

Appendix A: List of Documents Reviewed

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List of Documents Reviewed

- CH2M Hill, 2003. Final Ecological Risk Assessment for the Palos Verdes Shelf, CH2M Hill. November.
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- Gilbane Federal, 2014. ICs fish monitoring program database/website <http://bit.ly/1i6tHrW>. Updated periodically.
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- ITSI Gilbane, 2013b. Draft Data Usability Technical Memorandum – Palos Verdes Shelf, Institutional Controls Program Update. 20 September.
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- SGA, 2013. FCEC Enforcement Report. 31 May.
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- EPA, 2008. Palos Verdes Shelf Superfund Site Institutional Controls Program Implementation Plan – Draft. September.
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- EPA, 2009b. Interim Record of Decision, Palos Verdes Shelf, Operable Unit 5 of Montrose Chemical Corporation Superfund Site. September.
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Appendix B: Press Notices

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PUBLIC NOTICE
EPA BEGINS FIRST FIVE-YEAR REVIEW OF THE INTERIM CLEANUP AT THE
PALOS VERDES SHELF
SITE

The United States Environmental Protection Agency (EPA) has begun the initial Five-Year Review (FYR) of interim cleanup actions undertaken at the Palos Verdes Shelf Site, Operable Unit 5 of the Montrose Chemical Corporation Superfund Site, located off the Los Angeles, California coast. The review will evaluate whether the cleanup actions for the Site remain protective of human health and the environment.

Specifically, EPA will look at the movement and breakdown of the Site's remaining contaminants, the effectiveness of the institutional controls, changes in scientific knowledge about site contaminants and exposure pathways, and changes in regulatory standards.

After September 30, 2014, a copy of the final report will be placed in the information repositories listed below. This Site's next FYR is scheduled for 2019.

INTERIM REMEDY

The Palos Verdes Shelf site is a large area of dichlorodiphenyltrichloroethane (DDT) and polybrominated biphenyls (PCBs) contaminated sediment located in the ocean off the coast of the Palos Verdes peninsula near Los Angeles, California. High levels of DDT and PCBs are found in the active biologic zone of the Palos Verdes Shelf sediments, and fish from the Shelf are contaminated with DDT and PCBs. On September 30, 2009, the EPA signed an interim Record of Decision that selected an initial remedial action for PV Shelf of capping, monitored natural recovery, and institutional controls.

COMMUNITY INVOLVEMENT

If you like to be interviewed for the FYR, please contact Judy Huang, EPA Project Manager at (415) 972-3681 or by email at huang.judy@epa.gov prior to February 17, 2014.

For more Site information, go to EPA's webpage at:
www.epa.gov/region09/pvshelf

To be added to the Site's mailing and email list, contact Carlin Hafiz at (213) 244-1814 or by email at hafiz.carlin@epa.gov.

INFORMATION REPOSITORY LOCATIONS:

San Pedro Public Library, 931 So. Gaffey Street, San Pedro, CA 90731, (310) 548-7779; Redondo Beach Public Library, 303 N. Pacific Coast Hwy., Redondo Beach, CA 90277, (310) 318-0675; Palos Verdes Peninsula Library, 650 Deep Valley Drive, Rolling Hills Estates, CA 90274, (310) 377-9584 and EPA Superfund Record Center, 95 Hawthorne St., San Francisco, CA 94105, (415) 820-4700.

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Appendix C: Interview Forms

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INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 14:45	Date: 02/07/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: James Alamillo	Title: Urban Programs Manager	Organization: Heal the Bay
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Telephone No: 310-451-1500, ext 115	Street Address: 1444 9 th St.
Fax No: 310-496-1902	City, State, Zip: Santa Monica, CA 90401
E-Mail Address: jalamillo@healthebay.org	

1. What is your overall impression of the PV Shelf project? (general opinion)

There has been a great deal of work completed for the PV Shelf project, from studies (fish tissue study, fish consumption study) to award winning public outreach programs over the past 10 years. However, there is still a lot of work to be completed and questions answered about the site. Until then, public education and outreach will continue to be an important component of reducing the risk to public health from contaminated fish consumption.

2. Do you feel well informed about the site's activities and progress?

Yes. However, we still feel that there is room for improvement with regards to the members of the ICs and PVSTIEG collectively working with one another to inform not only PV Shelf stakeholders, but the greater Los Angeles/Orange County audiences. Too often, members of the public do not know the relationship of PV Shelf studies to PV Shelf policies or outreach education. An example of this would be the recently completed "2013 Palos Verdes Shelf Seafood Consumption Study" by SGA and USEPA and its implication of the Interim Record of Decision. Most of the public would see this report as an interesting study. However, the report, and its suggested 'fish consumption rate' have huge implications for how future PV Shelf resources are allocated. Few, if any, IC stakeholders from the community would recognize this issue. As such, USEPA needs to do a better job highlighting this to IC community stakeholders, as well as the public at large.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes. In addition, we are aware that the data indicated that contamination levels in the sediment were reported as 'decreasing'. While the report can lead one to have enthusiastic, almost euphoric sentiment that the site is cleaning itself up without human intervention, Heal the Bay has taken a more reserved position until a number of questions can be answered. For example, the report fails to adequately address why the current results differ so drastically from previous sediment sampling results and assessments. In addition, the report does not address the fate or

transport of the ‘missing’ sediment other than stating it has ‘magically’ disappeared. Also, while DDT might be reducing at accelerated rates than previously thought possible, which is still being debated; PCBs concentrations were thought to be highly stable and more problematic in terms of remediating. To this end, while there might be an explanation for the reduction in DDT concentrations, the report made no mention of how and why PCBs concentrations were significantly reduced in the sediment.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes.

4b. In your opinion, is the ICs component functioning as expected? Yes. Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

Yes, the ICs component is functioning as expected. And yes, the ICs program is reaching its outreach and education goals. However, within this context, we believe that more outreach and education needs to be targeted to those recreational and sport-fish anglers that target fish listed on ‘do not consume’ list, as well as have limited fish consumption advisories. In addition, greater effort needs to be made to determine/validate what anglers state that are consuming versus what they are actually catching and taking home.

As for the enforcement and monitoring goals, continuing to fund these efforts is critical despite the lack of white croaker being landed or found in markets. Given the fluctuations in fish populations and landings, and the number of fish under current health advisories, tracking and monitoring fish catch, and the fate of that catch, this effort needs to be constantly done.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes.

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

No. There are still a number of unanswered questions associated with this site, such as 1) a defensible explanation for the significant reduction in concentration of DDT and PCB in sediment, 1a) an explanation of how PCB is showing significant concentration reductions given its highly stable nature, 2) an explanation for why an equally significant reduction in fish tissue does not mirror the sediment reduction, 3) the development of a descriptive food web model of that demonstrates the fate and transport of DDT and PCB within the PV Shelf ecosystem—to include the water column and sediment.

To date, the MNR has simply monitored conditions on the shelf. As such, the MNR has not effectively reduced contamination levels at the PV Shelf because the MNR has not actually completed any work to reduce contamination levels. Currently, any reductions of contamination have been completed by nature—through chemical breakdown or biological uptake, or erosion—the moving of contaminated sediment on-site and off-site. The MNR has neither facilitated this process nor physically cleaned-up/abated the contaminated sediment.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Heal the Bay conducts the Angler Outreach Program under the auspices of the Fish Contamination Education Collaborative, which is a component of the Institutional Controls Program (ICs). The Angler Outreach Component is designed to conduct educational outreach to anglers on piers regarding: fish consumption guidelines, portion sizes and cooking methods to reduce risk, pier locations with “safer” fish populations, and updates on activities associated with clean-up and abatement of the PV Shelf, as well as restoration efforts. To date, Heal the Bay’s Angler Outreach Program has reached over 120,000 anglers during the past 10 years.

In addition to our involvement in the ICs Program, Heal the Bay regularly participates in the Palos Verdes Shelf Technical Information and Exchange Group.

Finally, Heal the Bay is routinely in communication USEPA, along with local State and municipal agencies, regarding the Santa Monica Bay Toxics TMDL for DDT and PCB.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

To the extent that this is possible, the proponents of the proposed remedy should strive to work with other public agencies to collectively address the contamination issues affecting the Santa Monica Bay, San Pedro Bay (Port of LA and Port of LB) and the Palos Verdes Shelf. They are hydrological and ecologically linked, yet the responsible jurisdictional agencies rarely collaborate on regulatory compliance or oversight, monitoring studies, or public education to more holistically address, understand the issue.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 12:26	Date: 02/04/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Robert K. Brodberg, Ph.D.	Title: Chief, Fish, Ecotoxicology, and Water Section Cal/EPA	Organization: OEHHA
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Telephone No: 916-323-4763 Fax No: 916-327-7320 E-Mail Address: robert.brodberg@oehha.ca.gov	Street Address: Mail Stop 12-B, PO Box 4010 City, State, Zip: Sacramento, CA 95812
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Summary Of Conversation

1. What is your overall impression of the PV Shelf project? (general opinion)

The project is progressing and evolving. Initially, the focus seemed to be on public health; including communication, protecting and working with a broad coalition of non-government organizations (NGOs) representing a diversity of ethnic communities. Now the focus seems to be more on the clean-up and working through consultants and fewer and larger NGOs. The goals remain the same the implementation feels different.

2. Do you feel well informed about the site's activities and progress? Yes

3. Are you aware of the 2009 sediment monitoring data? Yes. Are you aware that the data indicated that contaminant levels in sediment are decreasing? Yes. What are your thoughts about this? This is an interesting, somewhat unexpected development at this time in the project. The results need to be replicated/verified by repeated testing over several years. The time-frames for declines in sediment and fish may vary. Indicator species should be tested (analyzed for PCBs and DDTs in the PV area and entire "red zone" over several years to see if the levels in fish are also declining.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)? Yes.

4b. In your opinion, is the ICs component functioning as expected? Yes. Is the ICs program reaching its outreach and education goals? Yes. Its enforcement and monitoring goals? Enforcement yes; sediment monitoring yes; now need to monitor fish. This may be earlier than anticipated, but fish monitoring is need to respond to the sediment data.

INTERVIEW RECORD (cont.)

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)? Vaguely aware.

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf? It is too soon to say that contamination levels have been permanently reduced, and why.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results. No

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? No. If so, please give details of the events and results of the responses.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

a) The continued absence of white croaker in local fish markets and commercial landings suggests that the on-the-water Enforcement component is less critical. A reduction in white croaker tissue concentrations similar to what has been found for sediment would also support this conclusion. Develop a plan to re-examine the continued need and role of the Enforcement component of the program.

b) If white croaker tissue concentrations are found to be lower it will be necessary to do a broader tissue monitoring study of other species across the current "red zone" in order to make changes in the state advisory across this area

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 05:31	Date: 02/14/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Robert Eganhouse	Title: Research Chemist	Organization: United States Geological Survey
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Telephone No: 703-648-5879	Street Address: 12201 Sunrise Valley Drive, MS 432
Fax No: 703-648-5832	
E-Mail Address: eghanous@usgs.gov	
City, State, Zip: Reston, Virginia 20192	

1. What is your overall impression of the PV Shelf project? (general opinion)

The remedial plan is reasonable and realistic as long as ongoing research findings are used to inform decisions about the application of engineering solutions (i.e. capping) at the site. The PV Shelf is very complex and may be the most extensively studied of any portion of the continental shelf in the world. Consequently, questions still remain about the behavior of the contaminated deposit. Given that, it is only prudent that a staged approach be used in attempting to remediate the site and, thereby, mitigate impacts.

2. Do you feel well informed about the site's activities and progress?

Not particularly. I have only intermittent contact with the RPM and the prime contractor's representative (R. Lindfors). Clearly there are research activities going on and decisions being made, but I hear little, if any, about them and my input has rarely been solicited. One other comment I might make is that EPA's Palos Verdes website is only very infrequently updated. Thus, one must depend on direct contact with the RPM or EPA's prime contractor (e.g. via a PVSTIEG meeting or email) for information.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes. I understand that the results suggest that the contaminant mass was significantly lower in 2009 than it was in the past. What are your thoughts about this? Well, it has been known since the early 1990s that reductive dechlorination of the major DDT compounds in Palos Verdes Shelf (PVS) sediments (DDE, DDD) was occurring. That process continues. In addition to microbially-mediated reductive dechlorination, it is also likely that contaminants are being lost from the sediments by physical processes (diffusion, resuspension/desorption, sediment transport). Our work appears to indicate that reductive dechlorination is the dominant mechanism for attenuation of DDE in PVS sediments. This is primarily due to the fact that most of the contaminant mass is found at significant depths below the sediment-water interface where physical loss processes are less likely to be effective.

Research we are just now completing indicates that the dechlorination rate of p,p'-DDE at two well-studied locations (LACSD stations 3C, 6C) differs, but it does not appear to have changed at either site over the period 1981-2010. The first-order dechlorination rates we have developed do not support the magnitude of the apparent decrease in mass of DDE suggested by comparison of the modeling of 2009 baseline survey data and data from previous studies (cf., Table 10, final report). Thus, we believe that the mass of DDE and surficial sediment (0-8 cm) concentrations (with and without organic carbon normalization) in PVS sediments that was estimated from data collected in the 2009 survey are almost certainly underestimates. Possible reasons for lower-than-expected masses and concentrations could include one or more of the following: 1) negative bias of the trace organic analytical chemistry (i.e., DDT, PCBs) results, 2) positive bias of the TOC results, 3) negative bias associated with the geostatistical methods used to estimate mass from the analytical chemistry measurements, and/or 4) differences in sampling methods (viz., sampling devices) and locations (navigation) used in the 2009 baseline survey and those used in principal preceding study (i.e. USGS [1992] survey) with which the 2009 survey data are being compared.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Somewhat. I have read a bit about them in the FS and some of the EPA documents/bulletins.

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

Don't know.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes.

5b. In your opinion, is the MNR component functioning adequately?

If by the 'MNR component' you mean the evaluation of whether and how MNR is proceeding, I would say the approach is working, but the results to date (i.e. the 2009 baseline survey) have not resulted in an accurate understanding of what is happening in the sediments.

Is it effectively reducing contamination levels at PV Shelf?

DDE concentrations are decreasing. It is really a question of how fast, how the rates vary spatially (vertically, laterally), and whether the rates are changing with time or not. It must be recognized that in the case of reductive dechlorination of the dominant DDT 'parent' compounds (i.e., DDE and DDD), products that could also exhibit toxicity (i.e., DDMU, DDNU, DDMS, DDNS) are being generated. Thus, while some contaminant concentrations are decreasing, others may be increasing. If the 'parent' compounds (DDE, DDD) or reductive dechlorination products (DDMU, DDNU, DDMS, DDNS) become sequestered within the sediments or are completely mineralized (to CO₂, HCl, H₂O) they are effectively removed from the system. This would, in my opinion, be the best outcome, but we don't yet know the extent to which this is occurring. It is also possible that the COCs are being transformed to other degradation products (e.g. DBP, DDA, DDOH), which may be more or less mobile and toxic, but these compounds are not presently being measured.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site?

I have supplied quarterly reports of our research to USEPA, Region IX for the last several years (since 2009). If so, please give purpose and results. The purpose is to keep the RPM informed of progress, expenditures, and, to some extent, research findings.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office?

An article written by Ms. Marla Cone (Environmental Health News) on the apparent loss of DDE in PVS sediments as a result of the 2009 baseline survey results was published in Scientific American online. If so, please give details of the events and results of the responses. I was contacted by Ms. Cone in January 2013 and eventually I gave an interview. I got permission to review and comment on her draft article as well. Here is the publication link... <http://www.scientificamerican.com/article/the-mystery-of-the-vanishing-ddt-in-the-ocean-near-los-angeles/>

Somewhat later, I was contacted by an environmental reporter at Southern California Public Radio (Ms. Molly Peterson), but she never followed up with an interview. An article on the same subject, but with less information, came out in December 2013 (<http://www.scpr.org/news/2013/12/04/40725/scientists-turned-detectives-look-to-crack-the-cas/>).

Another article appeared in the Los Angeles Times in November, 2013 (<http://articles.latimes.com/2013/nov/17/local/la-me-palos-verdes-shelf-20131118>), but I was not contacted or interviewed for that article.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

It would be good if all researchers involved at PV whose work is pertinent to the issues EPA is trying to address be given information on activities at the site. From my limited perspective, there is a need for greater transparency and better communication. My second suggestion is that all data being generated in support of decision making be taken into account before EPA invests in further remedial actions. This should include soliciting the advice of principle investigators who, in some cases, have unique in-depth knowledge of the site, are familiar with the large body of previous research, and have the best overall sense of current conditions on the PVS.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 09:18	Date: 02/18/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Mark Gold	Title: Associate Director	Organization: UCLA, Institute of the Environment and Sustainability
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Telephone No: 310-825-5324	Street Address: La Kretz Hall, Suite 300
Fax No: 310-825-9663	
E-Mail Address: gold@ioes.ucla.edu	
City, State, Zip: Los Angeles, CA 90095	

1. What is your overall impression of the PV Shelf project? (general opinion)

I'm disappointed at the pace of the project. I've been involved on this since the mid-1990s and I never thought we'd be sitting here in 2014 without implementation of a remedy. The research efforts have been slow as well.

2. Do you feel well informed about the site's activities and progress?

Pretty well informed. Yes.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

I am still in shock on this. It is contrary to all of the results prior to that point. Scientifically, it doesn't make much sense. There was no massive resuspension event. Even if DDT degraded more rapidly in a very short period of time, that doesn't explain the rapid drop in PCB concentrations. PCBs are not known to degrade rapidly.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes. The work on educating the most exposed public has gone well. Outreach and education has been the strongest part of the entire superfund effort. However, enforcement is still negligible. And the fact the commercial closure area hasn't changed in 20 years is unconscionable in light of the data that demonstrates that contaminated fish are found throughout San Pedro Bay. That could have been an easy change at CDFW, but it never happened. The same tiny, arbitrary closure area is being used. This feeds into the fact that enforcement has never been a big priority for the project. It has always been about outreach and education.

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

See above. Great work on outreach and education. Not much effort on the enforcement side.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes.

5b. In your opinion, is the MNR component functioning adequately? Yes Is it effectively reducing contamination levels at PV Shelf?

In light of my history on this project, I'm not even sure how to respond. This is not action. This is not protecting public health. Natural recovery is a euphemism for doing nothing. Monitoring is critical, but it isn't remediation

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

No. I'm still on the Board of Heal the Bay, and I helped create their pier outreach program. They are a partner on the project. I try to go to some EPA meetings and read the e-mail.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No. But Heal the Bay and me have been vocal about the slow pace of remediation and research (the fish study took years and the sediment flux study has yet to be completed) and the definition of site remediation success.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

We'll have to wait for the results of the latest study to move forward on capping. It definitely feels as if EPA has thought capping was too difficult and too expensive, so natural recovery seems to be their preferred approach. Continuing the outreach and education program is critical. Expanding the regulatory component of ICs is over a decade overdue. People should not be catching and selling contaminated fish. Also, starting a clean fish certification program for fish caught in the bight is equally as important and long overdue.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 17:37	Date: 02/19/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Stephen Groner, P.E.	Title: President	Organization: S. Groner Associates, Inc.
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City, State, Zip: Long Beach, CA 90804	

1. What is your overall impression of the PV Shelf project? (general opinion)

From the big picture stand point, it seems like EPA has done an excellent job developing a methodical plan for addressing the overall site including: gathering data, working with stakeholders, developing interim ICs, and coordinating with other agencies' expertise to collaborate and then basing remedial action decisions on the data they have on hand. The process has been slow, but very methodical and has made steady progress throughout the time I have been involved in the project.

The complexity of the site makes it difficult to provide stakeholders with clear and definitive answers on key long-term questions, which may be frustrating for some stakeholders. However, EPA has done a very thorough job of putting in place IC protections while long-term questions are methodically being answered through a step wise process of obtaining new data and incorporating it into the analysis of how to best remediate the site.

2. Do you feel well informed about the site's activities and progress?

As a contractor to the project, I do feel well informed. However an average stakeholder who is not as close to the project as we are may be confused, especially due to the fact that the data coming from the site has been so dynamic over time without clear explanation (this may confuse stakeholders that don't hear from EPA very often). In addition, the complexity of information may be difficult to follow, especially when they hear about the remediation portion of the project infrequently.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes, I'm aware of the sediment monitoring data and the indication of a rapid decrease in contaminant levels. The data seems pretty straight forward that there has been clear declines in the contaminants in the soil sediment. While I am a registered environmental engineer familiar with soil sampling and remediation, I am not as familiar with the chemistry of DDT or PCB and/or its chemical decomposition process and how quickly it may naturally bio-remediate over time and/or chemically breakdown into "daughter" compounds, so it is hard for me to judge if this is out of the ordinary for these chemicals.

With that said, most people naturally think in linear terms, so the fact that there has been a rapid (non-linear) decrease in the last data set, I'm sure has many people questioning the situation. From my professional experience in communications, people want information to fit into an explainable model or narrative that fits into their mental prediction of what seemed plausibly. The non-linear nature of the data decline over time and that it did not fit into most people's mental expectation leading up to this last round of data, I'm sure makes many people uncomfortable.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes.

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

I do feel the IC component is functioning as expected. And I do feel the ICs program is reaching its outreach and educational goals.

I feel the pier outreach program is very solid and strong, which reaches the most direct audience (but not necessarily the most vulnerable – women of child bearing age and children being most at risk). The outreach to key EJ communities where fish may be brought back to families is harder to implement and assess the effectiveness, but the development of partnerships within key communities, plus development and distribution of multi-lingual outreach materials and online outreach has helped bridge this gap. The one area where I am least confident about and uncertain of the risk associated with the audience is anglers fishing for barred sandbass (both individuals fishing from private boats and from commercial passenger fishing vessels i.e., “party boats”). This is a different audience than pier anglers and is more difficult to reach, plus it seems like the data on barred sandbass is the least robust as far as its level of contaminants and sample size. So it is unclear what the risk level is and how much if any outreach is needed to protect this audience.

I also feel the enforcement and monitoring programs have done a good job keeping key “do not consume” fish out of the markets, specifically in Long Beach and Orange County. And the Department of Fish and Wildlife has added additional credibility, oversight and knowledge to the enforcement and monitoring effort which has been very valuable.

Between the education and outreach efforts and enforcement and monitoring efforts, I feel that EPA has put into place a comprehensive IC program that is protective of public health.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes.

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

Yes it seems to be effectively working, especially given the latest round of data.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Yes, we implement/oversee the public education and outreach on behalf of EPA. We also work closely with the enforcement and monitoring program to ensure those efforts are aligned with the public education messaging. And lastly we assist EPA on conducting the annual strategic planning meetings and annual partner meetings.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

No additional comments at this time.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 09:49	Date: 02/07/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Joseph Gully	Title: Supervising Environmental Scientist, Ocean Monitoring and Research Group	Organization: Sanitation Districts Los Angeles
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Telephone No: 562-908-4288, ext 2818	Street Address: 1955 Workman Mill Rd.
Fax No: 562-908-4293	City, State, Zip: Whittier, CA 906010
E-Mail Address: jgully@lacsds.org	

Summary Of Conversation

1. What is your overall impression of the PV Shelf project? (general opinion)

The staff tracking the PV Shelf Project from the Ocean Monitoring and Research Group (OMRG) of the Sanitation Districts of Los Angeles County (Sanitation Districts) feel that the project is taking adequate steps to protect public and environmental health and restore lost resources resulting from the DDT and PCB contamination on the PV Shelf. The EPA Remediation leadership has been appropriately cautious in determining what, if any, engineered remediation (i.e. capping) is necessary and whether such an action would be worth the potential risk of resuspension of the contaminated sediments. This has taken great courage given the pressure by some environmental groups to take action immediately regardless of the risks or effectiveness.

2. Do you feel well informed about the site's activities and progress?

For the most part yes, although during significant (>4 months) lulls in activity, it would be helpful to get a periodic status report. Maybe a standing quarterly update should be considered.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes and yes. We are not surprised that the contaminant levels on the PVS are decreasing. There are many mechanisms by which sediment contamination levels would be expected to decrease over time including burial, degradation, efflux to the water column, accumulation in biota, and sediment transport. Our 42 years of monitoring the area have documented such declines over time as well. What is surprising and difficult to explain is the magnitude of decline in just five years. It is hard to imagine that conditions on the PVS would have changed such that one or more of the aforementioned loss mechanisms would cause an 80% reduction in the deposit. EPA has made the right decision to repeat (and expand) the 2009 work to confirm this result before deciding on the appropriate remediation strategy.

INTERVIEW RECORD (cont.)

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes, we have participated in the ICs program since their inception as a technical resource to the program.

4b. In your opinion, is the ICs component functioning as expected? Yes. Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

Yes, we feel the ICs program is generally functioning as expected and reaching its outreach and education goals. One concern we have (and expressed at the time) is that the simplified fish consumption guidelines message unnecessarily restricts males and older women from consumption of certain fish contaminated with mercury. A goal of the IC program is to inform the public on which fish are safe to consume and the current consumption message is inaccurate in this regard. Further, mercury is not one of the contaminants associated with the PVS Superfund Site and perhaps should be eliminated from the ICs message altogether. That is not to say informing the public of mercury contamination issues should not occur, just that the ICs program should just focus on DDTs and PCBs and let OEHHA and DFW take care of mercury. As far as enforcement and monitoring is concerned, there has been considerable improvement in the past several years on both fronts. Hopefully this trend will continue into the future.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes. We provided in-kind support to the sediment coring (2009, 2013) and contaminant flux studies (2011).

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

Yes, we feel the MNR component is functioning adequately. As far as effectively reducing contamination levels goes, the answer is yes give the circumstances. While MNR is slow, the uncertainty of the 2009 data and the demonstrated risk of resuspension associated with capping make MNR and ICs the best way to manage the site at this time. Hopefully, the 2013-2014 monitoring activities will provide more clarity on the rate and primary mechanisms of contamination decline at the site so the risk to reward factor associated with capping can be determined.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Yes, in addition to participating in the MNR and other special studies at the site over the years, we routinely monitor the sediments, benthic infauna and bottom fish/invertebrate communities, water column, and fish tissue contamination at the site for our NPDES permit. These data are provided annually and discussed in terms of impacts from our discharge and spatial/temporal trends every two years in our Receiving Water Monitoring Report submitted to the Los Angeles Regional Water Quality Control Board. Copies of these reports are available upon request.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

A single, high quality laboratory should be placed under long-term contract (5 yrs?) by EPA to ensure consistency and quality in the data.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 15:15	Date: 02/18/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Rebecca Hartman	Title: Captain	Organization: California Department of Fish and Wildlife
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Telephone No: (310) 678-4864	Street Address: 4665 Lampson Ave Suite C
Fax No: (562) 804-1548	
E-Mail Address: Rebecca.Hartman@wildlife.ca.gov	
City, State, Zip: Los Alamitos, CA 90720	

1. What is your overall impression of the PV Shelf project? (general opinion)

I think it is getting out an important message, but it does take a lot of people and time to get the messages out. I guess it's better to do it that way than to put out an outreach product that doesn't reach the intended people, or doesn't convey the right message.

2. Do you feel well informed about the site's activities and progress?

Yes, through the big meetings we have

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes, it looks like it is occurring naturally, right? Any the question I have, and the public asks too, is where is it going? Is it breaking down biologically into something else? Or being carried to another location?

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes, very much so!

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

It is operating as expected, and meeting goals, but there are still people that don't know about the contamination issue showing up constantly, which is mind boggling since we have done so much outreach! I think the outreach would have to continue until the threat is gone, in order to reach our goals. Also, there haven't been any white croaker landed commercially because the fishermen aren't catching them. Where are they?! If the white croaker come back, the markets will see a ton of them, and then we will need to be reactive in warning businesses about the problems, unless we keep checking different markets and keep letting them know, even though they aren't buying white croaker now.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Not sure what this is... if you mean that is cleaning itself up naturally, then yes, but I'm still concerned about where it's going!

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

See 5a.. I think it's functioning, and is probably the only way to go, it's just going to take awhile...

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

I am with Fish & Wildlife (Formerly Fish & Game), so we do the outreach and enforcement aspect. We have found that many people know of the contamination issues and are avoiding white croaker, but we are also learning that there is a limitless number that don't know.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

It would be good if the sample size for contaminated fish species was larger, and I really want to know where the white croaker have gone, and where the contaminant has gone if it's not still there...

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 10:00	Date: 4/1/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email)	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	
Location of Visit:		

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Michael Lyons	Title: Staff Level Environmental Specialist	Organization: Los Angeles Regional Water Quality Control Board
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Telephone No: 213-576-6718	Street Address: 320 West 4th Street #200 City, State, Zip: Los Angeles, California 90013
Fax No: 213-576-6640	
E-Mail Address: mlyons@waterboards.ca.gov	

Summary Of Conversation

1. What is your overall impression of the PV Shelf project? (general opinion)

It's taking forever to make a decision on how to proceed.

2. Do you feel well informed about the site's activities and progress?

Relatively well informed. However, given the infrequency of meetings and lack of updates, it's easy to lose track of when decisions will be made.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

I am aware of the 2009 monitoring data and the indications of decreasing contaminant levels. It would be nice if this turns out to be true, but it is puzzling why PCB and DDT levels would drop to the same extent if natural degradation is occurring, since these compounds have different degradation pathways. I wouldn't be surprised if material has sloughed off the shelf into deeper water or if it's simply an analytical technique anomaly.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes.

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

The IC program seems to be conducting a lot of outreach and education. Not sure if this is effectively reducing consumption of contaminated fish.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes.

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

Bald eagles and other raptors seem to be experiencing improved reproductive success, so it looks like some reductions in contaminant transfer have occurred. However, fish continue to be contaminated and we still have fish advisories.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

No.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

More frequent updates on progress would help. It would be useful to circulate a summary of meetings to the groups so that those that miss a meeting can stay informed.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 15:13	Date: 02/06/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Tayseer Mahmoud	Title: Senior Hazardous Substances Engineer	Organization: DTSC
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Fax No: (714) 484-5437	
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City, State, Zip: Cypress, California 90630	

Summary Of Conversation

1. What is your overall impression of the PV Shelf project? (general opinion)

The USEPA is working diligently to investigate the Site and address State and local agencies concerns to select at a final remedy for the Site that will be protective of public health and the environment. Also, USEPA holds technical meetings, strategic planning meetings, and information exchange meetings to keep the agencies involved and coordinate activities for the project.

2. Do you feel well informed about the site's activities and progress? Yes

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes. DTSC is aware that contaminant levels are decreasing. DTSC reviewed the draft report and sent comments to EPA. The responses to comments were acceptable and DTSC concurred with the 2009 Sediment Report on December 9, 2013. Additional sediment sampling is planned for the project.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)? Yes.

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

The ICs component of the remedy is functioning as expected. Also, the outreach program is reaching the public and the ICs signs play a big role in keeping the public safe. In addition, state and local agencies are working with USEP to monitor and enforce the ICs.

INTERVIEW RECORD (cont.)

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)? Yes.

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

Although the MNR is expected to function at the Site, additional sediment sampling is planned to confirm that the MNR is effectively reducing contamination levels.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results. No

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? No. If so, please give details of the events and results of the responses.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

The planned additional sediment sampling, water column sampling, and fish movement studies will support the selection of a final remedy for the Site.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 09:06	Date: 02/24/14
Type: <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Salwa Mina	Title: Environmental Health Specialist II	Organization: Los Angeles County Public Health
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Fax No:	
E-Mail Address: smina@ph.lacounty.gov	
City, State, Zip: West Covina, CA 91790	

Summary Of Conversation

1. What is your overall impression of the PV Shelf project? (general opinion)

It's a very good project. I've received so much information on the project when I joined [FCEC]. I feel that it's very good and should continue with the project.

2. Do you feel well informed about the site's activities and progress?

Yes, because of all the meetings. The meetings are very informative.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Not sure about it. I'm aware of the decreasing concentrations in the sediment.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes, we are participants of the ICs program.

4b. In your opinion, is the ICs component functioning as expected? Yes. Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

Yes, I'm aware. The results show that the program is doing a great job informing market operators and owners.

INTERVIEW RECORD (cont.)

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Not sure about it.

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

Not sure about it.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Yes, there have been.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No, never. No complaints.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

Very wonderful project and it should continue.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 09:06	Date: 02/24/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Mozghan (Mo) Mofidi	Title: Supervising Environmental Specialist II	Organization: Illness Prevention and Response Section, Environmental Health Division
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Telephone No: 714-433-6075	Street Address: 1241 E Dyer Rd, Suite 120
Fax No: (714) 433-6426	City, State, Zip: Santa Ana, CA 92705
E-Mail Address: mmofidi@ochca.com	

Summary Of Conversation

1. What is your overall impression of the PV Shelf project? (general opinion)

This is a much needed project because it outreaches and protects the public from the health risks of consuming contaminated fish.

2. Do you feel well informed about the site's activities and progress?

Yes, updated information are provided via FCEC meetings, emails and the website.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes, I'm aware of it. I think the environmental changes and enforcement efforts had an effect on this change. It is defiantly good news.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

It has in Orange County

INTERVIEW RECORD (cont.)

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

I'm not familiar with the details of it but I would say yes, based on the data

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Yes, Orange County Environmental Health conducts 12 surveys per month at retail food facilities. The purpose has been to provide outreach, education and enforcement when needed. As of today, white croaker has not been found.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

No

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 16:35	Date: 02/18/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Patty Velez	Title: CERCLA Program	Organization: California Department of Fish and Wildlife
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Telephone No: 831-649-2876	Street Address: 20 Lower Ragsdale Dr, Suite 100 City, State, Zip: Monterey, CA 93940
Fax No:	
E-Mail Address: pvelez@ospr.dfg.ca.gov	

1. What is your overall impression of the PV Shelf project? (general opinion)

Good.

2. Do you feel well informed about the site's activities and progress?

Yes.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes, Surprised to hear this (but in a good way) and waiting for the additional data

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes.

4b. In your opinion, is the ICs component functioning as expected? Yes Is the ICs program reaching its outreach and education goals? Yes – but I would like to see a Hispanic CBO involved/participate in the FCEC meetings and activities. Its enforcement and monitoring goals?

Yes.

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes.

5b. In your opinion, is the MNR component functioning adequately? Yes Is it effectively reducing contamination levels at PV Shelf?

It seems to be.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

Yes. My Department (CDFW) participates on the TRC and the ICs activities – provides review of items (data, reports, etc); attends/participates in meetings; etc.

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office?

No, but our enforcement group may have additional information pertaining to this. If so, please give details of the events and results of the responses.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

No additional comments.

INTERVIEW RECORD

Site Name: Palos Verdes Shelf	EPA ID No.: CAD008242711	
Subject: Five-Year Review	Time: 10:07	Date: 03/03/14
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input checked="" type="checkbox"/> Other (email) Location of Visit: N/A	<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing	

Contact Made By:

Name: Ed Gillera	Title: Project Scientist	Organization: Gilbane Federal
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Individual Contacted:

Name: Guang-Yu Wang	Title: Staff Environmental Scientist	Organization: Santa Monica Bay Restoration Commission
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Telephone No: 213-576-6639	Street Address: 320 W 4 th St, Suite 200
Fax No:	
E-Mail Address: gwang@waterboards.ca.gov	
City, State, Zip: Los Angeles, CA 90013	

Summary Of Conversation

1. What is your overall impression of the PV Shelf project? (general opinion)

Overall, I feel that the project has been moving in the right direction and taking right steps. However, the progress is slow and the high turn-over of project managers did not help to keep the project on track.

2. Do you feel well informed about the site's activities and progress?

Overall the answer is yes because I am a member of the FCEC and the Technical Information Exchange Group.

3. Are you aware of the 2009 sediment monitoring data? Are you aware that the data indicated that contaminant levels in sediment are decreasing? What are your thoughts about this?

Yes, I am aware of the data and the preliminary findings. However, I think it is too early to draw conclusion and more sampling and testing are needed.

4a. Are you aware of the Institutional Controls (ICs) component of the remedy (including outreach, education, and enforcement)?

Yes, not only I am aware of the ICs but also I participate in many of its activities.

4b. In your opinion, is the ICs component functioning as expected? Is the ICs program reaching its outreach and education goals? Its enforcement and monitoring goals?

In my opinion, the ICs has functioned as expected in the most part. It has reached most of its outreach and education goals but less of its enforcement and monitoring goals.

INTERVIEW RECORD (cont.)

5a. Are you aware of the monitored natural recovery (MNR) components of the remedy (including sampling of environmental media and reporting)?

Yes, I'm aware of this component of the remedy.

5b. In your opinion, is the MNR component functioning adequately? Is it effectively reducing contamination levels at PV Shelf?

It is too early to conclude whether MNR is effective or not until more data are collected and analyzed. We all know that natural process reduce contamination eventually. But the real issue is the speed of recovery, and there is not sufficient evidence at this time to prove that natural process alone can meet the desired recovery timeline.

6. Have there been routine communications or activities (inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

No, there are no routine communication activities conducted by our entity. We do obtain and use information collected from other agencies, including EPA and MRSP to report on the conditions of PV shelf in the State of the Bay report that we develop periodically (once every five years on average).

7. Have there been any complaints, violations, or other incidents related to PV Shelf that required a response by your office? If so, please give details of the events and results of the responses.

No, there are no such incidents because we are not a regulatory agency with jurisdiction over the site.

8. Do you have any comments, suggestions, or recommendations regarding the remedy at PV Shelf?

Because it seems that it will take quite a long time before finalization of any engineering-based remedy plan, including MNR, due to the new questions raised by sediment data collected in recent years, EPA should put more emphasis on the IC component of the program and plan it for long-term. As part of the long-term planning for the IC, EPA should conduct a comprehensive assessment of the current program to identify which outreach and enforcement mechanisms have been and will be most effective.

Appendix D: Site Inspection Checklist

(not applicable – Montrose OU 5 is a layer of contaminated sediment on the ocean bed with an average depth greater than 60 meters)

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Appendix E: Photographs from Site Inspection Visit

(not applicable – Montrose OU 5 is a layer of contaminated sediment on the ocean bed with an average depth greater than 60 meters)

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