; <mailto:Laurent.Meillier@waterboards.ca.gov> ; [Ray Day](mailto:Ray.Day@Waterboards.ca.gov) ; [Elizabeth Geler](mailto:Elizabeth.Geler@Waterboards.ca.gov) ; [Renee Silveira](mailto:Renee.Silveira@Waterboards.ca.gov) ; [Ann Moran](mailto:Ann.Moran@Waterboards.ca.gov) ; [Bill Blackburn](mailto:Bill.Blackburn@Waterboards.ca.gov) ; [Rosina Wilson](mailto:Rosina.Wilson@Waterboards.ca.gov) ; [Damon Connolly](mailto:Damon.Connolly@Waterboards.ca.gov) ; [Chris Calloway](mailto:Chris.Calloway@Waterboards.ca.gov)  
**Subject:** Re: 2/22/16 Meeting

Dear Dyan Whyte, Ralph Lambert and Stephen Hill,

I am sorry that I did not make it to the meeting today. I am very disappointed that the voices of 150 plus Marinwood residents concerned about scientific and technical inadequacies of the Prosperity Cleaners RAP seemed to have been dismissed as uninformed. Our committee has studied the materials for months, consulted experts and was careful to responsibly make people aware of the issues of clean up.

While I understand the RWQCB seems to concur with our technical findings, the preferred path is to accept the incomplete and insufficient RAP and try to make it work. If the report is technically inadequate according to EPA's CERCLA guidelines and does not even meet the letter or spirit of the February 14, 2015 Executive Order, how can you possibly accept it?

The student handed in the paper late, did not complete his labs, offered unscientific conclusions or follow guidelines of order. The RAP deserves an "F". Please do not give this a "good effort , try harder". This is not kindergarten. People's lives are at stake.

What particularly stinks in the injection of political pressure from former Supervisor Susan Adams and Representative Marc Levine as was relayed in this clip. <https://youtu.be/6jH0NlYrNQ> . Susan Adams told the community repeatedly that Marinwood Plaza had been "remediated". It was at best a misstatement and led to a voter revolt. It might have been a misstatement too in October 2015 when the board claimed no contact with politicians on the Marinwood Plaza project.

How do you think the community will receive news of the special treatment of Marinwood Plaza once again? There has been no active remediation since 2011! Do you think the community will sit idle?

We want to believe you are here to help us, however it seems than only the "discharger" is getting preferential treatment. Our options are limited. Please reject the RAP and order an Interim Remediation while a new RAP is being created.

Respectfully,

Stephen Nestel  
Marinwood, CA  
415.448.6099

On Mon, Feb 22, 2016 at 4:30 PM, Bill McNicholas <[billmcn@pacbell.net](mailto:billmcn@pacbell.net)> wrote:

Dyan,

Ray and I thank you, Ralph, and Steven for meeting with us to discuss our package. In addition we appreciate your enlightening us on the procedures and your views on the next steps in moving forward with the Marinwood Plaza Cleanup. We look forward to seeing the proposals/solutions and meeting with you and your staff in the near future. Please email me with a couple of times and dates for future meetings. We are available to answer any questions concerning our package.

We have marked out calendar for the April 13, 2016 RWQCB meeting with the Marinwood Plaza RAP on the agenda.

Thanks,

Bill McNicholas  
Cleanup Marinwood Plaza Now Oversight Committee.  
[415-491-4102](tel:415-491-4102)  
(F)[415-491-1556](tel:415-491-1556)  
[billmcn@pacbell.net](mailto:billmcn@pacbell.net)



**From:** [Stephen Nestel](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Reject in entirety the Geologica cleanup plan for Prosperity Cleaners dated Dec 29, 2015 (#SL0604185908)  
**Date:** Sunday, February 21, 2016 6:35:48 PM  
**Attachments:** [20160210Clean Up Marinwood Plaza. Now! -Stephen Nestel.pptx](#)

---

*Dear Regional Water Quality Control Board:*

*Feb 22, 2016.*

*We are depending on you to do the right thing for our community and the environment.*

*I urge the Regional Water Quality Control Board(RWQCB) to **reject in entirety** the Remedial Action Plan (RAP) put forth by Marinwood Plaza II , LLC and Geologica for Prosperity Cleaners, 187 Marinwood Ave, San Rafael, CA 94903 (#SL0604185908) on December 29, 2015. The Remedial Investigation is incomplete, the proposed action plan is technically and scientifically inadequate and the plan does not meet EPA's own CERCLA guideline or meet the terms of the RWQCB Executive order of February 14, 2015. The action plan has no start date and is only contingent up on redevelopment. This is clearly not consistent with the terms or intent of the Executive Order. The RAP should be rejected until it complies with the Order and describes complete remediation of the Site to include Marinwood Plaza, Silviera Ranch, Casa Marinwood.and the eastern & western boundaries of Marinwood Ave.*

*We strongly **urge an Interim Remediation Plan** to commence at the earliest possible date or by April 1, 2016 to aggressively remove the two or more toxic hotspots on the site to a depth of 35' and a diameter that encompasses all known contaminated soil of at least 75' or more.*

*No active remediation has occurred since 2011. We demand full, aggressive remediation of the toxic hotspots at the Marinwood Plaza site immediately while methods for remediating offsite contamination, whether soil vapor or groundwater, are identified for timely implementation in an approved RAP. Partial solutions are unacceptable.*

*We concerned citizens of Marin demand a full remediation of Marinwood Plaza (#SL0604185908) that will not imperial the environment and community health for decades to come.*

Please respond to the following questions:

**Soil:**

Previously it's been disclosed that contamination at the source areas extends to a depth of at least 35 feet. The RAP proposes excavating soil to a depth of only 12 feet beneath the building and leaving the remaining contamination in place.

What happens to the deeper contamination that you propose to leave? Won't that continue to contaminate groundwater, as it's doing now, and as noted in the Board Order?

Soil was sampled at only a few locations at the Eastern Hot Spot to verify soil contamination after treatment in 2011. Why are you not proposing to excavate in this area to verify that soil contamination above cleanup standards is not present?

The RAP estimates that approximately 45 cubic yards of soil will be excavated based on very limited information. What will happen if the soil contamination turns out to be much more extensive?

### **Soil Vapor:**

We understand that contaminated soil vapor is moving preferential pathways along buried utility lines. When you tested for soil vapor in the Casa Marinwood neighborhood you located the underground utilities but avoided them during your testing. If you were concerned about damaging utility lines as you claimed, why didn't you use passive soil vapor sampling that has commonly been used for investigations at other sites?

Absolutely no contaminated soil vapor was reported at Casa Marinwood, which is not surprising because you did not sample the contaminant pathways where the vapor is moving. When will you conduct a valid soil vapor investigation at Casa Marinwood?

Once you've blocked the pathways for soil vapor at the Site, where will the contaminated soil vapor that is present adjacent to Casa Marinwood go; into the houses?

### **Groundwater:**

Why did you submit a feasibility study that does not follow EPA guidance as required by the Board Order?

Why do you think it's reasonable to develop a remedial action plan when you haven't yet completed the remedial investigation?

Why haven't you installed any monitoring wells east of Hwy 101?

Why have you not conducted any groundwater monitoring east of Hwy 101?

Why was MNA the only remedial approach considered in the feasibility study?

How can NMA be seriously considered when the extent of groundwater

contamination is unknown?

How can you possibly evaluate whether the groundwater plume is stable or shrinking if you don't know how far it goes?

Given that dry cleaning fluid (PCE) is present a considerable distance east of Hwy 101, what evidence exists that supports the complete breakdown of PCE to non-toxic compounds?

Why were remedial approaches that are commonly used to cleanup VOC contamination in groundwater at sites in Silicon Valley not evaluated in the feasibility study?

**l. Why do you think it's OK to contaminate millions of gallons of valuable drinking water and then walk away without cleaning it up?**

Please send your responses to Bill McNicholas, Chairman of the "Cleanup Marinwood Plaza Now," Citizen Oversight Committee : [billmcn@pacbell.net](mailto:billmcn@pacbell.net) , [murphy1978y@comcast.net](mailto:murphy1978y@comcast.net) , [stephennestel@gmail.com](mailto:stephennestel@gmail.com)

Sincerely,

Stephen Nestel, Lisa Manning, Anna Nestel and Rebecca Nestel

360 Quietwood Dr. San Rafael, CA 94903 415.448.6099

Attached is a powerpoint given to the community to educate them about the dangers of PCE and why the plan is insufficient. Also, blog post appearing on [www.savemarinwood.org](http://www.savemarinwood.org) was made available to the community to provide quick understanding of the issues.

<http://www.savemarinwood.org/2016/02/five-minutes-to-understand-basics-of.html>

Each brief video is 30 secs to 1:30 minutes

<https://youtu.be/gIKVhByWi0Q>

<https://youtu.be/RHMPWBuu4bl>

<https://youtu.be/-Id0ssyULDc>

<https://youtu.be/nyro8Gt8zq4>

[https://youtu.be/xisjra4\\_PrU](https://youtu.be/xisjra4_PrU)

<https://youtu.be/2ICAWuFcB9c>

[https://youtu.be/4WB4NrsmIek?list=PL\\_BuJGc-hEs7T7nqn9ov1G4-fRd2PKskG](https://youtu.be/4WB4NrsmIek?list=PL_BuJGc-hEs7T7nqn9ov1G4-fRd2PKskG)

# Clean Up Marinwood Plaza Now!

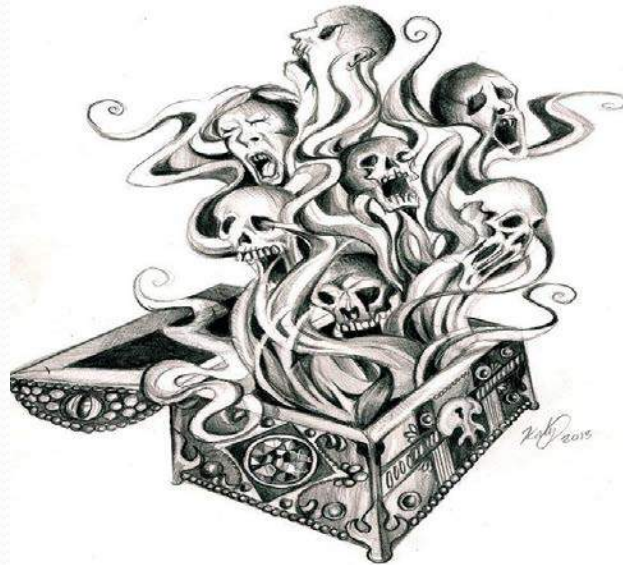
## Oversight Committee

Local citizens for a clean environment and  
healthy homes

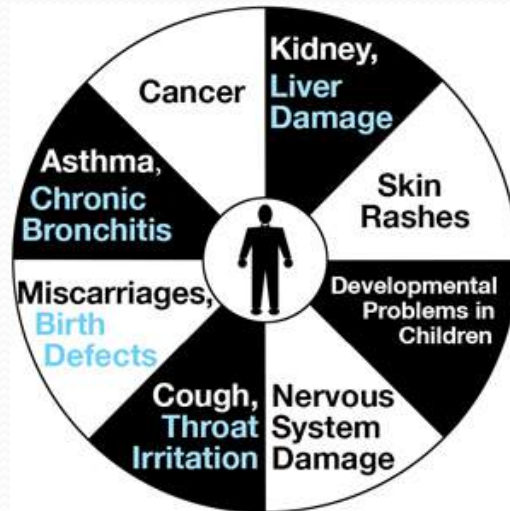


# What is the Toxic Waste at Marinwood Plaza and why should you be concerned?

- PCE (short for **Tetrachloroethylene** (**Perchloroethylene**) and sometimes called “perc”) is a toxic chemical that, once spilled, can keep on contaminating soil, water and indoor air for decades.
- PCE breaks down to even MORE toxic TCE, DCE and Vinyl Chloride.



# EPA says PCE is highly toxic to humans and the environment



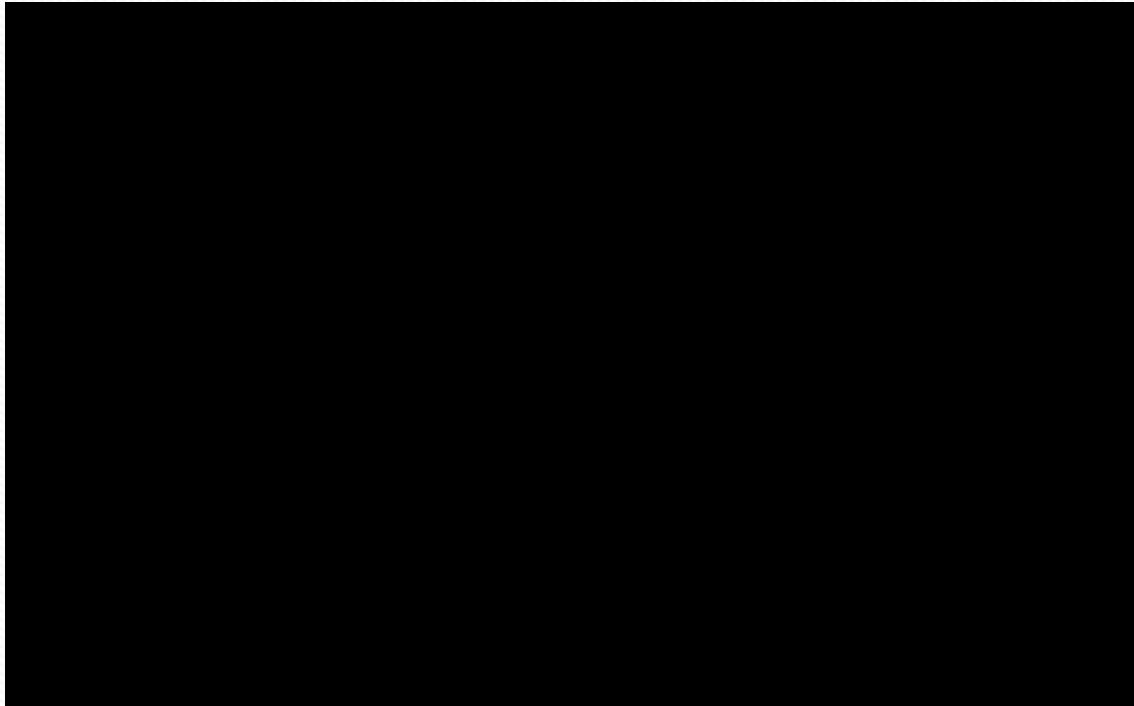
- *“Tetrachloroethylene is widely used for dry-cleaning fabrics and metal degreasing operations. Effects resulting from acute (short term) high-level inhalation exposure of humans to tetrachloroethylene include irritation of the upper respiratory tract and eyes, kidney dysfunction, and neurological effects such as reversible mood and behavioral changes, impairment of coordination, dizziness, headache, sleepiness, and unconsciousness. The primary effects from chronic (long term) inhalation exposure are neurological, including impaired cognitive and motor neurobehavioral performance. Tetrachloroethylene exposure may also cause adverse effects in the kidney, liver, immune system and hematologic system, and on development and reproduction. Studies of people exposed in the workplace have found associations with several types of cancer including bladder cancer, non-Hodgkin lymphoma, multiple myeloma. EPA has classified tetrachloroethylene as likely to be carcinogenic to humans.”*
- source: EPA website : <http://www3.epa.gov/ttn/atw/hlthef/tet-ethy.html>
-

Only a few drops of PCE will poison an entire swimming pool!!

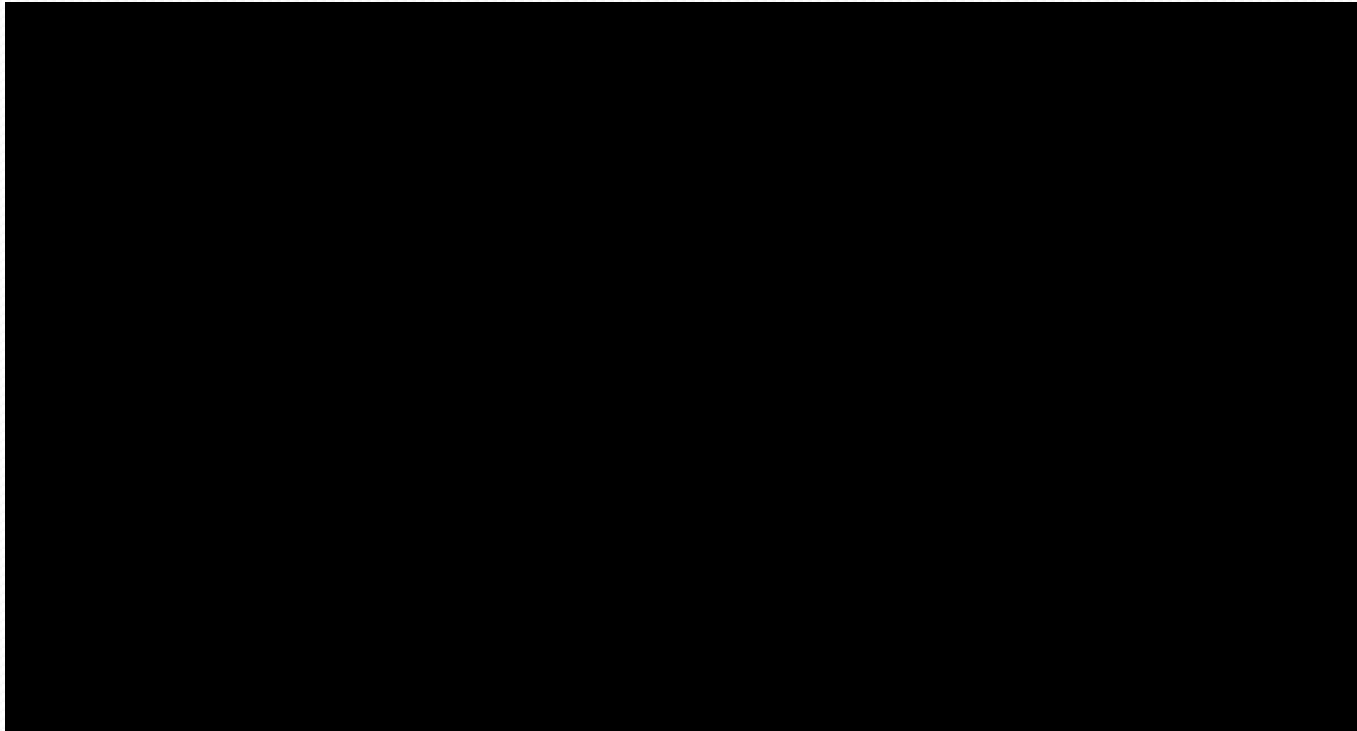




Any amount of PCE is a BIG problem



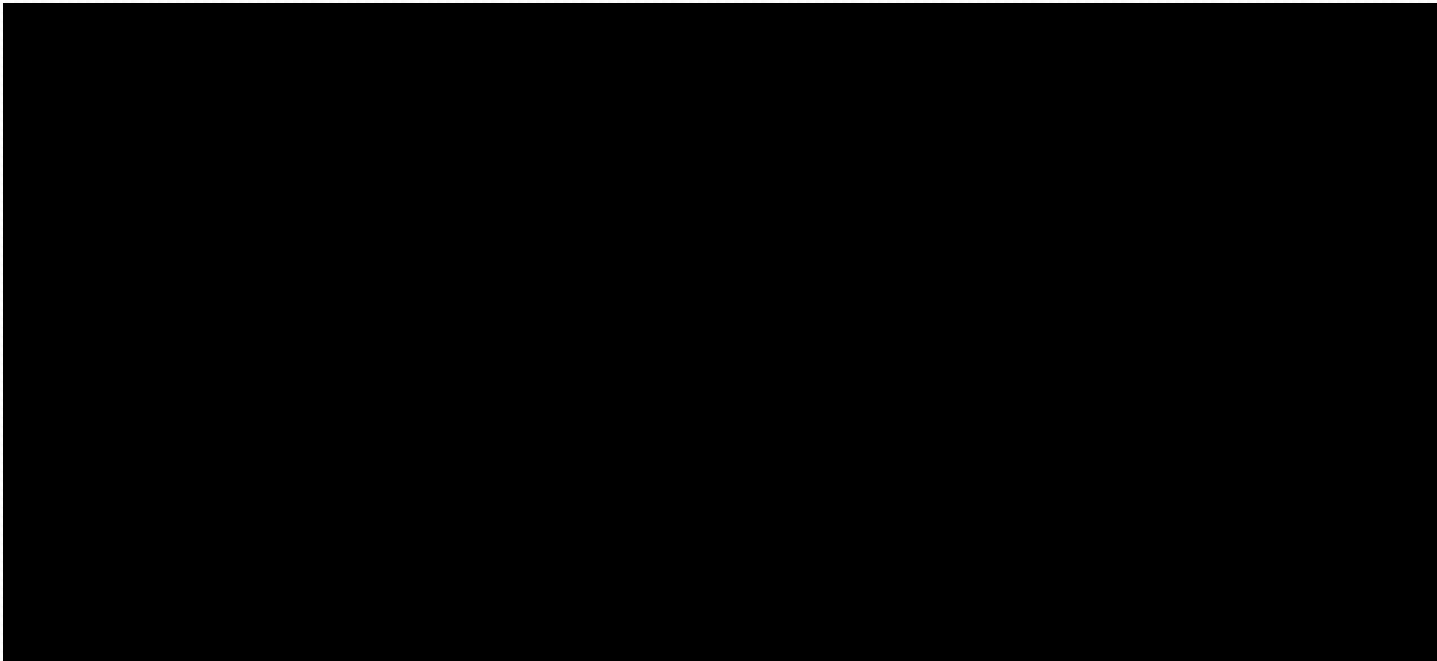
PCE is heavier than water  
causing BIG problems in clean up.



PCE is heavy, sticks to soil and falls BELOW the water line and poisons the groundwater aquifer.

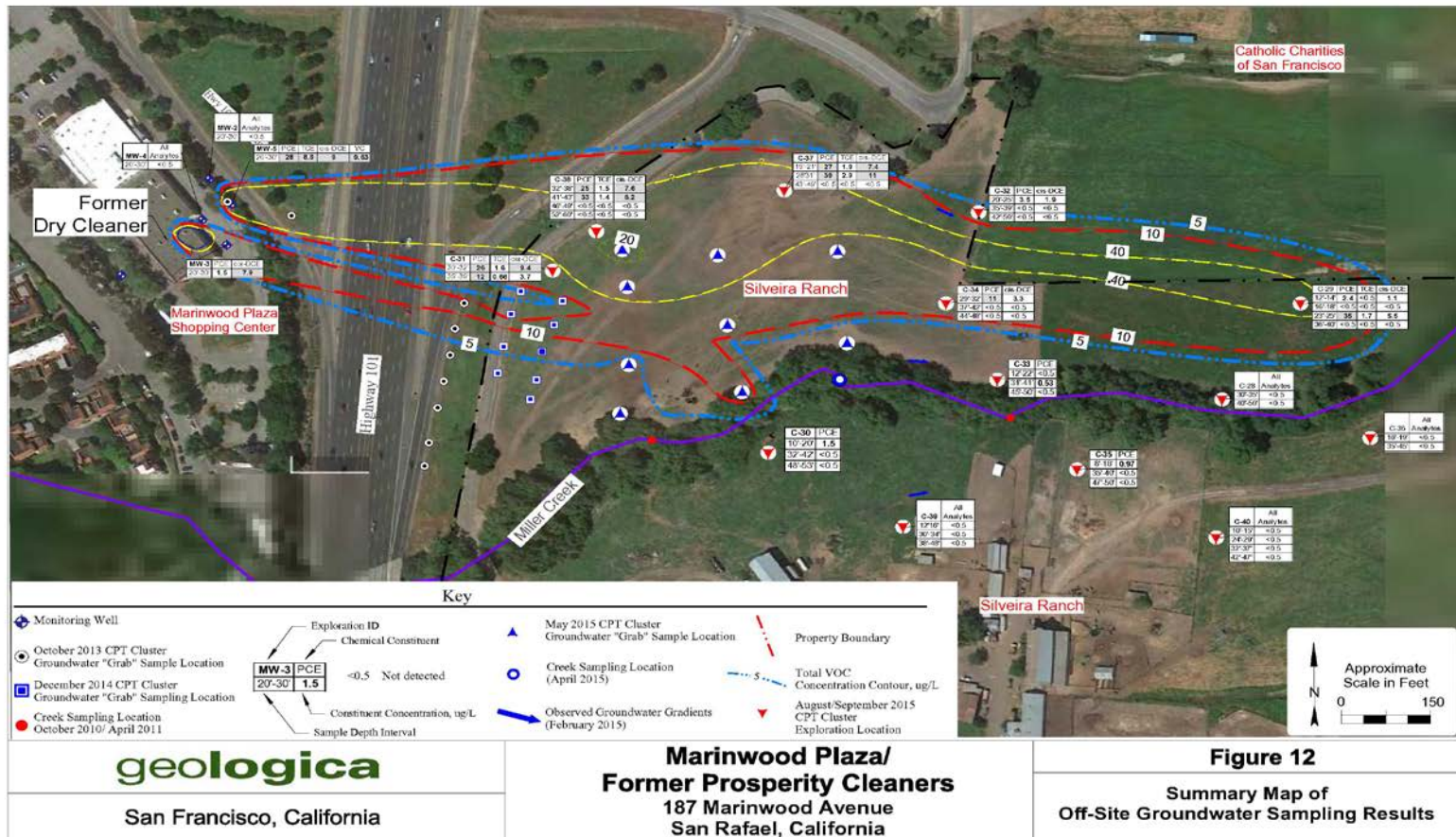
# This groundwater model closely resembles Miller Creek Geology

*“The site and vicinity are underlain by Quaternary Alluvium consisting of unconsolidated deposits of silt, clay, sand and gravel. Franciscan bedrock comprised of sandstone and shale reportedly outcrops in highland areas north, west, and south of the site.” source: Geologica RAP 12/29/2015*

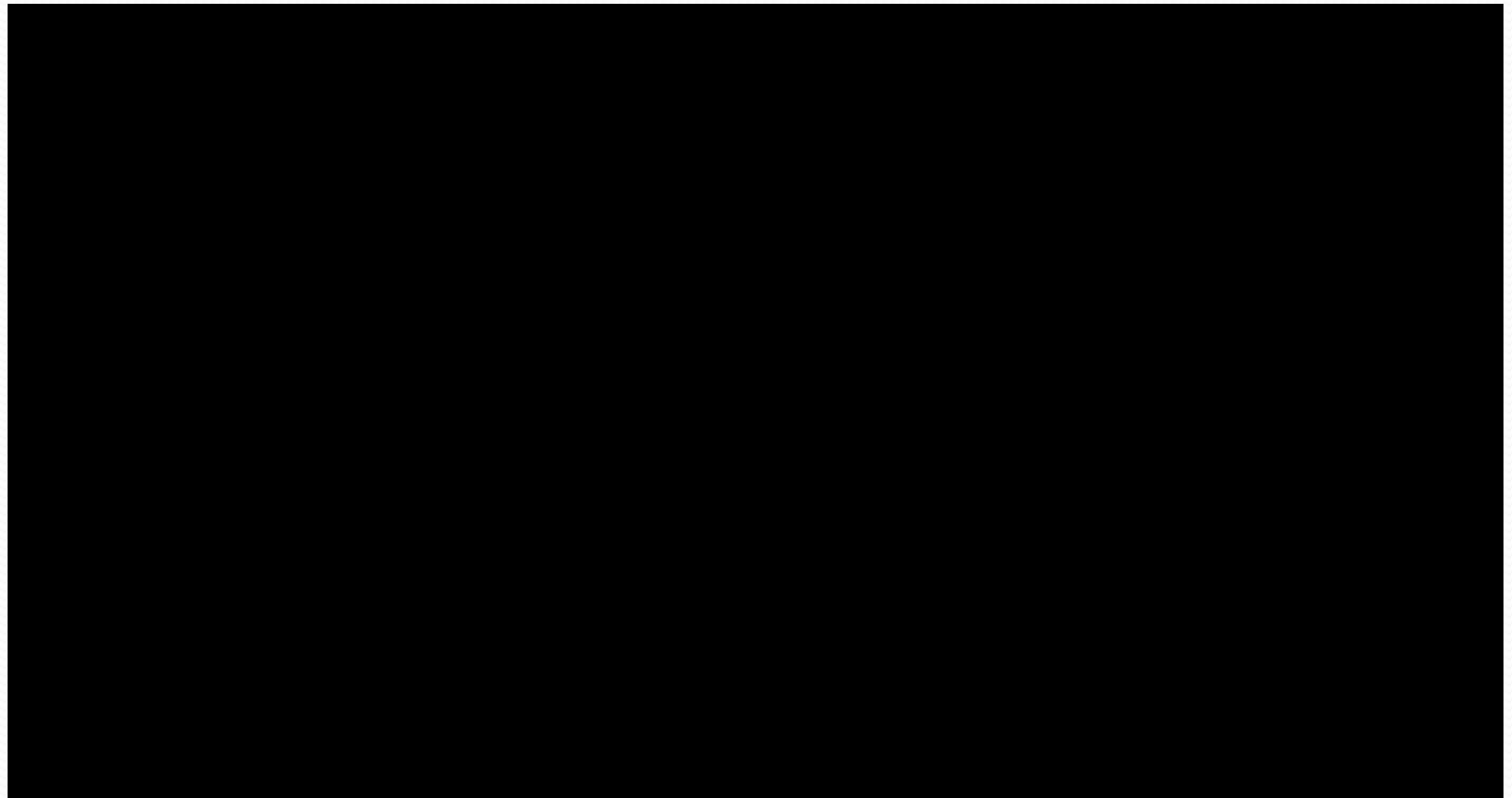


See how quickly the toxic wastes spread in the broken layer bedrock similar to the Franciscan Complex of Miller Creek

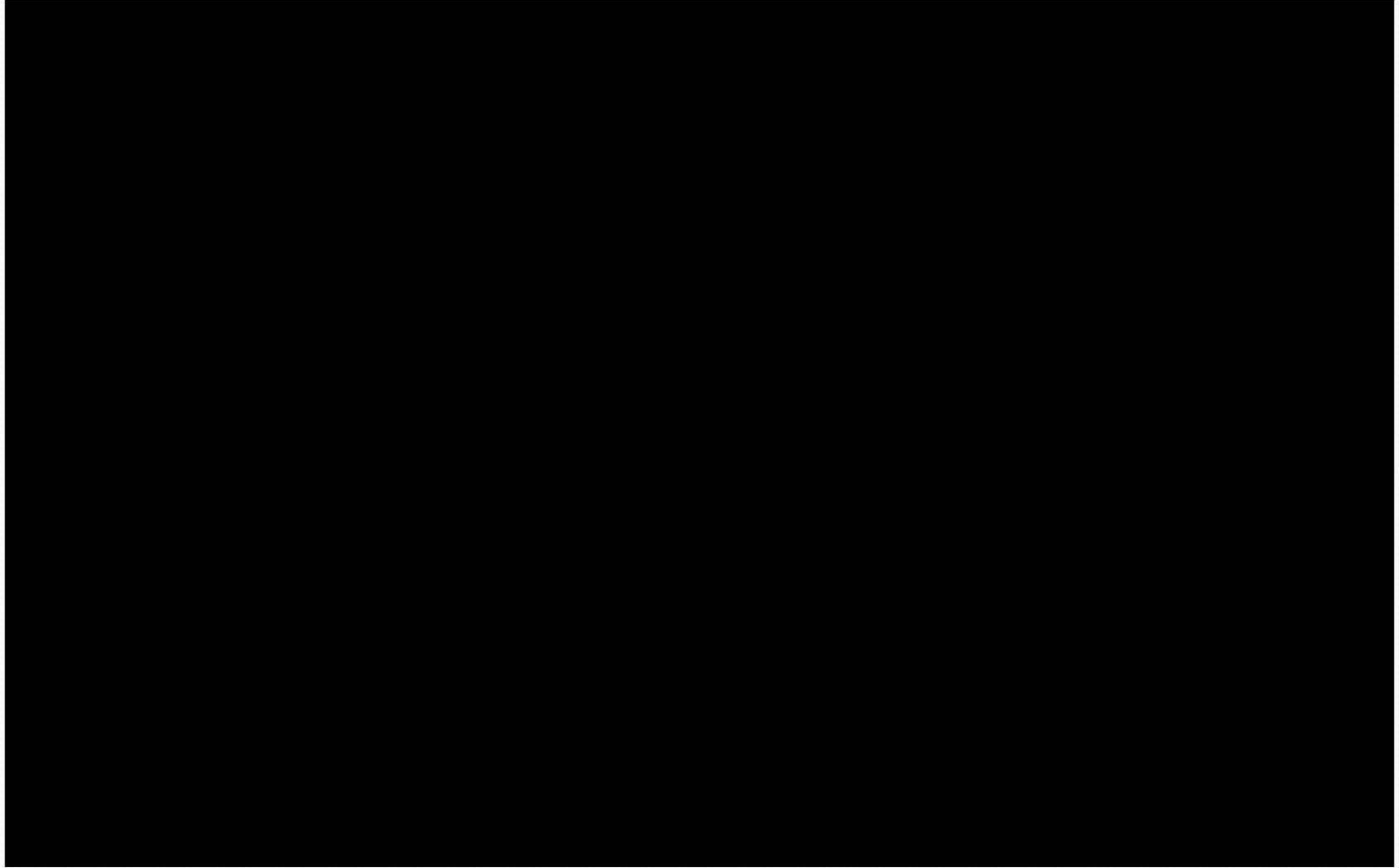
# We still don't know the size of the toxic plume. It is huge.



Yet they will only dig a little hole  
10' x 10' feet x 15' deep over one  
hotspot. The PCE is 35' deep



Here is the problem that we face today



# We need Complete Remediation not partial fixes.

Immediate soil excavation to 35' or more while further testing is done to determine the full size of the plume and continue with bioremediation, soil vapor extraction.

No active remediation has occurred since 2011 while the danger to our community continues.

We need results, not testing.



**We are counting on you.**





**From:** [James Nielsen](mailto:James.Nielsen@nielsenhalley.com)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards.ca.gov)  
**Cc:** [murphy1978y@comcast.net](mailto:murphy1978y@comcast.net); [billmcn@pacbell.net](mailto:billmcn@pacbell.net)  
**Subject:** Case No. 21S0053 - Marinwood Plaza Remedial Action Plan  
**Date:** Sunday, February 21, 2016 12:52:30 PM

---

Dear Mr. Lambert:

I understand you are with the San Francisco Bay Regional Water Quality Control Board and are considering a Remedial Action Plan that has been submitted to address the underground plume of toxic chemicals (primarily perchloroethylene) emanating from Marinwood Plaza (more specifically, the cleaners businesses that have been there over the years).

We in the Marinwood community understand that the RAP has been submitted on behalf of Marinwood Plaza's ownership group, which, as you have probably heard, has a poor reputation in the community. Recent meetings have disclosed that the RAP proposes remediation based on poorly designed testing (which, we infer, was deliberately so) that has failed to account for the impact of perchloroethylene subterranean vapors in the Casa Marinwood area or address the readily measurable contamination of aquifers extending from the Plaza eastwards underneath U.S. 101 into the ranchland beyond. The strong sense of the community is that the RAP is designed to permit a minimal and ineffective remediation effort for the purpose of reducing expense and permitting the ownership group to slough the problem on to a new owner -- perhaps a public or semi-public entity -- and to enhance the ownership group's negotiating leverage. Simply stated, the RAP does not amount to a sincere effort to protect the health and economic interests of the Plaza's neighbors and the local community.

I and many others respectfully urge that the Board reject the RAP. In this regard, a handful of leading members of the Marinwood community -- Ray Day in particular -- have expended a good deal of time and energy reviewing the proposal (and earlier evaluations), and I join in and defer to their more detailed comments and requests.

We appreciate your attention to these concerns and look forward to the Board's careful consideration of the pending RAP.

Sincerely yours,

Jim Nielsen  
Nielsen Haley & Abbott LLP, Lawyers  
100 Smith Ranch Road, Suite 350  
San Rafael, CA 94903  
direct dial: 415-248-0162

**From:** [Christine Nishinaga](mailto:Christine.Nishinaga)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Cc:** [billmcn@pacbell.net](mailto:billmcn@pacbell.net); [murphy1978y@comcast.net](mailto:murphy1978y@comcast.net)  
**Subject:** Marinwood Plaza Remedial Action (CASE #21S0053)  
**Date:** Sunday, February 21, 2016 10:21:07 PM

---

Attn: Mr. Ralph Lambert  
San Francisco Bay Regional Water Quality Control Board

I am a 22 year old college student who grew up less than a mile from the toxic site at Marinwood Plaza. I have heard that the owners of this site have submitted a remediation proposal (RAP) to the Water Board.

Our neighbors tell me that this RAP tries to do as little as possible while pushing full cleanup responsibilities to subsequent owners.

Please help protect my community from this dishonest ploy. Please require a full evaluation of the toxic contaminants and a full cleanup. Please reject the RAP.

My community wishes to build residences on this property and a half-hearted clean up will endanger the lives of the families that eventually live on this site.

Thank you,

Christine Nishinaga  
[2658 Las Gallinas Ave](mailto:Christine.Nishinaga)  
[San Rafael, CA. 94903](mailto:Christine.Nishinaga)

**From:** [Glenn Nishinaga](#)  
**To:** [bruce.wolfe@waterboards.ca.org](mailto:bruce.wolfe@waterboards.ca.org)  
**Cc:** [Lambert, Ralph@Waterboards](mailto:Lambert_Ralph@Waterboards)  
**Subject:** Marinwood Plaza Remedial Action (CASE #21S0053)  
**Date:** Saturday, February 20, 2016 7:10:01 PM

---

Attn: Mr. Bruce Wolfe, Executive Officer  
San Francisco Bay Regional Water Quality Control Board

I attended a community meeting where I learned of the proposal to clean up the toxic chemicals left behind by unscrupulous businesses using Marinwood [Plaza for the past 40](#) years. This proposal is known by the acronym RAP.

I do not believe the RAP is a sincere effort to protect the lives and economic interests of my community. The RAP is trying to do the bare minimum while not even doing a thorough test of the soils underneath the feet of Casa Marinwood residents. Accepting this RAP will turn our community into the toxic embarrassment of the county. Please listen to our community leaders like Mr. Ray Day. He tells me your water board will help protect our community if people like me speak up. Please help to insure that the plaza owners do not gain any negotiating leverage by accepting any part of the RAP.

Thank you,

Glenn Nishinaga  
[2658 Las Gallinas Ave](#)  
[San Rafael, CA. 94903](#)

**From:** [Keiko Nishinaga](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Cc:** [murphy1978y@comcast.net](mailto:murphy1978y@comcast.net); [billmcn@pacbell.net](mailto:billmcn@pacbell.net); [Wolfe, Bruce@Waterboards](mailto:Wolfe, Bruce@Waterboards)  
**Subject:** Marinwood Plaza Remedial Action (CASE #21S0053)  
**Date:** Saturday, February 20, 2016 7:50:51 PM

---

Attn: Mr. Ralph Lambert  
San Francisco Bay Regional Water Quality Control Board

I am a 84 year old Marinwood resident who has lived here for over 50 years. I love this community because it values the environment and we value our neighbors too.

I think the proposed cleanup plan (RAP) is unfair to my community and dangerous to the wildlife and children who come in contact with the Marinwood Plaza and nearby creek. Incomplete cleanup will also burden our community with future cleanup costs and lost property values.

Please stop the people who want you to accept the RAP. The people who own the Marinwood Plaza are a nameless, faceless group. I fear their motives because they hide behind anonymity.

Please stop them. I'm told that you protect the environment for the people and for the wildlife.

Please help our community.

Thank you,

Keiko Nishinaga  
205 Johnstone Dr  
San Rafael, CA. 94903

**From:** [Takako Nishinaga](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Cc:** [billmcn@pacbell.net](mailto:billmcn@pacbell.net); [Ray Day](#); [Wolfe, Bruce@Waterboards](mailto:Wolfe.Bruce@Waterboards)  
**Subject:** Marinwood Plaza Remedial Action (CASE #21S0053)  
**Date:** Sunday, February 21, 2016 12:13:28 PM

---

Attn: Mr. Ralph Lambert  
San Francisco Bay Regional Water Quality Control Board

I have lived in Marinwood for 30 years. I am shocked to now learn that I have been frequenting a toxic chemical site on a weekly basis. I have seen enough reports of similar sites to know how dangerous this situation is to our environment and to our lives.

I have learned that the RAP that describes a cleanup plan is woefully inadequate.

Without proper cleanup, our community will suffer a great blow to our reputation as a stellar place to live. My retirement depends on my health, my neighbors, and my home. All that is dear to me is put at risk with the RAP that is being sent to you for approval.

Please reject the RAP. Please listen to our community leaders like Mr. Ray Day.

Thank you,

Takako Nishinaga  
[2658 Las Gallinas Ave](#)  
[San Rafael, CA. 94903](#)

**From:** [Aaron O'Brien](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Comments on Geologica RAP, 187 Marinwood Ave., San Rafael, CA  
**Date:** Monday, February 22, 2016 1:33:22 PM

---

Dear Mr. Lambert,

I have some comments related to the ongoing Marinwood Plaza project at 187 Marinwood Ave. in San Rafael and thought I would send them in for your consideration. I've been reading about it in the local newspaper. I am a local environmental consultant running an environmental remediation firm called Tamalpais Environmental Consultants in Fairfax, California and have been curious to see the course of action for the property. I have worked with a variety of dry cleaner sites and agricultural properties and reviewed the RAP submitted by Geologica. I'm happy to see that there did not appear to be significant soil vapor transport toward local residents. Although the concentrations in groundwater are now relatively low, the data confirms the significant challenge for any potential groundwater cleanup because of the extent of the plume and migration beneath the freeway. I have a couple of comments related to both onsite and offsite impacts.

Impacted onsite soil vapor has been a source of potential indoor air intrusion to site tenants for years with a variety of minor engineering controls implemented to protect human health. While I haven't dived deeply into the historical files, the RAP seems to discount the possibility for soil vapor extraction (SVE) for onsite mass removal and to provide an engineering control for building occupants. I'd generally rather see the PCE removed before it had the chance to get into the existing buildings, rather than better ventilation after it gets into indoor airspace. The RAP only considers the use of active subsurface vapor control as a solution in future buildings rather than the existing buildings.

The proposed excavation could still be implemented for direct source removal but the extent of the soil vapor impacts far exceeds the excavation limits. Active SVE has the potential to meet multiple objectives and I think the implementation of SVE as an interim source control measure could be sufficient to delay the excavation until redevelopment projects were worked out. I think you have a tricky balance between keeping the community content with sufficient and timely action and being reasonable in your requirements. SVE might help bridge that gap.

Offsite groundwater impacts appear extensive and I don't think the RAP addressed remediation options sufficiently, even if natural attenuation is the final remedy selected. As you know, the plume extends into the Silveira Ranch, impacts a water supply well, and will likely continue to do so to some extent for decades. Groundwater extraction is unlikely to be worthwhile, but it could offer some protection for the drinking water well and plume containment. In-situ remediation of the groundwater also has the potential for at least some additional evaluation. It is also worth considering a new water supply well for residents that is far away from the plume or switching them to the municipal drinking water supply in the long-term.

The volatile organic compounds (VOCs) detected in groundwater already show some initial degradation from PCE to TCE and cis-DCE, likely indicating the initial stages of reductive dechlorination of the PCE in groundwater. The key to successful

implementation of an in-situ bioremediation project is the application of the electron donor across a significant portion of the aquifer or in remediation zones across the aquifer. We traditionally use wells for this, but this project may have the potential for surface or shallow surface applications to affect the aquifer as well, making some options far more affordable.

A variety of carbohydrate substrates can be used to promote the reductive dechlorination of PCE, including whey, emulsified vegetable oil, molasses, corn syrup, ethanol, chitin, and a laundry list of commercial products. Geologica used a high-end commercial product in the second phase of the eastern hot spot area remediation with good results. All of these substrates are capable of promoting the anaerobic conditions that are necessary for reductive dechlorination of the PCE to continue to non-toxic ethene. There are numerous advantages and disadvantages for these different electron donors and how they might be used. Many different sources can be effective as long enough organic carbon reaches the aquifer to promote the right kind of conditions...possibly even cow manure.

More intensive grazing activities on this pasture might have the chance to change the groundwater conditions, increasing organic carbon and creating anaerobic conditions in the aquifer that could promote the dechlorination of the PCE. A variety of composting techniques and watering might also be used to increase the transfer rate of organic carbon from the surface to the groundwater. Including organic carbon and ethene in the offsite groundwater monitoring program would be helpful in understanding whether complete dechlorination is occurring in the plume and the likelihood of the existing conditions to promote PCE degradation.

I sometimes use whey from a local cheese factory as an electron donor for PCE remediation. It can be an effective strategy and inexpensive compared with commercial electron donors that can cost over \$1,000 per drum. Microbes can also be added to foster complete and quicker dechlorination. You might end up with more vinyl chloride in the short-term, but that is generally short-lived and may be inevitable with the natural attenuation approach anyway. Vinyl chloride does tend to degrade both aerobically and anaerobically, so hopefully they will never see a buildup regardless of the chosen strategy.

I would be happy to discuss my comments. Feel free to contact me by email at [aaron@tamenv.com](mailto:aaron@tamenv.com) or by phone at (415) 456-5084. I look forward to seeing how things work out and hope you are able to find a solution that meets everyone's objectives. Good luck.

Sincerely,

Aaron O'Brien, PE  
President  
Tamalpais Environmental Consultants  
Fairfax, CA

**From:** [D Perry](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Cc:** [Bill McNicholas](#)  
**Subject:** Marinwood Plaza cleanup  
**Date:** Sunday, February 21, 2016 12:58:54 PM

---

Hello Mr. Lambert,

I would first like to thank you and your team for the presentation held recently in my community on the evening of February 10th. It was incredibly helpful and informative as well as much appreciated.

There is a petition from my community that you will be receiving but my opinion differs slightly from its wording and I would like to share with you my personal opinion of the situation. I think the cleanup of the area is of utter importance and allowing the PCE, and it's child components, to continue at the site, towards Casa Marinwood and through the Silveira ranch to the bay should not be acceptable. It seems to recently be moving quite quickly towards the sensitive bay as the toxins settle through the soil.

The initial proposed cleanup plan of the hot site at the existing cleaners should be approved without delay in my opinion. I do not agree the whole plan should be rejected, but only parts of it with the cleanup of the main pollution site addressed as soon as possible. However I feel this is only the initial phase of what should be a more aggressive cleanup plan overall. I believe calling this initial plan the tip of the iceberg would be an appropriate metaphor. It seemed from the presentation that the hotspot at the sidewalk area is being completely ignored. I would like to see that hotspot addressed in the near future, perhaps immediately following the cleanup of the dry cleaner location if they can't be done concurrently.

Additionally to address the fears of the residents of Casa Marinwood steps should be taken to prevent the spread of toxins via utility lines and other environmental paths. Also there should be a testing plan in place to confirm the toxins have not already spread into the community as has been presented and that they haven't spread there in the future. If possible perhaps testing within residences can be done along potential toxin pathways. I think this would go a long way in addressing peoples fears and help the residents live more comfortably. Despite the valuable information presented by the CAEPA toxicologist and Geologica many people need additional reassurance.

Also of concern is the spread under the highway through the Silveira ranch. Not only is the well water poisoning and pasture land of the cows of concern the Miller Creek runs through there and further along is a church, a dance school, an elementary school, a home for troubled youth and a location for homeless relief. On top of this there could be other entities I'm simply not aware of, but I do know that shortly after this location is the bay. Just letting these toxins spread through the site towards the bay for the next few decades for natural attenuation seems grossly irresponsible. Another way to look at it would be to spread the toxins out across the land for the next 50 years until it goes away. Who is that helping? This does not seem like a reasonable solution. I do not have any connection to the Silveira's, but my daughter does attend the dance school there so I do have a personal connection to the area.



The plan overall must include preventing the spread of the plume. Cleanup of hotspots and stopping the spread of the current plume is the only way to make natural attenuation an acceptable cleanup option. Allowing it to spread and then attenuate is not an option I would support. I will admit to not knowing all there is to cleanup but I do believe it can be done and be managed responsibly. I'm confident the RWQCB will choose the best option for the safety of the community and the sensitive environment it resides.

Thank you for your time. If you would like to discuss any further please feel free to email me.

Damien Perry  
685 Appleberry Dr.

**From:** [Barbra Rosenstein](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** Remediation Action Plan for Marinwood Plaza  
**Date:** Thursday, February 18, 2016 9:51:58 AM

---

Dear Mr. Lambert-

I am a homeowner and more importantly, mother of two young girls, in Marinwood on Heatherstone. I am writing to express my comments in regards to the clean up of toxic spills at Marinwood Plaza so that our children and community can live with peace of mind that our water supply is clean.

1. Clean up at source of contamination has a definitive deadline
2. Full excavation of the entire source of contamination
3. Clean up levels safe for both residential and commercial exposure
4. Groundwater should be fit for all uses at Silveira Ranch

Thank you for your consideration of my comments.

Barbra Rosenstein  
2579 Heatherstone Drive

February 22, 2016

Ralph Lambert, PG, CHg  
San Francisco Regional Water Quality Control Board  
1515 Clay Street  
Suite 1400  
Oakland, CA 94612

**Subject: Review of Proposed Remedial Action Plan for  
Former Prosperity Cleaners Site**  
Marinwood Plaza Shopping Center  
187 Marinwood Avenue  
Case #21S0053  
San Rafael, California

Dear Mr. Lambert:

I have been asked by Lorraine F. Silveira, trustee of the Anthony F. Silveira and Lorraine F. Silveira 2002 Trust, and her attorney to review and provide comments on the proposed Remedial Action Plan (RAP) dated December 29, 2015, prepared by Geologica on behalf of the responsible party, Marinwood Plaza, LLC. I have the following comments and concerns with respect to the RAP and its proposed response to the offsite migration of the tetrachloroethylene (PCE) plume onto the Silveira property.

The “Monitored Natural Attenuation” (MNA) proposed in the RAP (at pp. 29-30) is a passive and insufficient response to the residual PCE and other volatile organic compound (VOC) contamination that is both en route to the Silveira property and found within the soils and groundwater in a portion of the Silveira property. The reasons, as well as recommendations for appropriate measures, are discussed below.

1. The effectiveness of natural attenuation of the down-gradient plume is dependent on a number of factors. These include timely completion of in-situ soil remediation and reduction of PCE levels in the source areas, both in the area of the former dry cleaning machine located in the former dry cleaners facility and at the eastern “hot spot.” The additional remediation proposed in the RAP addresses soil contamination levels under the former dry cleaning building without directly addressing groundwater contamination. Prior in-situ remediation did lower a portion of the PCE and other VOC impacts to soil and groundwater (at the eastern hot spot but not under the building). This approach leaves untreated a persistent groundwater plume with PCE levels above the remedial objectives, for which the RAP proposes MNA as the preferred remedial approach.

2. Monitored Natural Attenuation, by itself, will not timely eliminate the current PCE groundwater contamination of the Silveira property or the risk to Silveira's drinking water supply. This can be demonstrated by looking at the current shallow groundwater gradient at the Marinwood Plaza site (approximately 0.0042 ft./ft.=i), and using medium-grained sand to estimate a hydraulic conductivity (K, which is estimated at approximately 39 ft./day), and an estimated effective porosity of 0.30 (n). Calculating a simple Darcy velocity ( $=V_{\text{Darcy}}= ki/n$ ) by multiplying hydraulic conductivity by the gradient, a velocity for groundwater of approximately 0.5516 ft. per day is obtained. From the calculated velocity of groundwater, an estimated time for one natural pore volume turn-over (i.e., the time it would take for groundwater to travel from the source to the current end of the plume, about 1,950 feet) is approximately 10 years. It is not expected that one pore volume of groundwater passing through the site will reduce the contaminate concentration sufficiently. In fact, due to likely contaminant retardation several pore volumes will be required over decades (assuming no further contribution from the source area) to achieve an acceptable result.

This means that MNA will be required for tens of years if no other remediation is applied, and possibly for a longer period of time if there continues to be a contribution of PCE contamination from an upgradient source area that is not fully remediated, and if measures are not taken now to prevent VOC-contaminated groundwater from continuing to migrate offsite onto the Silveira property. At best, MNA by itself will take decades to achieve – imposing an unnecessary long-term risk to Silveira, the impacted down-gradient property owner who depends on the property's groundwater for the domestic wells serving the dairy facility, employee homes and livestock.

3. Moreover, no data are presented in the RAP by Geologica for the purpose of analyzing potential bioremediation techniques to treat and eliminate the VOCs in the affected groundwater within a portion of Silveira's land. No studies of groundwater chemistry or bacterial type and counts are presented by Geologica in the RAP or feasibility analysis. It is also significant that the PCE daughter products in the groundwater samples on the Silveira property appear to be low to non-detected and generally do not show degradation past cis 1,2 DCE. This is a typical stalling point in the degradation of chlorinated hydrocarbons by natural biologic processes. Sites that exhibit stalling at cis 1,2 DCE (and at vinyl chloride) are most likely deficient in the dehalococcoides family of bacteria (a bacteria that can facilitate the total degradation of chlorinated hydrocarbons). MNA typically assumes bio-degradation is active along with other forms of attenuation. However; if the site is experiencing a degradation stall, the only contaminant attenuation will be dilution and pore volume turnover which will then need decades to lower concentrations to acceptable drinking water levels.
4. The Water Board should require an enhanced bio-degradation remedy be screened as a feasible alternative to Monitored Natural Attenuation. Rather than endorse a passive MNA approach to the contaminants on private property, the

RAP should implement an enhanced bio-degradation remedy designed to reduce the time of plume remediation. Such an approach has been used and followed at other sites in California and can and should be employed in this case. The approach would include **several lines of treatment zones, both up-gradient from and on the Silveira property**, perpendicular to the flow of groundwater toward and across the Silveira property. An up-gradient treatment zones should be located immediately adjacent to and down-gradient from the eastern “hot spot”. In addition, a treatment zone should be placed outside the Silveira property on the east side of Highway 101 in such a way as to intercept groundwater prior to entering the Silveira property. The treatment zones should be designed to prevent further migration of PCE and daughter products onto the Silveira property from the known source areas and to treat the groundwater beneath the Silveira property in a timely manner.

Properly designed and implemented, the system could reduce plume treatment and attenuation to several years (with optimal spacing of the treatment zones and groundwater flow velocity) rather than tens of years. An understanding of the groundwater chemistry and bacterial makeup would first be required, but it appears that this analysis has not been performed to date by Geologica. A common practice in California to enhance degradation using a combination of chemical and biologic treatments (zero valent iron (ZVI) with carbon substrate and dehalococoides bacteria has demonstrated good success at reducing the dissolved phase VOC load in shorter time frames. (See the article below for a good explanation of ZVI: <http://www.calpoly.edu/~ceenve/enve/jsczechowski/enve436/projects/Zv/Zero-Valent.html>; SGI Bulk Chemical and Storage Site, Sunnyvale, CA, in 2002; SGI Dry Cleaner Site, Gardena, CA, in 2012).

5. Given the call out for well-head treatment of Silveira’s well next to Miller Creek, the RAP should provide a guarantee of long-term monitoring and long-term well-head treatment for that well. Silveira’s other existent well and any future wells on the Silveira property should be monitored on a quarterly basis for PCE and its daughter products until the Silveira property is deemed free of contamination from the Marinwood Plaza dry cleaner’s site. Well-head treatment must be employed where necessary on the Silveira property. The Water Board should expressly require that all financial and operational costs of such sampling and well-head treatment are to be borne by Marinwood Plaza and/or any successor in interest after the site is sold.
6. Although no contaminants have been found in Miller Creek, the plan to sample further downstream is important. This is because the current sample points may not be below the actual interception of the plume with the creek.

Groundwater is a critical resource to the Silveira Ranch, not only as current but also future additional sources of drinking water. As such, the Water Board should require the implementation of more active remedial measures to reduce PCE levels in the

groundwater to the compliant Maximum Contaminant Levels (MCLs) and to reduce the corresponding time frame for that to occur (i.e., the stated goal for the project site). As previously noted, with an MNA approach, the plume will be at concentrations above the MCLs for several of the VOCs for decades. As outlined above, requiring more active forms of remediation to be implemented -- at the source site, the Silveira property and in between -- could greatly reduce the time frames to several years with an end to the groundwater contamination in a much shorter and more reasonable time frame. In the interim, the Water Board should require the responsible party to commit to funding and ensuring a continuous supply of clean drinking water to the ranch until compliance with the MCLs is fully achieved.

Thank you for this opportunity to comment on the proposed RAP for the Marinwood Plaza Prosperity Cleaners site.

Respectfully submitted,  
**The Source Group, Inc.**

A handwritten signature in blue ink, appearing to read "Fred Clark", written in a cursive style.

Fred Clark P.G. #4802  
Principal Geologist  
The Source Group, Inc.

cc: Lorraine and Renee Silveira  
David W. Trotter, Esq.

**From:** [Jonathan Spott](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Cc:** [Damon Connolly](#)  
**Subject:** Marinwood Plaza Cleanup .... or "Lack of action" by owners!  
**Date:** Tuesday, February 09, 2016 3:59:19 PM  
**Importance:** High

---

Hello Ralph - I have been a Marinwood resident since 1991, and I have enjoyed SUPPORTING OUR LOCAL COMMUNITY and the Marinwood Plaza over the last 25 years!

I have attended several meetings over the issue of CLEAN-UP / DEVELOPMENT of this Marinwood center, which has been a constant discussion with our neighbors.

It is totally UNACCEPTABLE to watch the continued delays by the Hoyt Trust, or whomever the current owners are in dealing with the CLEAN-UP. The ownership has continued to stall on this important cleanup, a recognized HEALTH RISK, which was ordered long ago.

I completely support Marinwood Market, and Save More Liquors - the only current tenants in this "broken down center". The lack of clean up and development is hurting the current tenants, local residents and the HEALTH STANDARDS for residents around the Marinwood Center.

I am sure this process for public input is important, but when will all parties have enough information??

In my view, the evidence continues to remain:

Dry Cleaner destroyed the property with unwise disposal of toxic chemicals  
Land Owner is responsible for clean up ordered years ago, but continues to delay clean-up.

Marinwood residents are hostage to the many lawyers, environmental studies ordered to prove what has been stated - PROPERTY NEEDS TO BE CLEANED UP!  
The development of the center will be the best plan approved by all involved, but CLEAN-UP IS CRITICAL, and the responsibility of Land Owner.  
The County and Water Dept. have the information, and if you have any input..... PLEASE use the necessary force to get land owner moving forward ASAP!

I have grown up in the Bay Area, and in my 40+ years as a VOTING resident, I am unaware of another small community center that has been mired in such a MESS!

Marin County should continue their standard of excellence .... we are not FLINT, MICHIGAN!!!!

Thank you and Damon Connolly for your continuing efforts ...

***Jonathan Spott***  
***Pacific Contract Group***

email: [jspott.PCG@gmail.com](mailto:jspott.PCG@gmail.com)

cell: 415.613.0001

*Representing Contract Furniture Manufacturers  
In Northern California & Northern Nevada*

**From:** [Pierre Terrier](#)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards)  
**Subject:** MarinWood plaza Rap report.  
**Date:** Sunday, February 21, 2016 10:38:54 PM

---

Pierre Terrier

7 Pueblo Drive  
Casa Marin  
San Rafael, CA., 94903

Casa Marin, 2/21/2016

Gentlemen and Ladies,

Thank you for having this town meeting and a great presentation.

I support all the comments made by Supervisor Damon Connolly on what needs to be done about the MarinWood Plaza RAP report.

I also would like what ever remediation you recommended to be implemented as soon as possible but not be considered as a final solution to the issue at end.

Sincerely, Pierre terrier



February 10, 2016

**Silveira Family Comments on the  
Proposed Remedial Action Plan for  
Former Prosperity Cleaners Site**  
Marinwood Plaza Shopping Center  
187 Marinwood Avenue  
Case #21S0053  
San Rafael, California

The Silveira family has reviewed the proposed Remedial Action Plan (RAP) dated December 29, 2015 prepared by Geologica on behalf of the responsible party, Marinwood Plaza, LLC. They have a number of comments and serious concerns with respect to the RAP and its proposed response to the offsite migration of the tetrachloroethylene (PCE) plume which has contaminated the groundwater on the Silveira Ranch.

Moreover, the Silveira family's concerns are supported by a technical review of the RAP which has been undertaken by Fred Clark, P.G., of the Source Group, Inc. (SGI). Mr. Clark's written comments on the proposed RAP will be submitted to the Water Board in a separate letter in the next few days.

The key point here is this: The "Monitored Natural Attenuation" (MNA) proposed in the RAP (at pp. 29-30) is a passive and insufficient response to the residual PCE and other volatile organic compound (VOC) contamination that is both en route to the Silveira property, and is already within the soils and groundwater on a portion of the Silveira property. There are a number of reasons for this, which are discussed below.

1. The effectiveness of natural attenuation of the down-gradient plume is dependent on a number of factors. These include **timely completion of in-situ soil remediation and reduction of PCE levels in the source areas, both in the area of the former dry cleaning machine and at the eastern "hot spot"**. The additional remediation proposed in the RAP addresses soil contamination levels under the former dry cleaning building without directly addressing groundwater contamination. Prior in-situ remediation did lower a portion of the PCE and other VOC impacts to soil and groundwater. However, that leaves untreated a persistent groundwater plume with PCE levels above the remedial objectives, for which the RAP proposes MNA as the preferred remedial approach. **This is not an acceptable outcome for the Silveira family.**
2. Monitored Natural Attenuation, by itself, will not timely eliminate the current PCE groundwater contamination of the Silveira property or the risk to Silveira's drinking water supply. This can be demonstrated by looking at the current groundwater gradient at the Marinwood Plaza site, and using an estimate of medium-grained

sand for a hydraulic conductivity. Mr. Clark has made this calculation. He has concluded that the estimated time for one natural pore volume turn-over (i.e., the time it would take for groundwater to travel from the source to the current end of the plume, about 1,950 feet) is **approximately 30 years**. This means that MNA will be required for tens of years if no other remediation is applied. **Indeed, it will take even longer if there continues to be a contribution of PCE contamination from an upgradient source area that is not fully remediated, and if measures are not taken now to prevent VOC-contaminated groundwater from continuing to migrate offsite onto the Silveira property.**

3. Moreover, no data are presented in the RAP for the purpose of discussing appropriate bioremediation techniques to eliminate the VOCs in the affected groundwater within a portion of the Silveira family's land. No studies of groundwater chemistry or bacterial type and counts are presented in the RAP or feasibility analysis. It is significant that the PCE daughter products in the groundwater testing on the Silveira property appear to be low to non-detected, and generally do not move past cis 1,2 DCE. This data suggests that MNA will take decades to achieve. That is hardly a reasonable outcome for the Silveira family, the impacted down-gradient property owner who depends on their groundwater for the domestic water wells serving their facility, employee homes and livestock.
4. **The Water Board should require an enhanced bio-degradation remedy as a feasible alternative to Monitored Natural Attenuation. This is another important aspect of the comments which will be submitted by Mr. Clark.** Rather than endorse a passive, MNA approach to the contaminants on private property, the RAP should implement an enhanced bio-degradation remedy designed to cut down the time of plume attenuation. Such an approach has been used and followed at other sites in California, and can and should be employed in this case.

The approach would include lines of treatment zones perpendicular to the flow of groundwater, including an interactive treatment barrier immediately adjacent to and down gradient from the eastern "hot spot" and another on the east side of Highway 101 at the Silveira property line. Such treatment zones can and should be designed to prevent further migration of PCE and other VOC contaminants onto the Silveira property from the known source areas. Properly designed and implemented, the system could reduce plume treatment and attenuation to several years (with optimal spacing of the treatment zones and groundwater flow velocity) rather than decades. An understanding of the groundwater chemistry and bacterial makeup would first be required. We are advised that it is common knowledge that a combination of chemical and biologic treatment is being used at many sites in California with good success at reducing the dissolved phase VOC load in shorter time frames.

5. The RAP should provide a guarantee of continuing and long term well head treatment for any groundwater development (north or south of the creek) by the Silveira Ranch, since such well head treatment is called out for the one well south of the creek. The Water Board should expressly require that all financial and operational costs of such well head treatment are to be borne by Marinwood Plaza and/or any successor in interest after the site is sold.
6. Although no contaminants have been found in Miller Creek, the plan to sample further downstream is important. This is because the current sample points may not be below the actual interception of the plume with the creek. If the creek is threatened, then as a sensitive receptor a more aggressive approach to remediation and protection would be in order.

Groundwater is a critical resource to the Silveira Ranch, not only as current but also future additional sources of drinking water. **The Water Board should require the implementation of more active remedial measures to reduce PCE levels in the groundwater to the compliant MCLs and to reduce the corresponding time frame for that to occur (which is, after all, the stated goal for the project site).** As previously noted, the plume will be at concentrations above the Maximum Contaminant Levels (MCLs) for several of the VOCs for decades.

Requiring more active forms of remediation to be implemented, both at the source and on or adjacent to the Silveira property, as outlined above, could greatly reduce the time frames to several years with an end to the groundwater contamination in a much shorter and more reasonable time frame.

In the interim, the Water Board should require the responsible party to commit to funding and ensuring a continuous supply of clean drinking water to the ranch until compliance with the MCLs is fully achieved.

Thank you for this opportunity to comment on the proposed RAP for the Prosperity Cleaners site.

Respectfully submitted,

David W. Trotter

Law Offices of David W. Trotter

**From:** [david.trotter](mailto:david.trotter)  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert_Ralph@Waterboards)  
**Cc:** [Fred Clark](#); [Renee](#)  
**Subject:** Review of Proposed Remedial Action Plan for the Former Prosperity Cleaners Site, Marinwood Plaza Shopping Center (Water Board Case No. 21S0053)  
**Date:** Monday, February 22, 2016 9:16:08 AM  
**Attachments:** [SGI Comment Ltr Prosperity Cleaners Project feb 16.pdf](#)

---

Dear Mr.Lambert:

Thank you for this opportunity to submit written comments on the proposed Remedial Action Plan (RAP) dated December 29, 2015, prepared for Geologica on behalf of the designated responsible party, Marinwood Plaza, LLC. These comments are submitted on behalf of Lorraine F. Silveira, Trustee, who owns the Silveira ranch property located downgradient from the former Prosperity Cleaners site.

Briefly, our comments are as follows:

1. At the February 10, 2016 Marinwood community meeting, Stephen Hill stated that Water Board staff had completed their initial review of the proposed RAP and identified "three deficiencies." One of these deficiencies was the RAP's failure to evaluate "active groundwater clean-up options" -- i.e., its reliance solely on Monitored Natural Attenuation (MNA) to reduce the elevated levels of tetrachloroethylene (PCE) that has migrated through the groundwater and is now polluting the groundwater on the Silveira ranch property on the east side of Highway 101. As the Water Board is well aware, that groundwater is a source of drinking water for Silveira's dairy facility, employee homes and livestock.

We agree that the Monitored Natural Attenuation proposed in the RAP is a passive and insufficient response to the residential PCE and other VOC contamination that is both en route to the Silveira property and also found within the soils and groundwater on a portion of the Silveira property. Some of the technical reasons why MNA is a deficient response to the existing contamination are set forth in a February 16, 2016 letter written by Fred Clark, P.G., of The Source Group, Inc. A copy of Mr. Clark's comment letter is attached hereto and all of the comments set forth therein are incorporated here. As Mr. Clark makes clear:

- MNA will not timely eliminate the current PCE groundwater contamination of the Silveira property or the risk to Silveira's drinking water supply. **Based on the calculated groundwater velocity, it will take approximately 30 years for groundwater to travel from the PCE source to the current end of the plume on the Silveira property (approximately 1,950 feet). This means that MNA will be required for tens of years if no other remediation is applied, and possibly even longer if PCE contamination at the source is not fully remediated and continues to migrate offsite from the upgradient dry cleaner site** - i.e., under Highway 101 (where existing elevated PCE levels have not been remediated) and onto the Silveira property. Measures need to be taken now to prevent VOC-contaminated groundwater from continuing to

migrate onto the Silveira property. The proposed RAP does not do this, and thus it imposes a unnecessary long-term and unmitigated risk on the Silveira family and their property.

- Geologica has presented no data in the RAP that analyzes potential bioremediation techniques to treat and eliminate the VOCs impacting the groundwater on Silveira's land. No studies of groundwater chemistry or bacterial type or counts are presented by Geologica in the RAP or feasibility analysis. Moreover, the available data indicates that the PCE daughter products in the groundwater samples taken on the Silveira property are low to non-detect, suggesting that natural biologic processes for breaking down these VOCs and reducing the risk to groundwater are stalling at the cis 1,2 DCE point. The application of MNA typically assumes that bio-degradation is active along with other forms of attenuation. With a bio-degradation stall, the amount of time required to reach acceptable drinking water levels by MNA alone will take even longer. Again, this is not an acceptable outcome for the Silveira family and it should not be supported by the Water Board here.
- To address these deficiencies in a passive MNA approach, **the Water Board should require that the RAP implement an enhanced bio-degradation remedy designed to reduce the time frame for remediation of the PCE plume.** Mr. Clark has outlined an approach involving **several lines of treatment zones, perpendicular to the groundwater flow toward and across the Silveira property. These several treatment zones would include, without limitation, a treatment zone immediately adjacent to and downgradient from the "eastern hot spot" on the former Prosperity Cleaners site, and another outside the Silveira property on the east side of Highway 101 to intercept PCE-contaminated groundwater before it enters the Silveira property.** The remedial approach recommended by Mr. Clark has had good success at other VOC-contaminated sites in California. **Requiring its prompt implementation in the RAP here would be very consistent with the comments made Mr. Hill at the February 10 community meeting.**
- The RAP should also provide a guarantee of long-term wellhead treatment all of Silveira's existing drinking water wells and any future wells on the Silveira property, and a guarantee of long-term monitoring of all wells on a quarterly basis for PCE and its daughter products until the Silveira property is deemed free of contamination from the Marinwood Plaza dry cleaner's site. **The Water Board should expressly require that all financial and operational costs of such wellhead treatment and sampling are to be borne by Marinwood Plaza and/or any successor in interest after the site is sold.**

2. The Silveira family is also supportive of the petition presented by the Marinwood neighborhood group. That petition urges the Water Board, before any RAP is approved, to require Marinwood Plaza to implement an Intermediate Action Plan to aggressively remove the toxic hotspots on the former Prosperity Cleaners site. Consistent with that petition, the Water Board should also insist on full and aggressive remediation of the toxic hotspots at the Marinwood Plaza site while

methods for actively remediating the offsite contamination, whether it be groundwater or soil vapor, are identified for timely remediation.

3. Finally, to date the Water Board has identified Marinwood Plaza, LLC as the party responsible for the clean-up of the contamination emanating from the former dry cleaner's site. Information on the California Secretary of State website indicates the existence of a second Marinwood Plaza entity - "Marinwood Plaza II LLC" - which may well be another potentially responsible party in this case. It would be appropriate for the Water Board to make follow-up inquiries and investigations on this point.

Thank you again for this opportunity to comment on the proposed RAP.

Very truly yours,

David W. Trotter  
119 Allen Court  
Moraga, CA 94556  
Telephone: (925) 876-1503  
E-mail: [david.trotter@dtrotterlaw.com](mailto:david.trotter@dtrotterlaw.com)

**From:** <[RosinaWilson.com@gmail.com](mailto:RosinaWilson.com@gmail.com)>  
**To:** [Lambert, Ralph@Waterboards](mailto:Lambert.Ralph@Waterboards); [Rosina Wilson](mailto:Rosina.Wilson)  
**Subject:** Marinwood Toxic Waste Cleanup –  
**Date:** Monday, February 22, 2016 11:58:21 PM

---

As a breast-cancer survivor, living in Casa Marinwood, I am personally concerned about thronging toxic waste that still remains on the site of the former Prosperity Cleaners.

The current Remediation Plan is deeply flawed, and it does *\*not\** take the well-being of our neighborhood into account – quite the opposite, in fact. It favors the Plaza owner, who have been remiss in complying.

I add my voice to those of my neighbors in urging you to *\*reject\** the RAP proposal and listen to Marinwood citizens.

Respectfully,  
Rosina Wilson  
9 Seville Drive  
Casa Marinwood

--

**Rosina Wilson**  
[www.DrinkWineWithDinner.com](http://www.DrinkWineWithDinner.com)

Author of the *Drink Wine With Dinner*® series of digital and print books

~~~~~

***Let's Connect ~***

Email ~ [Rosina@DrinkWineWithDinner.com](mailto:Rosina@DrinkWineWithDinner.com)

Blog ~ [www.DrinkWineWithDinner.com](http://www.DrinkWineWithDinner.com)

Facebook ~ <http://www.facebook.com/DrinkWineWithDinner>

LinkedIn ~ <http://www.linkedin.com/in/RosinaWilson>

Twitter ~ <https://twitter.com/DrinkWineEbooks>

YouTube ~ <http://www.youtube.com/user/DrinkWineWithDinner>

~~~~~

**CLEANUP MARINWOOD PLAZA NOW  
OVERSIGHT COMMITTEE**

**COMMUNITY PETITIONS SUPPORTING  
REJECTION OF THE PROPOSED REMEDIAL  
ACTION PLAN SUBMITTED BY GEOLOGICA**



**Petition Supporting the Cleanup Marinwood  
Plaza Now Oversight Committee Documents  
Recommending Rejection of the RAP *see reverse***

PAGE 01

5178

FEDEX OFFICE

415-491-0353

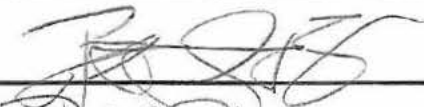

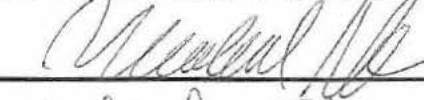

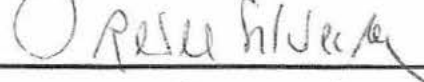
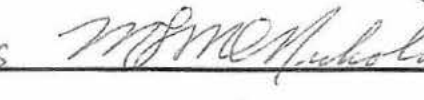



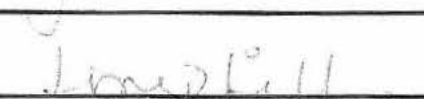
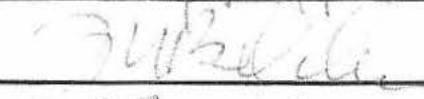



11:30

02/21/2016

NAME	SIGNATURE	PHONE	EMAIL
MAN BLAS	<i>[Signature]</i>	415-515-1776	<i>anglosofmail.com</i>
Bob Trapp	BOB TRAPP	707-864-6781	
JON HOLLOWAY	<i>[Signature]</i>	415-456-9670	JON.HOLLOWAY@SOL.COM
DELLA HOLLOWAY	<i>[Signature]</i>	415-456-9670	DPHOLLOWAY@ATT.NE
Cristina Holloway	<i>[Signature]</i>		
RICHARD LYON	<i>[Signature]</i>	510-913-2283	
NEIL KAAKE	<i>[Signature]</i>	510 307 5906	NEIL.KAAKE@COMCAST.NE
JUAN CESPEDES	<i>[Signature]</i>	415-740-9565	
Jayce T. Thompson	Jayce T. Thompson	415-924-2283	
Ray Piro	<i>[Signature]</i>	415-453-6949	
Marcia Piro	Marcia Piro	415-453-6949	
Lori Piombo	Lori Piombo	707-280-6718	
Guy Piombo	<i>[Signature]</i>	707-280-6718	
John Sweeney	<i>[Signature]</i>	415-902-7519	
Fersia Matine	<i>[Signature]</i>	415-845-8774	



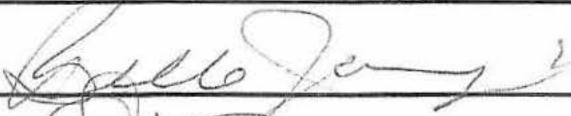



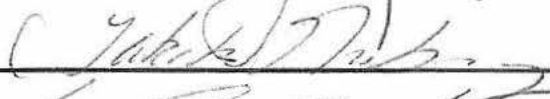

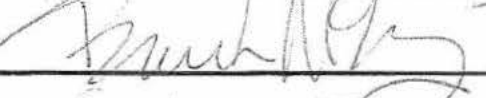

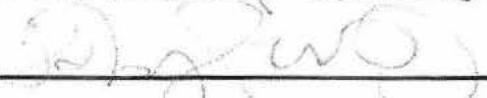


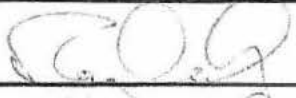
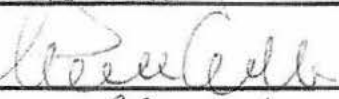
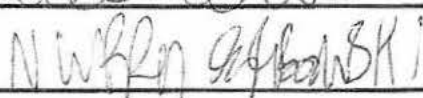
# Petition Supporting the Cleanup Marinwood Plaza Now Oversight Committee Documents Recommending Rejection of the RAP

NAME	SIGNATURE	PHONE	EMAIL
PIETE STOUT		415 4910911	SKM500@yahoo.com
BILL SHEA		415 717 9057	DIPETROSHEA@SPRGLOBAL
Michael Harris		415 4928282	dmikeh49@juno
Gabriela Shea		415 613 4880	gabshea@comcast
RESA Fildera		415-472-7496	rfsilver@comcast.net
Marilyn McNicholas		415 497 4102	---
Kym McNicholas		415-233-2730	Kymon24@yahoo.com
Les Boring		415-939-5009	lboring@masd.org
Sharlene Moss		415-225-6559	---
JOEL MOSS		415 223-6559	---
Linda Myhill		415-990-0931	---
James Bolden		510-479-6412	---
Kirk Beckstrom		415-502-0521	---
Terr Beckstrom		415-502-0521	---

# Petition Supporting the Cleanup Marinwood Plaza Now Oversight Committee Documents Recommending Rejection of the RAP

NAME	SIGNATURE	PHONE	EMAIL
John M. King 1194 IDILLBERRY RD San Rafael, CA	<i>John M. King</i>	415-479-7716	
Thomas Cole	<i>Thomas Cole</i>	415-499-1652	
Jeffrey Cohen	<i>Jeffrey Cohen</i>	415-441-8218	JEFFCO@CETREN.COM
Roy Belcher	<i>Roy Belcher</i>		
Consuelo Belcher			
Justin Rod	<i>Justin Rod</i>	415-798-1880	
Regina Weldon	<i>Regina Weldon</i>	415-382-1338	
Susan Lewis	<i>Susan Lewis</i>	415-497-7962	
Anita Nagel	<i>Anita Nagel</i>	415-290-1045	Anita.Nagel@gmail.com
ZVIKA GREENSFIELD	<i>Zvika Greensfield</i>	415-247-8209	DOCTORWHEAD@GMAIL.COM
NICOLE JANSON	<i>Nicole Janson</i>	415-786-0950	njanson@gmail.com
Samuel F. Barnum	<i>Samuel F. Barnum</i>	415-847-7619	SamBarnum@earthlink.net

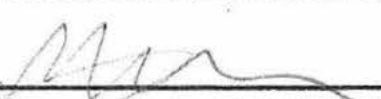


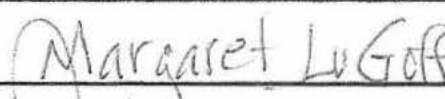

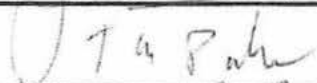
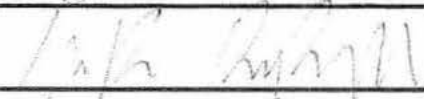
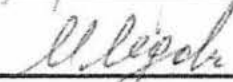


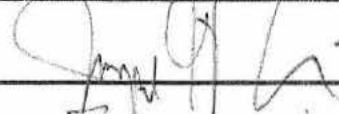
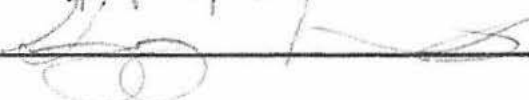
**Petition Supporting the Cleanup Marinwood  
Plaza Now Oversight Committee Documents  
Recommending Rejection of the RAP**

NAME	SIGNATURE	PHONE	EMAIL
Bete Jacopi		415-265-1194	Betejacopi@aol.com
Gordon Jacopi		415-265-1194	
Justin Jacopi		415-246-6607	Justin.jacopi@gmail.com
Roman Jacopi		415-892-2783	Roman.jacopi@gmail.com
TAKAKO NISHINAGA		415-492-9538	takako_cal@hotmail.com
Glenn Nishinaga		415-492-9538	gnishinaga@hotmail.com
Randon McLaugh		415 686-8526	bruce1023@yahoo.com
Kimberly Bell		415-847-3403	kjbell@coloradomail.com
Johanna Reed		415-300-6404	johannareed@comcast.net
JAMES ROBERTS		415 328 2821	
Melinda Thurston		415-776-7469	
Ray Decker		(415) 717-9380	
Monica Carter		(415) 816-1048	
Nicholas Grabowski		415 717 2173	waff20-grabowski@yah.com


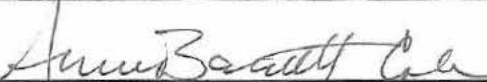

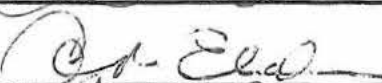
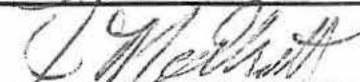

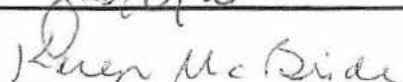
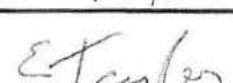

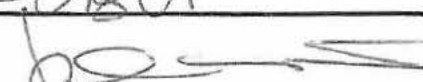


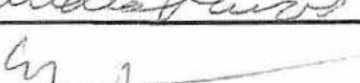

# Petition Supporting the Cleanup Marinwood Plaza Now Oversight Committee Documents Recommending Rejection of the RAP

NAME	SIGNATURE	PHONE	EMAIL
Michelle Johnson	<i>Michelle Johnson</i>	415 577-4414	MichelleJohnson@earthlink.net
Mutalea Kowalski	<i>Mutalea Kowalski</i>	415 840-0651	
Wayne Ebbert	<i>Wayne Ebbert</i>	415 957-1482	weebert@earthlink.net
Michael Braunkopf	<i>Michael Braunkopf</i>	415-578-3519	braunm@msg.sfsf.edu
Angie Ruiz	<i>Angie Ruiz</i>	(415) 479-8432	
Arlinda Shea	<i>Arlinda Shea</i>	(415) 472-4330	arlshea@aol.com
Todd Stengel	<i>Todd Stengel</i>	(415) 479-4465	rstengel@rocketmail.com
Rachel Stengel	<i>Rachel Stengel</i>	415) 479-4465	" "
Steve Farac	<i>Steve Farac</i>	415 472 5069	
FRED NIMS	<i>Fred Nims</i>	" 472-3337	
Mike Broderick	<i>Mike Broderick</i>	83(345 3585)	
Carl Gorman	<i>Carl Gorman</i>	415 5679711	
Bob Gerhold	<i>Bob Gerhold</i>	415-507-9770	
Greg Berlin	<i>Greg Berlin</i>	415-492-8957	Gth94@aol.com
Alex Berlin	<i>Alex Berlin</i>	415-992-9157	






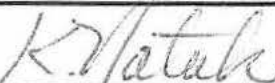
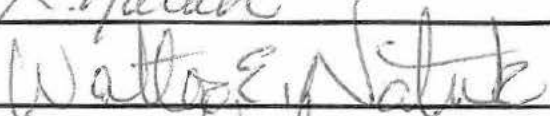
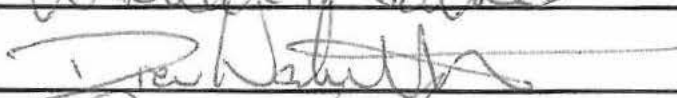
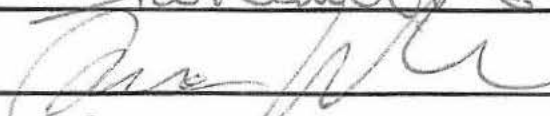



# Petition Supporting the Cleanup Marinwood Plaza Now Oversight Committee Documents Recommending Rejection of the RAP

NAME	SIGNATURE	PHONE	EMAIL
Dina Moraes		(415) 577 5678	Dinagun@yahoo.com
John Gilluly		415-205-0329	John Gilluly@STWS.org
John Alilovich		(707) 477-5219	alilovich@stws.org
Margaret Lu Goff		415/1012-4158	marghielu@gmail.com
MIKE HIRD		415/612-4158	mhird@comcast.net
Tom Padavan		415 479 6265	tmvann@att.net
Mike Rockwell		(415) 624-6813	m.rockwell13@gmail.com
Marina Ledovskaya		415-712 9147	smillaganik@gmail.com
Hironobu Kobayashi		415-295-7890	infinitypuzzle@gmail.com
Robin Geroloff		415-336-4464	robin.geroloff@comcast.net
Joe Cronin		(510) 276-2978	
Greg Whisman		415 272-5885	

**Petition Supporting the Cleanup Marinwood  
Plaza Now Oversight Committee Documents  
Recommending Rejection of the RAP**



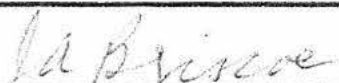


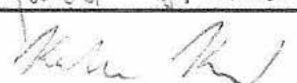


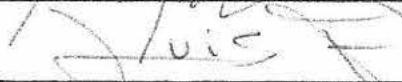
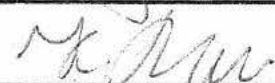

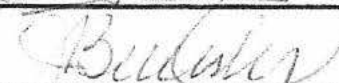

NAME	SIGNATURE	PHONE	EMAIL
PETER COLE		(415) 479-3143	PALCOLE@EARTHLINK.NET
ANNE BARRETT COLE		415-479-3143	palcole@earthlink.net
Lauren Cole		415-479-3143	lbc01e92@gmail.com
Cheryl McEwen		415 492 9535	sjcherylmc@comcast.net
Joe McBRATH		415 492 9535	mcbrathjoe@comcast.net
JOE McBRATH		" 492-0102	McBrathJoe@Comcast.net
Karen McBride		415 492-0102	Karen RT 2 comcast.net
Eric Taylor		415 497-0700	eric.taylor@plutoniumpartners.com
Evelyn Hanson		415-963-1095	evelyn@hanson9.com
John O'Neill		415 472-6669	JOHNON@YAHOO.COM
Ben Johnson		415 479 5910	ravasjohnson@gmail.com
Andrea Ravas		415 479 5910	Same as above
Eric Fleekop		510-852-4565	efleekop@gmail.com
MIKE THOMAS		415-378-8017	MTHOMAS@SI.PREP.ORG

**Petition Supporting the Cleanup Marinwood  
Plaza Now Oversight Committee Documents  
Recommending Rejection of the RAP**

NAME	SIGNATURE	PHONE	EMAIL
EVAN TO MORGAN		415 378 7286	
MARK HENRIKSON		415-521-5973	
Darby James Lukie		415-477-9693	
Tom Rolland		415-477-3941	
NOAH ROLLAND		415-578-2851	
Kim Natuk		915-717-7268	
Walter E. Natuk		415-203-5825	
Drew Natuk		415-479-5825	
JAMEC KILGANNON		415-8235-8043	
Carol Haagens		415 491 9722	
Jeffrey Ishtom		415 479-7518	
Eva Eriksson		415-246-2722	
		415-246-3212	



# Petition Supporting the Cleanup Marinwood Plaza Now Oversight Committee Documents Recommending Rejection of the RAP

NAME	SIGNATURE	PHONE	EMAIL
CHRISTOPHER J. JONES		415 473-2109	chris.charon.jones@gmail.com
Carissa Hernandez		(510) 728-5641	hehannie@gmail.com
JUDE BRISCOE		415 459 5645	
MARCIE PHARES		523-842-3932	marson4@yahoo.com
ROBERT PHARES		373-512-3930	bob_phares@yahoo.com
KATERINA KRIZKOVA		(415) 342-6451	KRIZKOVA@YAHOO.COM
SUZIE WILLIAMSON		415-518-1743	suzwilliamson@gmail.com
LINDSEY WILLIAMSON		415-491-1743	williamson.lindsay@spn.com
LOUIS FLORES		(650) 200-7502	LFcasasf@gmail.com
Ksena Lister		415-306 6740	-
Cheryl Spott		415 717 3288	cspott@earthlink.net
Joan Benavente		510-512-7261	
Sara Barr		415 799 7608	-

Notify  
Start of cleanup?

# Petition Supporting the Cleanup Marinwood Plaza Now Oversight Committee Documents Recommending Rejection of the RAP

NAME

SIGNATURE

PHONE

EMAIL

LINDA PARK

307-5059

lpark@att.net

DAVID DEVLIN

415-499-8602

DAVIDDEVLIN@COMCAST.COM

\* MAUREEN MCGRATH

415-4723248

bunnymcgrath@yahoo.com  
can share materials

TIM PARK

415-250-3212

vospark@comcast.net

Sharon Johnson

415-479-8312

Carol Ruth

541-520-1754

CSDQT@yahoo.com

Joann Ernst

541-214-8120

JAMIE ERNST

458-510-7066

SANDRA LAROQUE

415 342-7272

CHRISTINA BRENNAN

415 444 6134

Traci Kuma

415 897-7853

Cornie Burger

415 244-8040

Thomas A. Cuppener

415-797-2323

**Petition Supporting the Cleanup Marinwood  
Plaza Now Oversight Committee Documents  
Recommending Rejection of the RAP**

NAME	SIGNATURE	PHONE	EMAIL
James Nielsen	<i>James Nielsen</i>	248-0162	jnielsen@nielsenwater.com
Caroline Nielsen	<i>Caroline Nielsen</i>	415-637-8821	centurymayle@gmail.com
Mary Nielsen	<i>Mary Nielsen</i>	(415) 637-0795	mjnielsen@mindspring.com
Genevieve Nielsen	<i>Genevieve Nielsen</i>	(415) 637-9180	limeprelude13@gmail.com
Chris Gussalo	<i>Chris Gussalo</i>		nickolusskude@zohar.com
Ian Crosby	<i>Ian Crosby</i>		ian.m.crosby@gmail.com
PAMELA ELLIOTT	<i>Pamela Elliott</i>		nativepam@hotmail.com
JOHN ELLIOTT	<i>J. Elliott</i>		jelliottpaints@hotmail.com
Keiko Nishinaga	<i>Keiko Nishinaga</i>	415-479-8347	KeikoNishinaga@gmail.com

Petition Supporting the Cleanup Marinwood Plaza Now Oversight Committee  
Documents Recommending Rejection of the RAP

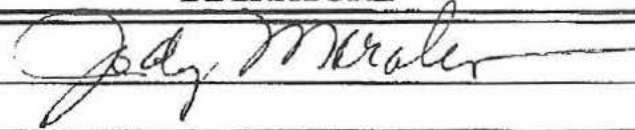
NAME

SIGNATURE

PHONE

EMAIL

JODY MORALES



415-479-6460

jodymorales@lucasvalley.net

p.1

415-479-6460

Jody Morales

Feb 21 16 04:55p

Tom Giroux	<del>Mike</del>	415-235-8484
Anke Salinger	Shirley Palmer	415-924-6277
<del>Wm Jantz</del>	Michael Parmenter	415-924-5117
Susan Lyon	Susan Lyon	925-969-9322
<del>My</del>	Michele Deems	(415) 725 4017
<del>Mark Rose</del>	Robert Mark	(415) 710-5500
Mark Rose	Mark ROSE	415-971-2694

Petition Supporting the Cleanup of  
 Plaza Now Oversight Committee Document  
 Recommending Rejection of the

NAME	SIGNATURE	PHONE
Karen Cornea	Karen Cornea	503-320-4355
Gina Calera	Gina Calera	415-235-5166
Dominic Sharkey	Dominic Sharkey	415-498-1099
Karen Schmitz	Karen Schmitz	415-974-2121
Rubyan Stout	Rubyan Stout	415-515-9555
Julie Kritzberg	Julie Kritzberg	415-302-0200
Patricia McCarthy	Patricia McCarthy	415-479-7806
Suzanne O'Leary	Suzanne O'Leary	415-755-0253
Elizabeth Geler	Elizabeth Geler	415-724-2526
David R. Gallagher	David R. Gallagher	415-370-7523
DiAnne Ray	DiAnne Ray	415-472-0607
Courtney C Fischer	Courtney C Fischer	(415) 497-7775
Ann Moran	Ann Moran	415-717-0500

Petition Supporting the Cleanup Marinwood  
Plaza Now Oversight Committee Documents  
Recommending Rejection of the RAP

NAME

SIGNATURE

PHONE

EMAIL

A Melanephy

A Melanephy

gahco.com  
ammcan1992





**Appendix B**

**RESPONSE TO COMMENTS**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**RESPONSE TO COMMENTS**

**TO:** Bruce Wolfe  
Executive Officer

April 4, 2016  
File Nos. 21S0053 (RAL)

**FROM:** Ralph Lambert  
Engineering Geologist

**CONCUR:** Laurent Meillier  
Section Leader  
Toxics Cleanup Division

Stephen A. Hill  
Division Chief  
Toxics Cleanup Division

**SUBJECT:** **Response to Comments on the Draft Remedial Action Plan Submitted for the Prosperity Cleaners Site, 187 Marinwood Avenue, Marinwood, Marin County**

This memo provides Water Board staff's response to comments on the draft Remedial Action Plan (RAP) submitted on behalf of Marinwood Plaza, LLC, owner of the Prosperity Cleaners site (Site), to comply with Task 6 of the Water Board's site cleanup requirements order for the Site (Order No. R2-2014-0007, as amended by Order No. R2-2014-0036). The public comment period started on January 14 and closed on February 22, 2016. Water Board staff circulated a fact sheet to nearby residents and other interested stakeholders at the start of the comment period. Staff also hosted a well-attended community meeting on February 10 in Marinwood to introduce the RAP and hear preliminary comments. Thirty-three members of the public submitted written comments on the RAP. In some instances, they submitted comments on more than one occasion. We also received four PowerPoint presentations and a petition from some nearby residents to reject the RAP. In total, 116 pages of comments, presentation, and petition were submitted. The original comments may be found in the Community Involvement section of GeoTracker at: [http://geotracker.waterboards.ca.gov/profile\\_report.asp?global\\_id=SL0604185908](http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0604185908).

Written comments were submitted by the following individuals:

- Bartolacelli, Wayka
- Bergeman, Charles
- Blackburn, Bill
- Blanton, Marian
- Catena, Gina
- Clark, Fred (The Source Group for Lorraine Silveria)
- Connolly, Damon (County Supervisor)
- Day, Raymond
- Elliott, John
- Geler, Elizabeth
- Gerber, Christina
- Graham, Robert
- Green, David
- Jacobi, Belle
- Lewis, Susan
- Maloney, Jim
- McNicolas, Bill
- Moran, Ann
- Natuk, Kim
- Nestel, Stephen
- Nielsen, James
- Nishinaga, Christine
- Nishinaga, Glenn
- Nishinaga, Keiko

- Nishinaga, Takako
- O'Brien, Aaron
- Perry, Damien
- Rosenstein, Barbra
- Spott, Jonathan
- Terrier, Pierre
- Trotter, David (attorney to Silveira Ranch)
- Wilson, Rosina
- Petition to Reject the RAP

Below we summarized the comments and provide responses. For clarity, the comments/responses are grouped into several categories: environmental cleanup time frame, groundwater, soil and soil excavation, soil vapor, human and environmental health risk, rejecting the RAP, and other.

### **Environmental Cleanup Timeframe**

- 1) **Comment:** The environmental cleanup is taking too long and should happen soon.

**Response:** Past cleanup work has substantially reduced site contamination. However, we agree that the remaining cleanup work should happen soon, and we structured our RAP response so that additional cleanup can proceed quickly.

- 2) **Comment:** No time estimate is given for groundwater or soil vapor to reach cleanup levels using monitored natural attenuation (MNA).

**Response:** We agree; the RAP does not estimate how long it will take for cleanup levels to be met under the proposed MNA remedy. We will require the Responsible Party to evaluate a full range of groundwater cleanup technologies and, if MNA is still selected, demonstrate that MNA will achieve cleanup goals in a reasonable time.

- 3) **Comment:** Rejecting the RAP will cause cleanup delays. A member of the public stated: *“I strongly support starting remediation at the earliest possible date and finalizing other aspects later.”*

**Response:** We agree. Rejecting the RAP now to require additional investigation will delay the submittal of an updated RAP by more than six months. Some members of the public recommend the implementation of interim measures. However, we have no basis for requiring additional interim measures. Task 4A in the Order states that *“The Executive Officer will require this (interim remedial action) workplan if site contamination poses a potential threat to human health...”* In our view, current site contamination does not pose a potential threat to human health. Dr. Linville, the California Office of Environmental Health Hazard Assessment (OEHHA) toxicologist present at the February 10, 2016, community meeting, stated that there is no current unacceptable threat to human health at this Site. There is no documented exposure pathway to residents either at Casa Marinwood or at the Silveira Ranch.

- 4) **Comment:** Don't wait for redevelopment to start cleanup.

**Response:** We agree and so does the RAP. The cleanup schedule included in Figure 19 of the RAP states that the cleanup schedule starts when the Water Board approves the RAP and is not linked to Site redevelopment. Since the Responsible Party has no control over the approval date no specific date was put in; rather the schedule lists months after RAP approval. Figure 19 indicates that the only unknown date that is dependent on future development is vapor barriers

and venting systems that may be installed during future Site redevelopment. These engineered controls may be installed under the footprint of any new building at the time of construction, contingent on soil vapor findings conducted during the pre-development characterization phase.

- 5) **Comment:** Environmental cleanup should be implemented at a much faster rate than is currently proposed in the RAP.

**Response:** We disagree. The Responsible Party will implement cleanup once the RAP is approved. The RAP's implementation schedule allows six months to move the lessees out of the liquor store and to obtain demolition permits from the City of San Rafael, which seems reasonable. The actual permitting timeframe may be shorter but is not completely within the Responsible Party's control.

## Groundwater

- 6) **Comment:** Determine the time that the Site has contaminated groundwater.

**Response:** It is currently unknown when chlorinated volatile organic compounds (CVOCs) were released to the environment by the operations of the dry cleaner. Marinwood or Prosperity dry cleaning operations began in about 1989 and lasted until 2005. However, earlier dry cleaners may have also operated at the Site.

- 7) **Comment:** The groundwater contamination plume is not fully defined laterally or vertically.

**Response:** We agree that the lateral extent of the plume is not fully defined and have required additional offsite investigation to define the extent down to cleanup levels. We disagree that the vertical extent of the plume is not defined. Approximately 130 groundwater samples were collected east of the freeway at the Silveira Ranch property. The groundwater plume is defined vertically as indicated in Cross-section A-A' of Figures 3A and 3B included in the RAP. The deeper samples were either non-detect or contained less than 1 µg/L of any CVOCs including perchlorethene (PCE) and its breakdown products. The plume is well defined to the west and south as shown in Figure 12 of the RAP. The plume is not fully defined to the north and east. Section 3.2.1 of the RAP commits to complete full delineation of the northern and eastern extent of CVOCs in groundwater. There are no residences east of the known current extent of the groundwater plume that may be threatened. This downgradient area consists of pasture lands for the next mile, then the Las Gallinas Valley Sanitary District's reclamation ponds and open space/wetlands.

- 8) **Comment:** Miller Creek must be sampled east of the groundwater plume to determine if it is impacted.

**Response:** We agree. All surface water samples collected from Miller Creek indicate no impact. The highest concentration of PCE found in the plume over the last year is 39 µg/L. The Environmental Screening Level (ESL)<sup>1</sup> for PCE is 120 µg/L for discharge to fresh water and 230 µg/L for discharge to salt water. Based on this data, no adverse impact to surface water has

<sup>1</sup> See Water Board webpage: [http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/esl.shtml](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml)

been found nor is any expected. Additionally, on March 3, 2016, additional samples were collected from the creek east of the plume as a precautionary measure, and no CVOCs were detected.

- 9) **Comment:** The Responsible Party should install monitoring wells east of Highway 101. Offsite monitoring wells are required to determine concentration trends with time. It is unknown if the groundwater plume is stable or shrinking.

**Response:** We agree that offsite wells are needed to determine if the plume is stable or shrinking. These wells are proposed in Section 7.2 of the RAP and shown in Figure 18. The final locations must be negotiated with the relevant landowners.

- 10) **Comment:** MNA is not acceptable and may only be legitimately used if the groundwater contamination plume is stable or shrinking, which is unclear at this time. Successful cleanup technologies used in Silicon Valley were not evaluated. MNA does not meet the requirements of the Order.

**Response:** We agree that active groundwater cleanup technologies were not evaluated in the RAP, as required by the Order, and we will require this evaluation as part of our RAP response letter. We also agree that there is insufficient information right now to determine whether the plume is stable or shrinking. The RAP proposes offsite monitoring wells to fill this data gap (see response to comment #9). We will not know whether MNA is an acceptable cleanup option until after the Responsible Party evaluates a range of groundwater cleanup technologies and provides more supporting information about the MNA option. MNA was not fully evaluated using water quality and aquifer parameters such as dissolved oxygen, nitrate, iron, sulfate, and bio markers. Bioremediation data was not discussed in the RAP. The MNA processes of sorption, evaporation, chemical reaction, dilution, and biodegradation are not documented as required by U.S. EPA. A fuller evaluation of MNA will be required as part of our RAP response letter.

- 11) **Comment:** Bioremediation treatment walls or zones (zero valent iron, carbon substrate, bacteria enhancement) or enhanced bio-degradation are feasible alternatives to MNA and should be used instead of MNA.

**Response:** We agree that such active groundwater cleanup technologies should be evaluated in the RAP and will require this evaluation in our RAP response letter. However, the Water Board cannot specify the manner of compliance per Water Code section 13360. See also our response to comment #10.

- 12) **Comment:** Using MNA for groundwater cleanup will take decades. That is too long for the Silveira Ranch and is not a reasonable time.

**Response:** A reasonable timeframe for groundwater cleanup depends on the technical feasibility of various cleanup technologies and the projected future use of the groundwater. Doing active groundwater cleanup will also take years to accomplish. We will require the Responsible Party to complete an evaluation of groundwater cleanup technologies, including a detailed evaluation of the MNA option, and estimate relevant cleanup timeframes.

- 13) **Comment:** Cow manure with composting and watering could be used as a carbon substrate to treat the groundwater plume.

**Response:** This approach might work but could have adverse side effects. The manure may add unwanted substances such as nitrates, salts, and fecal coliforms to the groundwater.

- 14) **Comment:** Silveira Ranch may not be able to use the groundwater at its property due to contamination originating at Prosperity Cleaners. The Water Board should require cleanup to restore beneficial uses of this high-quality groundwater.

**Response:** We agree that groundwater at the Site, including groundwater beneath the Silveira Ranch, should be cleaned up to meet drinking water standards as specified in the Order. The Silveira Ranch supply well is currently safe for drinking water use, given that PCE concentrations in the well have been below the drinking water standard and that wellhead treatment has been provided as a precaution. See response to comment #11 regarding the reasonable cleanup timeframe.

- 15) **Comment:** The RAP must require maintenance of wellhead treatment.

**Response:** We agree and we believe that the RAP already does this. Section 7.2 of the RAP states that operation and maintenance of the wellhead treatment system will continue until, with concurrence from the Water Board, CVOC concentrations in the supply well and applicable monitoring wells are below the groundwater cleanup levels.

- 16) **Comment:** Consider a new water supply well away from the plume at the Silveira Ranch or switch them to municipal drinking water.

**Response:** These are both options that have previously been considered but a wellhead treatment system was selected. At this time switching to municipal drinking water is not warranted based on the CVOC concentrations detected in the supply wells at the Silveira Ranch. Currently, the Silveira Ranch does not want to switch to municipal drinking water.

- 17) **Comment:** Gaining access to perform investigation or cleanup work on the Caltrans property may be an impediment to cleanup.

**Response:** While obtaining permission to do work, especially cleanup work, on Caltrans property along the freeway could take substantial time, it is not clear that cleanup or monitoring work is needed on Caltrans property. The Responsible Party will need to take this into consideration as part of evaluating cleanup options. There may be adequate locations west and east of the Caltrans property to accommodate any necessary cleanup or monitoring work.

### **Soil and Soil Excavation**

- 18) **Comment:** The proposed excavation is not large and deep enough. The Responsible Party should excavate under the liquor store.

**Response:** We disagree. Section 8.1.1.3 of the RAP states that the initial excavation will be approximately 25 feet by 30 feet in area and 15 feet deep. The dimensions of the excavation are

based on the extent of soil samples that exceed cleanup levels. The RAP describes collecting soil confirmation samples along each side and at the bottom of the excavation. The excavation will be extended if concentrations in the confirmation samples exceed cleanup goals. See response to comment #19 regarding vertical extent of soil contamination.

- 19) **Comment:** Geologic probes reported soil contamination to 35 feet or 45 feet deep, much deeper than the proposed excavation.

**Response:** We disagree. The deepest soil sample collected at or immediately adjacent to the former dry cleaner was from 19.5 feet below ground surface and did not indicate any contamination. Figure 14 of the RAP indicates that soil sample results from the proposed excavation area had contamination above the proposed cleanup level to a maximum depth of 15.5 feet. However, we note that an Electron Capture Device detected contamination down to 35 feet below ground surface outside of the building area. This device does not distinguish between groundwater and soil impacts and does not measure concentration such that the readings can be compared to cleanup levels. The contaminant depth appears to be limited. Our understanding of this is based on the multi-level groundwater sample results collected from boring C-1 as reported in Figure 3A. The highest concentrations in groundwater were detected between 20 and 30 feet below ground surface (the shallowest sample collected). A sample from 35 to 40 feet below ground surface contained no detectable CVOCs, and a sample from the top of the bedrock, at about 50 feet below ground surface detected CVOCs at less than 1 µg/L. This groundwater data does not support the hypothesis that soils are heavily contaminated down to depths of 35 to 45 feet.

Depth to water in the onsite monitoring wells in November 2015 was approximately 12 feet below ground surface. Excavations are typically not advanced into groundwater more than a few feet due to shoring hazards and difficulty in dealing with produced water. For the above reasons, we expect that excavating to approximately 15 feet deep will be sufficient. As mentioned in response to comment #18 confirmation soil samples will be collected and the excavation will be enlarged or deepened as needed and as feasible.

- 20) **Comment:** The Eastern Hot Spot should be excavated.

**Response:** We disagree. Figure 15 of the RAP shows that 40 confirmation soil samples were collected from the Eastern Hot Spot in January 2014. All 40 soil samples were below the Site's soil cleanup levels. Therefore, no further soil cleanup is needed in this area.

- 21) **Comment:** The Responsible Party should consider active vapor control technologies such as soil vapor extraction (SVE) for existing buildings. This would allow a delay in soil excavation.

**Response:** SVE was considered as shown in Table 9 of the RAP. The moist, fine-grained soils at the Site make SVE and similar technologies much less effective than soil excavation. In addition, we want to avoid further delays in cleanup.

## **Soil Vapor**

- 22) **Comment:** Soil vapor samples were not collected at appropriate locations near utility lines. The poorly-designed sampling plan may be deliberate. It is suspicious that soil vapor

concentrations decreases rapidly offsite through a short distance. The Water Board should require additional soil vapor sampling at all locations along utility lines.

**Response:** We disagree. Soil vapor has been sampled in multiple sampling rounds. The most recent round of sampling was specifically designed to determine whether soil vapors were preferentially migrating through utility-line backfill toward Casa Marinwood residences. PCE was detected in an earlier round at 2,300  $\mu\text{g}/\text{m}^3$  PCE in soil vapor sample SV-31. This sample was collected under a sidewalk near a natural gas line, approximately 40 feet from the nearest residence. Therefore 21 additional soil vapor samples were collected in the neighborhood. Three of these samples were collected between location SV-31 and the nearest residences. Four samples were collected adjacent to where the gas lines enter the townhouses. Fifteen samples were collected within 5 to 10 feet of housing; 11 samples were adjacent to various utilities. Samples were collected as close as about two feet from the utility lines. None of these 21 samples had any detectable PCE or other CVOCs. Samples were not collected in the streets along the gas line, rather where the utilities enter the housing units as this is where exposure could occur. Samples were collected as closely as possible to the utility lines and the residences as landscaping, utility safety, and access permitted.

- 23) **Comment:** If soil vapor cannot be collected near the utility lines due to safety concerns, the Responsible Party should implement a passive soil vapor sampling program.

**Response:** We disagree. Passive samplers such as Gore-Sorber® or the Waterloo Membrane Sampler are used for screening. These samples do not report a concentration but a relative mass, which is not comparable with the Site's soil vapor cleanup levels.

- 24) **Comment:** The Responsible Party should consider sampling indoor air in residences at Casa Marinwood.

**Response:** Indoor air sampling is not warranted, based on Site conditions and recent soil-vapor sampling results. Extensive soil vapor sampling has not found PCE in soil vapor in preferential pathways near the Casa Marinwood residences (see response to comment # 22). Furthermore, indoor air sampling cannot easily distinguish between PCE from vapor intrusion and PCE from indoor sources. PCE is commonly detected in indoor air. It is found in multiple household sources such as recently dry cleaned clothing, some adhesives and glues, spot remover, scented candles, metal degreasers, and some paints. In a June 2011 document (EPA 530-R-10-001), U.S. EPA documented indoor air samples for PCE from 2,312 background residences around the country. PCE was detected in 62.5% of the residences. It was not unusual to find PCE above the indoor air ESLs. Therefore, finding PCE inside a residence would not necessarily indicate a soil vapor source from the Site.

- 25) **Comment:** The Responsible Party should confirm soil vapor concentrations in the neighborhood, now and in the future, or install vapor test well(s) on the west side of Marinwood Avenue along utility lines to monitor the effectiveness of proposed utility trench cutoff barriers.

**Response:** We agree. The RAP proposes a permanent soil vapor well near the Casa Marinwood neighborhood east of Marinwood Avenue to confirm the effectiveness of the utility trench vapor barriers and the removal of contaminated soil below the former dry cleaner. We



recommend that this soil vapor probe be moved to the west side of Marinwood Avenue. We will require regular monitoring of soil vapor to confirm that vapor intrusion is not occurring.

- 26) **Comment:** The Responsible Party should sample soil vapor wherever residential units are proposed for future development.

**Response:** We agree and the RAP proposes this. Section 8.1.3.5 of the RAP calls for vented vapor barriers under each new building or vapor sampling under each proposed building footprint.

- 27) **Comment:** The Responsible Party should determine if additional vapor intrusion interim measures must be implemented at the liquor store.

**Response:** We disagree. Past indoor air sampling at the liquor store has shown that detected PCE levels do not pose an unacceptable threat. According to OEHHA toxicologist Dr. Linville, the excess cancer risk to the store workers is an acceptable  $2.5 \times 10^{-6}$ . This is two orders of magnitude below the  $10^{-4}$  excess risk level requiring mitigation according to U.S. EPA, DTSC<sup>2</sup>, and the Order.

- 28) **Comment:** The RAP proposes cleanup levels for commercial/industrial use. The cleanup levels should be for residential use, in light of current zoning and likely future use.

**Response:** We agree that the cleanup levels should be protective of any residential use at the Site. The Order sets cleanup levels for both residential and commercial/industrial use and applies the residential levels to any future residential use. Table 8 of the RAP presents both residential and commercial cleanup levels, and Section 8.3.1.5 discusses using the applicable level.

- 29) **Comment:** MNA has not been working on soil vapor at the Site based on how long the Site has been around and it is still impacted.

**Response:** We disagree. One cannot determine if MNA is working based on longevity if the source has not been removed, because the source will continue to feed the groundwater and vapor plumes. However, since treatment of the eastern hot spot source area, concentrations in the adjacent soil vapor probe (SVM-5) have fallen over 95%. In addition, as illustrated in Table 5 of the RAP, the PCE degradation products of trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride have all been detected both before and after treatment, showing degradation is occurring.

- 30) **Comment:** The utility trench cutoff barriers may allow soil vapor to flow back into the Site subsurface.

**Response:** We disagree. The purpose of the utility trench cutoff barriers is to prevent further movement of soil vapors in the subsurface along preferential pathways formed by the utility

<sup>2</sup> See Department of Toxic Substances Control webpage:  
[https://www.dtsc.ca.gov/SiteCleanup/upload/VI\\_ActiveSoilGasAdvisory\\_FINAL.pdf](https://www.dtsc.ca.gov/SiteCleanup/upload/VI_ActiveSoilGasAdvisory_FINAL.pdf)

line backfill, thereby protecting the Casa Marinwood residences. The effectiveness of the removal of the contaminated soils and the installation of the trenches will be regularly monitored.

- 31) **Comment:** Utility trench cutoff barriers are not proposed on the west side of Marinwood Avenue. The Responsible Party should install cutoff barriers in the neighborhood.

**Response:** We disagree. The RAP proposes to remove the source of the contamination at the Site and to prevent preferential movement along the utility lines toward the neighborhood via cutoff barriers on the east side of Marinwood Avenue. No CVOCs were detected at any neighborhood soil vapor samples, and therefore there is no reason to disturb the neighborhood by closing the roads to construct trenches in that area.

- 32) **Comment:** The utility trench cutoff barriers facilitate vapor accumulation behind the barriers. Blocking the utility pathways may facilitate transport to the Casa Marinwood residential neighborhood.

**Response:** We disagree. The utility trench cutoffs barriers will prevent contaminated soil vapor from traveling from the source area to the neighborhood. Soil vapors may travel if there is a pressure differential and by diffusion with a concentration gradient. The cutoff barriers will minimize vapors from leaving the Site along the utility trenches. Vapors on the residential side of the trenches will dissipate because there is no more source or higher concentration to drive them.

- 33) **Comment:** Operation of the proposed future vapor barriers and venting systems to be installed during future construction will be up to future site owners and does not achieve clean up.

**Response:** We agree. Vented vapor barriers are a commonly used mitigation measure if there is the potential for vapor intrusion and can only be installed at the time of new building construction. Vented vapor barriers do not directly clean up the contamination but allow it to dissipate and prevent indoor vapor intrusion. The Order requires a deed restriction to assure implementation of risk management measures, and Section 7.3 of the RAP calls for ongoing maintenance of any future vapor barriers.

### **Human and Environmental Health Risk**

- 34) **Comment:** The Site's risk evaluation is incomplete and a risk assessment was not completed.

**Response:** We disagree. The Responsible Party performed a "Tier 2" risk assessment when it considered the potential exposure pathways at the Site and used the applicable ESLs for those exposure pathways. The Order cannot and does not require a site-specific (Tier 3) risk assessment. As a practical matter, site-specific risk assessments typically result in higher cleanup levels.

- 35) **Comment:** There is a recognized health risk here.

**Response:** We disagree. There is no complete exposure pathway to residents at Casa Marinwood or at the Silveira Ranch, and residents are not exposed to unsafe PCE levels. This

conclusion is based on current soil, soil vapor, surface water, and groundwater data at the Site and its interpretation by an OEHHA toxicologist - see her presentation slide #15 at the February 10, 2016, community meeting.

- 36) **Comment:** The animals consuming groundwater and surface waters at the Silveira Ranch should be tested. The former dry cleaner and ranch workers should be tested for exposure to CVOCs.

**Response:** We disagree. Based on water samples from a Silveira Ranch supply well and from Miller Creek, neither animals or people at the ranch are exposed to groundwater containing CVOCs above conservative drinking water standards. Potential occupational exposure for dry cleaner workers would come under Occupation Safety and Health Administration (OSHA). Since there is no exposure at levels of concern there is no unacceptable risk for wildlife and humans from the pollutants emanating from the Site. Also see response to comment #35 above.

- 37) **Comment:** The potential health risk from soil vapor to residents of Casa Marinwood is understated due to inadequate investigation.

**Response:** We disagree. See responses to comments #22 and #35 above.

### Rejecting the RAP

- 38) **Comment:** You must reject the RAP because the groundwater vertical and horizontal delineation is incomplete. Findings and conclusions in the RAP are invalid because groundwater delineation is not complete.

**Response:** We disagree. See response to #7 above. The extent of groundwater is known well enough for the proposed soil vapor and soil source cleanup. Rejecting the RAP will cause substantial delays of at least 6 months to implement cleanup work proposed in the RAP and that is not beneficial to anyone.

- 39) **Comment:** Reject the RAP because it is not in compliance with CERCLA guidance as specified in the Order and it does not meet Order task 6d and EPA CERCLA guidance for Remedial Investigation/Feasibility Study.

**Response:** We disagree. See responses to comments #10, #34, and #38. The CERCLA document is a guidance document (not a requirement), and CERCLA is applicable to federal Superfund sites. The former Prosperity Cleaners site is not a federal Superfund site.

- 40) **Comment:** The RAP should be approved without delay, with deficient portions rejected, so that cleanup can resume.

**Response:** We agree with this approach as highlighted in our response letter. We agree that cleanup needs to be started now and not delayed by additional characterization.

### Other

- 41) **Comment:** The Responsible Party must guarantee funding for treatment and operation and maintenance for any impacted wells at the Silveira Ranch, existing or future wells, anywhere

on the property. The Board should require that the Responsible Party and any successors pay for all the costs incurred for current or future well head treatment at Silveira Ranch.

**Response:** The Water Board can require protection of supply wells affected by groundwater contamination but cannot specify the manner in which that protection is provided. The interim remedial action tasks in the Order authorize the Executive Officer to require protection of any impacted or threatened supply wells, and we have used this authority to require measures to protect the Silveira Ranch supply well. This authority extends forward in time until groundwater cleanup levels are met.

- 42) **Comment:** The Responsible Party is trying to do the bare minimum and is getting preferential treatment. They demonstrate little concern for the health and economic interests of the community.

**Response:** The Responsible Party has done significant investigation and interim cleanup work at the Site. While the RAP has deficiencies, mainly the lack of an evaluation of alternative groundwater cleanup technologies, it does propose significant cleanup work to address the PCE source beneath the former dry cleaner building and associated soil vapor migration. As noted elsewhere in this response memo, onsite and offsite residents are not exposed to Site contamination. The Water Board will require sufficient cleanup to meet cleanup levels established in the Order.

- 43) **Comment:** Don't be like Flint, Michigan.

**Response:** The facts at this Site are very different from those in Flint, Michigan, where a change in the water system's supply water resulted in unsafe lead levels in some residents' drinking water. Drinking water in the Marinwood neighborhood is provided by the Marin Municipal Water District and does not come from local groundwater. One well at the Silveira Ranch has had occasional detections of detectable CVOCs but always below drinking water levels. This well now has a wellhead treatment system that will reduce any CVOCs to non-detectable levels.

- 44) **Comment:** The State or County of Marin should fund this cleanup.

**Response:** We disagree. State law requires dischargers to pay for site investigation and cleanup, under the "polluter pays" principle. Further, public funding is not justified or available at this Site based on the Responsible Party's financial solvency.

- 45) **Comment:** Is there a contamination legacy from dry cleaners in Marin County?

**Response:** Yes, past practices at dry cleaners in Marin County and elsewhere have commonly resulted in CVOC releases. The Water Board and other oversight agencies require cleanup of these releases as they are discovered. More recently, the oversight agencies are starting to look for releases at former dry cleaner locations where releases would pose the greatest threat to human health and groundwater resources.

- 46) **Comment:** The Site's contamination and proposed cleanup actions affect the welfare/livelihood of the current lessee of the liquor store.

**Response:** The Site contamination does not pose a health threat to liquor store employees or customers (see response to comment #27). The RAP proposes demolition of the former dry cleaner building prior to soil excavation, which will necessitate relocation or closure of the liquor store, at least temporarily.

- 47) **Comment:** The RAP does not abide with the mission statement of the Water Board to preserve, enhance, and restore water resources for all beneficial uses.

**Response:** We disagree. The RAP proposes cleanup levels that are consistent with the Order and with the Water Board's Basin Plan. The RAP proposes cleanup actions to attain those cleanup levels, although the time for groundwater cleanup is not specified. See also our responses to comments #2 and #10.

- 48) **Comment:** Property values at Casa Marinwood have been impacted by the release at the Site.

**Response:** Comment noted. We are not authorized or qualified to make conclusions about the effect of Site contamination on property values, which are affected by various factors. Residents who are concerned about this issue should contact the County Assessor's office or a real estate professional. In our experience, any declines in property value tend to rebound following cleanup plan implementation.

- 49) **Comment:** A Site deed restriction must be recorded to notify residents/buyers/users of pollution if full cleanup is not completed. Owners and tenants of the Marinwood Plaza should be informed of the legacy contamination from the Site.

**Response:** We agree. The Order Task 9 requires recordation of a deed restriction for the Site for the reasons mentioned.

- 50) **Comment:** Require testing west, north, and south of the shopping center located at the Marinwood Plaza.

**Response:** Sufficient sampling has been conducted around the shopping center located north of the former dry cleaner. This sampling includes soil, groundwater, soil vapor, and indoor air to determine the extent of upgradient and lateral contamination.

- 51) **Comment:** Who are other owners of the Site in addition to Marinwood Plaza, LLC, and the Hoyts? Does Wells Fargo Bank or subsidiaries have an ownership interest in the Plaza? Does Wells Fargo Bank or subsidiaries have a lien on the Plaza?

**Response:** The Order names Marinwood Plaza, LLC, the current landowner. We are not aware of any other current landowners.

## **Appendix C**

### **RECOMMENDED RESPONSE TO DRAFT RAP**

---

**San Francisco Bay Regional Water Quality Control Board**

April XX, 2016  
File No. 21S0053 (RAL)

Marinwood Plaza, LLC  
c/o Mr. Tom Fitzsimons  
Assistant Vice President - Real Estate Services  
Wells Fargo Bank  
P.O. Box 63939  
San Francisco, CA 94163

Sent via email: [Thomas.Fitzsimons@wellsfargo.com](mailto:Thomas.Fitzsimons@wellsfargo.com)

**SUBJECT: Partial Approval of Remedial Action Plan, Former Prosperity Cleaners -  
Marinwood Plaza, 187 Marinwood Avenue, San Rafael, Marin County**

Dear Mr. Fitzsimons:

This letter partially approves and partially rejects the cleanup actions proposed in the December 29, 2015, *Remedial Action Plan* (RAP) submitted on behalf of Marinwood Plaza, LLC. As explained below, we approve the RAP's proposed onsite soil excavation and vapor intrusion mitigation measures. We reject the RAP elements dealing with groundwater cleanup, notably due to the absence of any groundwater feasibility study. This letter is sent to you as the representative of Marinwood Plaza, LLC, owner of the above-referenced Site.

**Background**

Prosperity Cleaners (Site) was located in Marinwood Plaza in San Rafael. Releases of tetrachloroethene (PCE) from past dry cleaning operations have impacted soil, soil vapor, and groundwater beneath the Site. PCE and its degradation products have been detected in the Site's soil, groundwater, and soil vapor. PCE has been found at onsite and offsite locations. The Site is subject to the Water Board's Site Cleanup Requirements Order No. R2-2014-0007 (Order) adopted in February 2014 and amended in August 2014 by Order No. R2-2014-0036. The RAP was submitted in accordance with Task 6 of the Order. The RAP does not comply with all of the requirements of Task 6 of the Order.

Two onsite release areas have been identified, one under the former dry cleaners and another at the edge of the pavement out the back door of the former dry cleaners. The second source area is referred to as the Eastern Hot Spot. Soil at the Eastern Hot Spot has been successfully treated. All 40 confirmation soil samples from the Eastern Hot Spot were below cleanup standards specified in the Order after treatment. According to sampling conducted in November 2015, both soil vapor and groundwater concentrations adjacent to the Eastern Hotspot have decreased by about 95% but remain above established cleanup levels.

To proactively address potential human health exposure, interim mitigation measures are being implemented at the adjacent liquor store and an offsite private supply well at the Silveira Ranch property. With these measures in place, concentrations of chlorinated volatile organic compounds (CVOCs) in indoor air at the liquor store present no unacceptable risks. A wellhead treatment system was installed at the supply well to remove PCE below the drinking water standard to non-detect levels.

## **RAP Summary**

The RAP proposes several cleanup actions as follows:

- Proposed Soil Cleanup - The RAP proposes to address the remaining source area by excavating and disposing of contaminated material under the former dry cleaner. The excavation will include an area of approximately 25 feet (ft) by 30 ft and about 15 ft deep. Side wall and bottom soil samples will be taken to verify that the excavation has removed soil contaminated to levels below established cleanup goals. The confirmation sampling may lead to enlarging the excavation until cleanup goals are met.
- Proposed Groundwater Cleanup - The RAP predicts that concentrations of CVOCs are expected to decrease following the soil cleanup, as they did after treatment of the Eastern Hot Spot. After soil source removal, the RAP proposes offsite and onsite groundwater monitored natural attenuation (MNA). Natural attenuation includes processes such as biodegradation, dispersion, dilution, and volatilization of contaminants. As of November 2015, the highest PCE groundwater concentration is 25 µg/L onsite and 39 µg/L downgradient approximately 900 feet east of the Site. Additional groundwater delineation and monitoring wells are proposed for offsite areas to determine the extent of impact and verify effectiveness of MNA and source removal under the drycleaner. The RAP proposes to cease groundwater monitoring when all wells indicate a declining concentration trend.
- Proposed Soil Vapor Cleanup - The RAP proposes to excavate trenches across several utility lines that may act as vapor transport pathways. The trenches will be filled with clay as a barrier to soil vapor. The remaining onsite and offsite vapor mass is expected to naturally decrease via MNA after onsite soil source removal and the preferential pathways cutoff trenches described above. Additional soil vapor probes are proposed to verify the effectiveness of the cleanup actions. The RAP also proposes sub slab vapor mitigation (vented vapor barriers) for new construction depending on the results of vapor sampling at the time. These vapor barriers may be installed below the future buildings at the time of property redevelopment.

## **Public Comments Received on the RAP**

The Water Board issued a fact sheet in January 2016, inviting public comment on the RAP. We hosted a well-attended community meeting on February 10, 2016, at Marinwood. At the community meeting, Dr. Linville, a toxicologist with the State's Office of Environmental Health Hazard Assessment, concluded in her presentation that, based on her review of available data, offsite residents are not being exposed to groundwater or soil vapor contamination. Additionally, she concluded that onsite workers and ranch occupants at the Silveira property are not being exposed to unacceptable risk concentrations of PCE in air, soil, or drinking water. Dr. Linville indicated that the proposed cleanup goals are more conservative than required at most cleanup sites in California. The public comment period closed February 22, 2016. We received comments from 33 individuals. These comments can be divided into the following categories:

- Timing of the cleanup
- Groundwater cleanup and delineation
- Soil vapor cleanup and delineation
- Soil excavation concerns
- Exposure risks from the Site
- Reject the RAP
- Miscellaneous comments



A summary of the comments and our response to comments is attached.

### **Discussion**

The RAP includes a subset of acceptable proposals to abate contamination in soil and soil vapor at the Site and its immediate vicinity. The removal of contaminated soil below the dry cleaner and the installation of soil vapor barriers will hasten site cleanup and help protect human health. However, the RAP does not evaluate groundwater cleanup strategies other than the proposed passive monitored natural attenuation (MNA). Additionally, MNA is not appropriately evaluated against accepted standards found in feasibility studies documentation. These are significant deficiencies.

### **Acceptable Sections of the RAP**

The following work proposed in the RAP is approved and the proposed deadlines must be met in order to comply with Task 7:

- Section 7.1: Soil Cleanup: Soil excavation will be done under the former dry cleaner building following building demolition that will occur in the next six months. The excavation will be approximately 25 ft by 30 ft and about 15 ft deep. Confirmation sampling may require enlarging the excavation until cleanup goals are met.
- Section 7.3: Soil Vapor Cleanup: This will involve constructing six soil vapor barriers across utility lines at locations mapped in the RAP. Post-installation monitoring will verify the effectiveness of the soil removal and vapor cut-off trenches.
- Section 8.1.1.1: Soil Management Plan: The soil management plan will describe measures to be taken to deal with any impacted soil that may be encountered in the future.
- Section 7.3: Future Sub-slab Vapor Mitigation: Vented vapor barriers will be used for new construction, if vapor monitoring at the time of development exceeds criteria listed in the Order.
- Section 6.2: The cleanup goals found in Table 8 of the RAP are equivalent or in some instances more conservative than tabulated in the Order.

### **Installation and Startup Technical Report Required**

According to Task 7 in the Order, Marinwood Plaza, LLC, must submit an acceptable technical report consisting of a remedial action completion report consistent with the schedule presented in the RAP. According to Figure 19 of the RAP, a soil cleanup report is scheduled for submittal nine months after approval by the Executive Officer. This soil cleanup report must report on the completion of the following elements: onsite soil excavation, results of confirmation soil sampling, installation and monitoring effectiveness of six soil vapor barriers, and a soil management plan. Therefore, to comply with Task 7, as it pertains to the soil cleanup report, Marinwood Plaza, LLC, must submit the soil cleanup technical report by **January 31, 2017**, approximately nine months after the date of this letter. The schedule also proposes quarterly groundwater and soil vapor sampling and reporting. The soil vapor cleanup activities (such as the installation of the soil vapor barrier trenches) must be included with the quarter sampling data.

### **Unacceptable Sections of the RAP**

The RAP does not fully satisfy Task 6.d of the Order as it applies to groundwater. Task 6.d requires the RAP to include a feasibility study evaluating alternative final cleanup actions. The RAP does not evaluate active cleanup measures for groundwater. It is expected that the removal of contaminated soil will reduce groundwater concentrations of chlorinated volatile organic compounds at the Site and offsite. After soil source removal, the RAP proposes MNA to reduce legacy groundwater contamination onsite and offsite. The RAP does not evaluate the potential effectiveness of groundwater MNA (a

passive cleanup action) in comparison to alternative cleanup technologies such as injecting a variety of substances to oxidize, dechlorinate, or cause biological degradation. MNA was the sole proposed remedial action for groundwater in the RAP. Furthermore, the MNA assessment must include an evaluation of whether MNA is appropriate and an estimation of the timeframe to achieve cleanup standards and the restoration of beneficial uses throughout the affected area. The potential for residual pollution to adversely affect future beneficial uses must also be evaluated.

### **RAP Addendum Requirement**

Marinwood Plaza, LLC, shall submit a RAP addendum that addresses the above deficiencies and includes the following elements:

1. A feasibility study for groundwater cleanup in compliance with Task 6.d of the Order: If appropriate, a revised recommendation for groundwater cleanup (Task 6.e) and a revised implementation time schedule (Task 6.g) should be submitted.
2. RAP Section 8.1.1 Soil Remedial Actions: This section should be expanded to consider the addition of approved contaminant treatment amendments to the base of the excavation if groundwater is encountered.
3. RAP Section 8.1.1.3 Soil Excavation Procedures: This section should propose vapor monitoring and control measures to be taken during soil excavation below the former dry cleaning building to ensure that there is no threat to Site workers and residents.
4. RAP Section 8.1.3 Vapor Remedial Actions and Utility Cutoff Barriers: This section should provide for an additional soil vapor monitoring point between the source area and Casa Marinwood (e.g., on the west side of Marinwood Avenue nearest the residences and location of sample SV-31).
5. RAP Section 8.3. Implementation Schedule: The schedule should be updated to provide date-certain milestones for approved RAP elements, based on the date of this letter and the “time after Board approval” time intervals specified in the RAP.

As discussed above, Marinwood Plaza, LLC, is in violation of Task 6 as it pertains to groundwater. Water Code Section 13350 allows the Regional Water Board to impose administrative civil liability of up to \$5,000 per violation day for such violations. You are hereby given notice that we will refer this matter to the Regional Water Board’s enforcement unit by July 1, 2016. We will reconsider this enforcement-referral action if Marinwood Plaza, LLC, submits, by **July 1, 2016**, a RAP addendum acceptable to the Executive Officer. In the event Marinwood Plaza, LLC, fails to comply with Task 6, it may be subject to penalties based on the original due date of January 1, 2016.

If you have any questions, please contact Ralph Lambert of my staff at (510) 622-2382 or via e-mail at: [RALambert@waterboards.ca.gov](mailto:RALambert@waterboards.ca.gov).

Sincerely,

Bruce H. Wolfe

## Executive Officer

Attachment: Response to Comments  
cc w/attach: Mailing List

## Mailing List

Taper Family Enterprises  
Attn.: Mr. Craig Cooper  
Email: [Craig@taperfamilyoffice.com](mailto:Craig@taperfamilyoffice.com)

Hoytt Enterprises, Inc.  
Attn.: Mr. Lee Hoytt  
Email: [Lee.Hoytt@hoyttenterprises.com](mailto:Lee.Hoytt@hoyttenterprises.com)

Wells Fargo Bank  
Attn.: Mr. Eric Hu  
Email: [Eric.Hu@wellsfargo.com](mailto:Eric.Hu@wellsfargo.com)

Geologica  
Attn.: Mr. Brian Aubry  
Email: [Baubry@geologicagroup.net](mailto:Baubry@geologicagroup.net)

Geologica  
Attn.: Mr. Dan Matthews  
Email: [DMatthews@geologicagroup.net](mailto:DMatthews@geologicagroup.net)

Casa Marinwood Neighbors  
Bill McNicholas  
Email: [Billmcn@pacbell.net](mailto:Billmcn@pacbell.net)

Marin County Supervisor  
Mr. Damon Connolly  
Attn.: Mr. Chris Callaway  
Email: [CCallaway@marincounty.org](mailto:CCallaway@marincounty.org)

Marin County Public Works  
Attn.: Mr. Raul Rojas  
Email: [RRojas@marincounty.org](mailto:RRojas@marincounty.org)

Marin County Community Development  
Attn.: Mr. Brian Crawford  
Email: [BCrawford@marincounty.org](mailto:BCrawford@marincounty.org)

Marin County Health Department  
Attn.: Mr. Armando Alegria  
Email: [AAlegria@marincounty.org](mailto:AAlegria@marincounty.org)

Silveira Ranches  
Attn.: Ms. Renee Silveira  
Email: [RFSilv@comcast.net](mailto:RFSilv@comcast.net)

David Trotter Law  
Attn: Mr. David Trotter  
Email: [David.trotter@dtrotterlaw.com](mailto:David.trotter@dtrotterlaw.com)