



July 5, 2015

To: Santa Barbara County Supervisor Janet Wolf
California Senate Select Committee on The Refugio Oil Spill
California & Assembly Natural Resources Committee

Re: Written Testimony Refugio-Failed Oil Spill Response

Dear Ms. Wolf and Hearing Co-Chairs,

The Lawrence Anthony Earth Organization (LAEO) would like to submit written testimony re the Refugio Oil Spill Response. While we were not able to attend your hearing in person, I, and several of our representatives were able to join by live stream via the web. We appreciate the time spent on this very important issue.

Since the Deepwater Horizon disaster in the Gulf of Mexico, the Lawrence Anthony Earth Organization (LAEO), a non-profit conservation alliance and its Science and Technology team has worked to find a fix for our broken oil spill response system.

Scores of scientists and industry leaders have since documented that the Deepwater Horizon (DWH) cleanup methods were wholly inadequate *resulting in enormous harm to sea life, the seabed, the coastline, human health and the local economy.* The Proceedings of the National Academy of Science (PNAS) study on the DWH response reported that, “despite aggressive recovery and removal efforts, only around one-quarter of the oil was removed by the federally directed response.” In 2014, scientists ascertained that oil on Gulf of Alaska beaches affecting wildlife was the very same 25-year-old oil from the 1989 Exxon Valdez spill. Hundreds of kilometers from the initial site, this oil contained most of the same chemical compounds as oil sampled 11 days after the initial spill.ⁱ Our National Oil and Hazardous Chemical Clean up system has not changed despite failure after failure.

We do not want this outcome for California. We know you do not either. *But this is the outcome we will get unless we compel* the U.S. EPA, Coast Guard and Regional Response Team Nine Officials to cease perpetuating outdated and false science with ineffectual planning that employs obsolete tools in oil spill response. We are very familiar with the nature of the Unified Command system, which excludes anyone but system insiders and we were very interested in Ms. Wolf’s testimony on that subject.

As covered in our research paper, [A Call for a Twenty-First-Century Solution in Oil Spill Response](#), we have identified National Contingency Plan system flaws (which includes the de-facto favoritism paid to lethal chemical dispersants) that encourage OSRO dispersant stockpiling and the federal agency (EPA/NRT) push for preauthorization of these chemicals. We also assessed and identified a unique and effective spill clean up technology – *Bioremediation Enzyme-Additive Agent* as it is categorized on the NCP list – that eliminates any need for dispersant use while effectively remediating a spill. Had it been employed at the beginning of the Refugio spill, it would have fulfilled the Clean Water Act mandate of removing the entire spill from the environment as a scientifically predictable end point in a matter of a few weeks.ⁱⁱ

On May 26th LAEO sent a formal submission to the Federal On-Scene Coordinators (FOSCs) of the U.S. EPA and Coast Guard who were overseeing the Refugio spill to make them aware of better options for open water and shoreline clean ups. This submission contained key scientific documentation on proven and far more effective oil spill remediation solutions. No response was received. (Complete documentation sent as part of this formal request can be found at: <http://protectmarinelifenow.org/knowledge-base>.) We submitted a second request on June 17th, which likewise, was not replied to by the FOSCs.

Sadly, now over 40 days into this spill, we are still contending with beaches littered with oil from Santa Barbara to Los Angeles.

It appears much of what was debated at your hearing reflected the same government regulator and industry playbook used during the 2010 BP spill. But of most interest to us, was the higher awareness and recognition that rapid and effective spill response was non-existent in this cleanup, as has been the case with pipeline and other spills throughout the country for decades.

In a letter sent to you by Congresswoman Lois Capps, the important point was made that it was not only essential to investigate *how* the spill happened but also “*the efficacy of the response*”. Focusing only on safety and prevention is in fact the often-played red herring in this system. Senator Jackson has proposed legislation, SB 414, to improve oil spill response, which we applaud. LAEO has reviewed this legislation and made recommendations so as to strengthen it and address some gaps that could result in weakening our ability to effectively respond to oil spills on California coasts. Another key point is that industry contractors such as CTEHⁱⁱⁱ must not be used to audit or certify spill response plans and results. Only wholly independent inspectors can assure best available technology is being employed. (Please see attached [SB 414 LAEO Edit](#) document with proposed revisions highlighted and links to documentation and citations supporting those revisions.)

We are pleased to see increasing lawmaker interest in fixing spill response. But much more work needs to be done to save our oceans and waters from ruinous oil and chemical spills. Through our extensive research into this subject, we have found that, for many years, the industry and government regulators have been making faulty decisions regarding oil spill methods to be used based on antiquated and inaccurate science purveyed through a deeply flawed, EPA internal guidance document utilized as the definitive source of information.

While we are working to get this document corrected, we must keep up our intense educational efforts or this lawmaker investigation into the efficacy of the response will fall short of observing some of the most obvious absurdities:

- a. LAEO's research shows that an oil spill such as this could unquestionably have been mitigated to insignificant levels within hours, and completely cleaned up in a matter of a few weeks with virtually no shoreline damage or contamination.
- b. Statistics on the capacity of skimmers used indicate that, at best, only 5% of the oil spilled in the water will have been recovered. That means potentially 15,000 or more gallons of oil would be left in California waters. The type of oil from the Refugio spill is subject to rapidly sinking; hence, this oil will be rolling up as tar balls and impacting shorelines for years unless properly addressed.^{iv} There is research that suggests more advanced skimming technology may exist which can recover a far higher percentage of a spill.^v
- c. The environmental damage and deaths of hundreds of birds and marine mammals could have been completely avoided if best available technology had been used. That technology was readily available, as it is already listed on the EPA's NCP product schedule, and the manufacturer could have had it deployed and on Refugio Beach within 24 hours in sufficient quantity to address the entire spill immediately.
- d. Additionally, Plains pipeline company, the responsible party in this spill, has so far spent \$96 million on an inadequate cleanup that, utilizing best technology, would have cost a total of less than \$2 million for a fully complete cleanup.^{vi}

In light of the information contained herein we are asking for you to consider:

1. Urging Regional Response Team Nine and Area Committee members responsible for California Coastal Contingency Plans to appoint a Science and Technology Committee to work with the Lawrence Anthony Earth Organization Science and Tech Oil Spill Response Advisory Team to evaluate best-available technology for preauthorization consideration and rapid response to update California's Contingency Plan.
2. Adopt LAEO proposed revisions/amendment to SB 414 as per attached document.
3. That a demonstration of *Bioremediation Enzyme Additive*^{vii} technology be done under the supervision of OSPR on an oiled cliff face or section of Refugio that has not yet been addressed.
4. Consider including LAEO's *Identification and Assessment Methods for Contingency Plans* in amended legislation: <http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-5yranniv-May2015OptimizingOilSpillResponseSystems.pdf>

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We would welcome the opportunity to meet with you to discuss our research and present further details. We are confident that this information would be highly beneficial for you in your efforts to see the Refugio spill competently addressed.^{ix} We are hopeful that our shared knowledge will help you as law and policy makers to bring oil spill response into the 21st century.

Sincerely,

Diane Wagenbrenner
VP Operations
Lawrence Anthony Earth Organization

Info copy:

- Santa Barbara District Attorney
- All Members: Senate Committee on Refugio Oil Spill
- Calif. Assembly Natural Resources Committee Members
- All those who testified at the Refugio Hearing

References and Endnotes:

ⁱ In Mar, 2014, *The Atlantic* reported on the Exxon-Valdez spill, that, "Eventually more than 1,000 miles of coastline were fouled, and hundreds of thousands of animals perished... Though the oil has mostly disappeared from view, many Alaskan beaches remain polluted to this day, crude oil buried just inches below the surface." <http://www.theatlantic.com/photo/2014/03/the-exxon-valdez-oil-spill-25-years-ago-today/100703/>. Also see <http://www.cnn.com/2014/03/23/opinion/holleman-exxon-valdez-anniversary/>

ⁱⁱ Macondo Oil Spill Response Analysis: <http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-Oil-Spill-Response-Research-Paper.pdf>; Enzyme Additive Bioremediation Fact Sheet: <http://protectmarinelifenow.org/wp-content/uploads/2015/07/Bioremediation-for-Oil-Spill-Response-May2015-Global-Education-Pgm.pdf>; Efficacy Documentation-Enzyme Additive Bioremediation: <https://www.changeoilspillresponse.org/response-tools.html>

ⁱⁱⁱ See Investigation Summary on CTEH document attached.
CTEH Investigation Summary
<http://protectmarinelifenow.org/wp-content/uploads/2015/07/CTEH-Executive-Summary-Final.pdf>

Capps_Welch Congressional Letter re BP and CTEH:
<http://protectmarinelifenow.org/wp-content/uploads/2015/07/cappswelch.pdf>

^{iv} PNAS report: <http://www.pnas.org/content/111/45/15906>; Chemical composition report on Refugio Oil -- <http://danssheet.com>; National Science Foundation Report: http://nsf.gov/news/news_summ.jsp?cntn_id=133059&org=NSF&from=news

^v Example other Skimmer Technology http://spilltechnology.com/library/EST_R&D_Rev2.pdf
While LAEO isn't endorsing any particular skimmer technology, we are urging that SB 414 exclude designated types of skimming/brands (e.g. disc) until a full review and comparative analysis of all available technology is undertaken.

^{vi} Cost comparative analyses and expert witnesses can provide testimony illustrating that industry/OSRO contractors profit from ineffective spill response and have no incentive for adopting less costly and more efficient spill response tools and systems. For more information email: diane@theearthorganization.org

^{vii} *Enzyme Additive* is a category EPA designated for a type of biological agent listed on the NCP Product Schedule

^{viii} <http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-5yranniv-May2015OptimizingOilSpillResponseSystems.pdf>

^{ix} As our members and supporters know, we have absolutely no financial connection with any of the technologies we recommend; we advocate strongly for them because, through the diligent research of our Science and Technology Advisory Board, we have found them to be, by far, the best methods currently on the market that efficiently clean up spills, protect the public's health, the environment, and the marine life and wildlife, have no environmental "tradeoffs", nor any secondary cleanup necessary (like having to remove waste to landfills).

Attachments Referred to in Testimony 5 July 2015 Letter:

Senate Bill 414 California-LAEO recommendations:

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/SB-414-LAEO-Edit.pdf>

21st Century Solution Research Paper, Analysis of Macondo Oil Spill

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-Oil-Spill-Response-Research-Paper.pdf>

Optimizing Oil Spill Response, Identification and Assessment for Contingency Plans

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-5yranniv-May2015-OptimizingOilSpillResponseSystems.pdf>

Chemical Dispersants and the Clean Water Act <http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-ChemicalDispersantsexcerpt-5yranniv-Apr2015-PRINT.pdf>

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-ChemicalDispersantsexcerpt-5yranniv-Apr2015-PRINT.pdf>

Cooperative Ecology, A Fix for Oil Spill Response Systems <http://protectmarinelifenow.org/wp-content/uploads/2015/07/Co-Eco-LAEOspillResponse-exerpt-Mar2015.pdf>

Bioremediation Fact Sheet Corrections, Lawrence Anthony Earth Organization,

True Data on Bioremediation Enzyme Additive Agent for Water and Shoreline Oil Spills

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/Bioremediation-for-Oil-Spill-Response-May2015-Global-Education-Pgm.pdf>

CTEH Investigation Summary

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/CTEH-Executive-Summary-Final.pdf>

Capps_Welch Congressional Letter re BP and CTEH:

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/cappswelch.pdf>

SUBMISSION TO FOSC REFUGIO:

MAY 26 Request to EPA/Coast Guard FOSC's Refugio

http://protectmarinelifenow.org/wp-content/uploads/2015/07/LAEO-to-FOSC-Santa-Barbara-Spill_FF.pdf

Bioremediation EA Literature Review, King Fadh University:

<http://protectmarinelifenow.org/wp-content/uploads/2015/07/Saudia-Arabia-King-Fadh-University-peer-review-of-OSE-II-large-report-2014-Report-on-the-Evaluation-of-Oil1.pdf>