PEER
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November 25, 2013

Sandra Lyon, Superintendent of Schools
Santa Monica-Malibu Unified School District
1651 16th St.
Santa Monica, CA 90404

By postal mail and email to slyon@smmusd.org

Dear Superintendent Lyon,

We are writing to you on behalf of the group "Concerned Malibu/Cabrillo Teachers," which consists of many of the teachers and staff at Malibu Middle and High School and Juan Cabrillo Elementary School. Public Employees for Environmental Responsibility (PEER) is a national public interest, non-profit organization dedicated to serving public employees on environmental and public health matters (www.peer.org). PEER is headquartered in Washington D.C. with field offices in other parts of the country, including California. PEER, through its attorneys and advocates, is assisting the Malibu teachers group.

We are writing because the current testing protocol for Malibu Middle and High School does not include additional soil testing beyond what was done for the 2011 removal action. This is despite a promise by you at a meeting of parents and students on October 8, 2013 that soil surrounding the Middle School building would be tested. According to an article dated October 9, 2013 entitled "Malibu Classes Relocated during Tests for Toxic Chemicals" in the Huffington Post:

> Malibu Middle School classes will be relocated while the school district tests the building and surrounding soil for contaminants that teachers suspect has been making them sick, Santa Monica-Malibu Superintendent Sandra Lyon told hundreds of concerned parents and students Tuesday.

(emphasis added). Additional press reports quoted officials from the District and their consultants stating that soil testing will be done, but more recent reports make clear that it is not currently planned.

While we appreciate the current testing of air and materials inside some of the classrooms for polychlorinated biphenyls (PCBs), and that you are working with U.S. Environmental

Protection Agency (EPA) concerning remediation of the PCBs that were found in some of the classrooms in excess of EPA actions levels, none of this will address the possibility of contaminated soil in the majority of the campus that was not previously tested, nor does it address several other toxic contaminants that were found in the previous testing. As we understand it, the EPA involvement only concerns PCBs, and only to the extent that concentrations above 50 ppm, the EPA action level, are found.

Even as to PCBs, the limited air testing that was done, cannot, without further soil testing, rule out a continuing health threat. The statement in your "Update on Environmental Testing" of November 22, 2013, that there is not an immediate health risk from the levels of PCBs found in the classrooms is somewhat misleading. In fact, PCBs are never an acute health risk; the risk is from chronic exposures, which in this case likely have taken place over many years. Moreover, a safe level of exposure cannot be based on exposures from indoor air alone. In a November 17, 2013 letter from you to the Malibu High School staff (apparently subsequently withdrawn), you state that: "We were encouraged by the preliminary results, which show that PCB levels throughout the school are well below the U.S. Environmental Protection Agency's (EPA) public health guidelines for schools," citing an EPA electronic publication.[1] However, in the cited document, EPA makes clear that safe levels for children's exposure to PCBs must consider not only indoor air, but outdoor air, indoor dust, outside soils and diet. Thus, testing indoor air without testing outdoor air, indoor dust and outside soils cannot determine whether or not overall exposure levels are safe.

We are also concerned about the lack of transparency in the District's actions on these matters. Neither the raw data from the testing, nor the communications that you represent occurred with EPA have been released to the public. Your latest "Update" (first page) states that: "The school district will be releasing all data as soon as it is summarized, compiled and reviewed by the lead environmental agencies and district officials." This implies that the public will not be able to see the data until several other agencies have reviewed it, and possibly even then not the full set of raw data but only a "summarized and compiled" version. This does not comport with the District's promises of transparency and of collaboration with the teachers and parents of our school community. Our concerns are especially heightened because you first sent the teachers a letter stating that EPA found that the PCB levels were well below EPA guidelines, and then apparently withdrew that letter and sent an update saying some PCB was above guidelines and thus subject to EPA remediation requirements. We cannot feel secure having our information filtered through the District.

[1]U.S. EPA, "Public Health Levels for PCBs in Indoor School Air," http://www.epa.gov/pcbsincaulk/maxconcentrations.htm.

Equally important, the prior soil testing revealed the presence of PCBs and organochlorine pesticides (chlordane and DDT), presenting "an unacceptable health risk"[2] -- not inside the classrooms where the recent testing occurred, but in outdoor soils. As detailed below, while contaminated soil was removed in the limited areas that were tested, most of the campus was not tested for these or other toxic chemicals, even though there was no reason to believe they were confined to the tested areas. Both chlordane and PCBs are considered carcinogens by the U.S. Environmental Protection Agency (EPA) and the State of California.[3] PCBs also may have "serious effects" on the immune, reproductive, nervous and endocrine systems.[4] Aroclor, the particular type of PCB found in the Malibu campus soils,[5] is "a confirmed carcinogen" which also "exhibits experimental teratogenic [birth defect inducing] and reproductive effects." [6] Both PCBs and chlordane were banned after the Malibu schools were constructed because of their human health risks.[7] DDT is also considered a carcinogen,[8] and has been associated with thyroid disease in women.[9] DDT was banned in the 1970's, but is extremely persistent in the soil.

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[2] Santa Monica-Malibu Unified School District Removal Action Workplan, Malibu Middle and High School Campus Improvements Project, ARCADIS, August 5, 2010, p. 1 (hereinafter "Removal Action Workplan").

[3] Department of Toxic Substances Control Interim Guidance – "Evaluation of School Sites with Potential Soil Contamination as a Result of Lead from Lead-Based Paint, Organochlorine Pesticides from Termiticides, and Polychlorinated Biphenyls from Electrical Transformers," Revised 6/09/06, (hereinafter "DTSC Interim Guidance"), pp. 18, 29. (Attached to the Removal Action Workplan).

[4] DTSC Interim Guidance, p. 29.

[5] Removal Action Workplan, p. 12.

[6] Santa Monica-Malibu Unified School District "Preliminary Environmental Assessment Report, Malibu Middle and High School Campus Improvements Project," ARCADIS, June 14, 2010 (hereinafter "PEA"), Appendix B: "Health and Safety Plan for Soil and Soil-Gas Sampling Activities at Malibu Middle and High School Campus," October 21, 2009, LFR Project 002-11144-03**,** Appendix A, first page. (The PEA is Appendix G2, Attached to Volume III of the Final Environmental Impact Report, January 19, 2012).

[7] DTSC Interim Guidance, pp. 17 and 29.

[8] PEA, p. 35

[9]Goldner, et al., "Pesticide Use and Thyroid Disease among Women in the Agricultural Health Study," American Journal of Epidemiology, November 11, 2009. Abstract available at http://aje.oxfordjournals.org/content/171/4/455.abstract.

In addition to the PCBs and pesticides, the previous testing detected several other toxic chemicals. Lead,[10] arsenic[11] and cadmium,[12] as well as benzene[13] and toluene[14] were detected at above background levels and California Human Health Screening Levels (CHHSLs).[15] Yet, no further testing for these chemicals was carried out, and no remediation performed, because they were considered to be either in line with some detected background levels in the area, or below the level of concern for human health effects.[16] However, when toxic chemicals are detected at a site based on very limited sampling, even if the particular samples are not at a level requiring remediation, further testing should be done to determine where else those chemicals may be at the site, and at what levels. Only very limited areas of the campus were tested for any toxins.

The testing and removal project was limited to the areas of the campus slated for redevelopment, and to locations within those areas where there were already known sources of potential toxic releases. It is our understanding that this area encompasses only about 25% of the Middle School/High School campus and none of the elementary school campus. Given that the source of most of the contaminants found is unknown,

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[10] Lead has acute toxic effects, and is suspected to cause cancer, mutations and reproductive effects. "Recent experimental evidence suggests that blood levels of lead below 10 micrograms per deciliter (µg/dl) can have the effect of diminishing the IQ scores of children." It is classified by the State of California as known to cause cancer, birth defects, developmental toxicity and/or reproductive harm. Removal Action Workplan, Appendix A (Chemical Descriptions) to Appendix D (Health and Safety Plan), p. A-16.

[11] Arsenic has acute toxic effects and can also increase the risk of cancer of the liver, bladder, kidney, and lung. It is classified by the State of California as known to cause cancer, birth defects, developmental toxicity and/or reproductive harm. *Ibid.*, p. 4.

[12] Cadmium has acute toxic effects, has been shown to cause lung cancer, and is classified by the State of California as known to cause cancer, birth defects, developmental toxicity and/or reproductive harm. *Ibid.*, p. A-7.

[13] Benzene is a "known human carcinogen that can cause leukemia." It is classified by the State of California as known to cause cancer, birth defects, developmental toxicity and/or reproductive harm. *Ibid.*, p. A-5.

[14] Toluene may damage the developing fetus. Exposure "can affect the nervous system, causing trouble concentrating, headaches, and slowed reflexes." It can also cause skin rashes. "Repeated toluene exposure may cause liver, kidney, and brain damage." It is classified by the State of California as known to cause cancer, birth defects, developmental toxicity and/or reproductive harm. *Ibid.*, p. 24.

[15] PEA, pp. 28, 31.

[16] *Ibid.*, pp. 33, 36, 37.

there is no reason to believe that the untested areas are not equally, if not more, contaminated -- continuing to jeopardize the health of teachers, staff and students.

According to the Preliminary Environmental Assessment (PEA) which resulted in the soil removal action:

> Specifically, the PEA focuses on 20 areas located within the boundaries of the Malibu Middle and High School campus … that are proposed for modification. Of the 20 areas, 8 were identified as having a potential to have been impacted from current or historic activities. Soil sampling activities were conducted in these eight areas as part of this PEA.[17]

The PEA makes clear that areas outside of the redevelopment area were not tested or remediated, even when they were suspected to contain toxic contaminants. In fact, out of five "Recognized Environmental Conditions (RECs)," only three were addressed, because the other two were outside of the study area. The PEA states:

> REC #4: Potential releases of volatile hydrocarbons and solvents from the bus washing station did not require further investigation because the REC does not coincide with any proposed improvement areas.
>
> REC #5: The presence of transformers indicating the potential for releases of PCBs to the soils in the central portion of the Site did not require further investigation because this REC does not coincide with any proposed improvement areas.
>
> This PEA report addresses only REC #1 through REC #3, which are considered the apparent problem for the purposes of the PEA. REC #4 and REC #5 do not coincide with proposed improvement areas and thus are not addressed further in this PEA.[18]

While the District's contractor (ARCADIS) concluded in the Removal Action Completion Report that the areas subject to remediation were now within acceptable risk parameters for PCBs and pesticides, it warned that:

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[17] *Ibid.*, p. 1 (internal citation omitted).

[18] *Ibid.*, p. 14-15. The three RECs that were addressed were 1) lead from lead based-paints and termiticide pesticides adjacent to structures in the southwest portion of the site which were constructed before these materials were banned; 2) vapor intrusion from volatile organic compounds from leaking underground storage tanks that had previously been removed; and 3) potential hazardous substance releases into septic systems from chemistry laboratories, woodshop, art studios, and/or photography darkrooms. *Ibid.* p. 14.

> Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when ARCADIS' investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project Site may vary from those at the locations where data were collected.[19]

In addition to limiting its testing to the redevelopment areas, ARCADIS only tested areas which they believed had "a potential to have been impacted from current or historic activities" that they knew of,[20] namely the use of lead paint and termiticides in and around buildings, vapor intrusions from previously removed leaking underground storage tanks, and hazardous material leakage into septic systems from the chemistry laboratories, woodshop, art studios, and/or photography darkroom.[21] That is why out of twenty areas slated for re-development, only eight were tested. PCBs were not identified as a potential contaminant to be investigated at the outset, and in fact were found by accident, in the process of testing for pesticides.[22] Thus, obviously there were potential sources of toxins that ARCADIS did not know about.

ARCADIS not only admitted that it did not know the source of the PCBs,[23] but it discounted all of its own theories about where they may have come from:

> Three potential origins include the use of PCB-contaminated import material, potential use of PCB-containing paint on nearby structures (as

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[19] "Santa Monica-Malibu Unified School District Removal Action Completion Report - Malibu Middle and High School Campus Improvements Project," ARCADIS, June 12, 2012, (hereinafter "Removal Action Completion Report"), p. 37 (emphasis added). *See also* PEA at 3: "It must be recognized, however, that an ESA is intended for the purpose of evaluating the potential for contamination through limited research and investigative activities and in no way represents a conclusive or complete site characterization. Conditions in other parts of the Site may vary from those at the locations where data were collected."

[20] PEA, p. 1.

[21] *Ibid.*, p. 14.

[22] *Ibid.*, p. 15: "During analysis for pesticides of soil samples collected for the PEA scope of work, the laboratory detected compound interference, possibly from PCBs, in the SS-STRUCTURE samples. When those samples were subsequently analyzed for PCBs, multiple detections of Aroclor 1254 were recorded at levels in excess of regulatory standards, which constitutes an additional REC."

[23] Removal Action Workplan, p. 15.

> some historic paints are reported to have contained PCBs), or potential historic use of PCB-containing caulking/sealing materials on nearby structures (as caulking/sealing materials have been reported to have historically contained PCBs); however, all of these potential sources are speculative. Fill materials are a questionable source, as one might expect a more even distribution of PCBs in the subsurface materials and possibly existence in the quad area, although the results of testing to date identify the PCBs, where present, in near proximity to buildings.
>
> Building materials are also a questionable source, and it is noted that not all soil samples collected in the vicinity of and/or adjacent to buildings contained detectable concentrations of PCBs. Building materials have not been tested for the presence of PCBs. … Pesticide extenders are not believed to be a source of PCBs at this Site, as pesticides were not detected in the primary location where the PCBs were encountered. To reiterate, the source of the PCBs has not been identified.[24]

The fact that PCBs now have been found in the caulk in some of the classrooms does not mean that the source of the PCBs in the soil has been defined. It is not plausible that there were 1,179 cubic yards, 1,158 tons of soil[25] which were contaminated solely because the caulk in buildings somehow migrated to the soil. And, as stated in the PEA quoted above, PCBs were not uniformly present near the buildings.

Because there is no known source of the PCBs in the soil, they appeared in the eight tested areas purely by chance, and there is currently no way to identify other areas where they might be found, or to rule out any areas as possible contamination sites.

In the case of the pesticides chlordane and DDT, testing was limited to five of the eight areas identified as potentially containing toxic materials, and in only one area were pesticides detected and soil removed. [26] This was an area next to the stump of a tree which is theorized to have possibly been treated with pesticides, though ARCADIS admits that the source of the pesticides is not actually known.[27] Yet, during the period these schools were built (i.e. between 1948 and 1988), chlordane and other ogranochlorine pesticides were use as termite treatments "to drench soils below slab pre-construction, placed in trenches around the structures, and spot treatments drilled into concrete foundations and surrounding soil."[28] Given that chlordane was found on the site, the perimeters of all the buildings, as well as the soil below the slabs should be

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[24] *Ibid.*

[25] Removal Action Completion Report, p. vii.

[26] PEA, pp. vii, 15.

[27] Removal Action Completion Report, p.8; PEA, p. 15.

[28] DTSC Interim Guidance, p. 17.

tested. No theory is propounded as to the source of the DDT that was found, and therefore it could be in any of the untested areas.

Based on the mysterious presence of chemicals known to cause cancer and other serious health problems, the health and safety of all of those in all three schools cannot be assured without further testing of soil at multiple locations on the campuses, as well as further investigations into the source of the PCBs, pesticides and other toxic chemicals. As a consultant for a Malibu schools parents' group, Dr. Paul Rosenfeld, stated in a press report, "The district acted incredibly irresponsibly in 2011 when they removed 1,179 yards of contaminated soil without identifying the source of contamination."[29]

A prime opportunity to test the soil below the buildings to determine whether the buildings had been built on top of soil contaminated with pesticides, PCBs or other toxins was passed up this summer when major trenches were dug in some of the classrooms for the placement of communications cables in the area where teachers have become ill. It is inexplicable why samples were not taken and analyzed at that time.

In conclusion, the Concerned Malibu/Cabrillo Teachers request that a soil sampling protocol, covering areas both outdoors and beneath buildings, be added to the current environmental testing taking place at the schools. Soil should be tested in compliance with EPA procedures for testing soils contaminated with PCBs and testing of contaminated soils at potential CERLA (Superfund) sites. All results and raw data should be made available to the public at all times.

In addition, further investigation should be done to determine the source of the toxic chemicals that were found at the school site in order to better define the scope of the problem and where the toxic chemicals might be found.

We would appreciate a response as to whether, how and when this testing and investigation will be accomplished.

Sincerely,

Jeff Ruch, Executive Director

Paula Dinerstein, Senior Counsel
Public Employees for Environmental Responsibility

cc: Jared Blumenfeld, EPA Region IX Administrator

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[29] "Malibu PTSA Meeting Generates Heat," The Malibu Times, October 29, 2013.

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