

USEPA AMCO Superfund Site CAG Meeting, March 15, 2010

EPA Attendees: Leana Rosetti
Nick Vargas
Rose Marie Caraway
Steve Calanog

EPA Contractors: Frankie Burton/CH2M HILL

CAG Members: Angie May
Ana Baires
Bradley Angel/Green Action
Intern (no sign in info)/GreenAction
Brent Bucknum
Brian Beveridge
Cassandra Martin
David Carter/South Prescott Neighborhood Association
Diedri Broussard
Eric Mandu
Manuel García
Harlan Smith
John Schweizer/Technical Assistant
Lisa Spearman
Margaret Gordon
Monsa Nitoto/Coalition for West Oakland Revitalization
Nicanor Mendoza
Samson Mael/West Oakland Sustainability Alliance
Tori Johnson

CAG Meeting Policy

CAG Board Information

- Margaret Gordon and Brent Bucknum handed out the CAG meeting policy (listed below) and asked the CAG members if they had anything to add.
 - *Group Agreements for Meeting*
 - *One at a time*
 - *Step up, step back*
 - *Listen First*
 - *Stay focused; make connections to topic*
 - *Be brief, make your point*
 - *Allow others to respond*
 - *Keep history to a minimum*
 - *No, "Yeah-but"*
 - *Passion = Good*
 - *Disrespect = Bad*
- The community suggested the following additional items.
 - When off-topic questions and comments come up add them to a list of "parking lot" items, which will be addressed at future meetings.
 - Items not on the agenda could be discussed at a separate ad hoc meeting.
- Leana Rosetti/EPA suggested that everyone at the meeting try really hard to abide by the meeting policy and speak respectfully, because that may encourage more Spanish speaking residents to attend CAG meetings. Many Spanish speaking residents said they will not return to AMCO CAG meetings, because they are too combative and uncomfortable.

Community Comments

- The community would like to see EPA hire interpreters from the neighborhood rather than from an externally based company.
- The community would like to see EPA train and hire meeting facilitators, like Manuel.

March 15, 2010 Agenda

1. Presentation – Brent Bucknum/Urban Biofilters
2. Lead Assessment Presentation – Steve Calanog/EPA
3. TASC and Technical Assistant Workplan – Leana Rosetti/EPA

Lead Cleanup and Green Remediation Ideas

Urban Biofilter Presentation/Information

- Brent Bucknum/Urban Biofilter provided background information about his non-profit, Urban Biofilter.
 - 70 million gallons of wastewater per day are released into the bay. This could be used to water biofilter projects.
 - Bamboo and other plants can be incorporated into a waste water system to reduce pollutants from waste water treatment plants.
 - Open spaces are where we can integrate urban forests
 - Current Projects:
 - Army base masterplanning
 - Brownfield
 - Started small by working at the Oakland Trucking: 411 center...
 - Working in Tijuana
 - Storm water biofiltration
 - Wetland plants can be used to uptake heavy metals
 - Looking at ways vacant lots can be used to address soil contamination issues with biofiltration throughout the neighborhood.
 - Have attempted to put together phytoremediation case studies, which can be used to support implementing pilot studies in the South Prescott neighborhood.
- See How to Grow Fresh Air by B.C. Wolverton
 - Urban Biofilter is looking into growing house plants for West Oakland residents that could be given away to some and sold locally to others.
- Urban Biofilter suggests growing bamboo to create alternative fences for use during construction that will clean the air, block the view and sound of construction while uptaking contaminants in the groundwater and soil.
- Urban Biofilter has been speaking to Steve Calanog/EPA about using the Lead Assessment project as an opportunity to test phytoremediation's ability to uptake

Public/Technical Advisor Comments

- The residents would like to see EPA put residents to work
 - Urban Biofilter would also like to put residents to work.
- Is there hard data showing that bamboo can uptake pollutants?
 - Brent offered to send Ana different studies that have shown the ability of bamboo and other species to uptake contaminants. Urban Biofilter is looking for plants other than bamboo. Bamboo is a good example, because it has a dense leaf structure and grows quickly.
- Who would pay for the work Urban Biofilter wants to do?

- Hopefully the Superfund via EPA. Urban Biofilter is also looking into grants.
- Nick Vargas/EPA: If EPA was to decide to use bamboo or other plants would Urban Biofilter have space to grow bamboo or access to fully grown plants?
 - It would take about one year to grow enough bamboo. Pre-grown bamboo can also be purchased, but it is significantly more expensive than growing your own bamboo.
 - Keep in mind that bamboo grows quickly and from cuttings.
- Bamboo grows 18 – 24 inches underground and is selective with the chemicals it uptakes. The amount it uptakes depends on how drought tolerant the plant is.
- Please think long term, because we're dealing with cumulative impacts.

Brief interlude – AMCO Facebook Page

- Leana Rosetti/EPA showed the CAG the AMCO Facebook page and explained that you do not have to be a member of Facebook to view the page, but you must be a member to comment.
- Leana Rosetti/EPA pointed out the following on the AMCO Facebook page:
 - Links to meeting notes
 - CAG meeting information
 - Link to EPA AMCO website
 - Link to AMCO fact sheets
 - Links to presentations, posters and Lead assessment results under the Boxes tab
- Leana Rosetti/EPA requested the WOSA website URL, because she plans to post it on the AMCO Facebook page.

Public/Technical Advisor Comments

- The CAG really liked the Facebook page and thanked Leana Rosetti/EPA for getting it done so quickly.
- Community member requested that Leana Rosetti/EPA add Brent Bucknum's (Urban Biofilter) presentation to the Facebook page.

Lead Assessment Update

EPA Discussion

- Steve Calanog/EPA provided a brief history of the lead assessment (see "Background" slide of Steve Calanog's presentation).
 - 6 blocks, 150 parcels, 56 yards sampled (96 total sampled collected for lead analysis)
 - Took 5 point samples, which means they sampled five different places around the entire property.
 - Used x-ray fluorescent to test soil.
 - Sampling results: 80% above Preliminary Remediation Goal (PRG) of 400 parts per million (ppm) - 983 ppm average above PRG.
- What can residents do now?
 - Monitor children's ingestion of soil.
 - Thoroughly wash or do not eat food grown in lead contaminated soil.
 - See previous notes for more detailed information about preventing lead exposure.
- Steve Calanog/EPA has received approval to begin the lead contaminated soil clean up.
- **Project Objectives**
 - Minimize/eliminate the "Pb" (lead) risk to high risk community (i.e.: children).
 - Implement project with the least impact to the community and environment.
 - Utilize to the maximum extent possible local resources.
 - EPA has a grant to pay for training residents to become hazardous materials certified.
- **Project Implementation**

- Steve would like to utilize biodiesel, the least amount of machinery, solar-powered electricity, etc. in the implementation so as to minimize impact in the community and overall environmental impact.
- **Possible Remedies**
 - *Phytoremediation*: What Brent Bucknum talked about in the Urban Biofilter presentation. Lead is removed from the soil (or “taken up”) by the plant, but does not disappear. The lead is transferred from the soil to the plant, which must be disposed of properly.
 - *Dig and Haul*: \$6.5 million project. Removing and replacing 1 – 1.5 feet of surface soil in all yards.
 - *Soil washing*: Dig up the soil and haul it away to be washed. A big concrete mixer is used to “wash” the soil by mixing it with chemicals that will remove the lead.
 - *Phosphate mobilization*: Breaks down the lead compounds into a lead phosphate compound, which is not toxic when consumed.
 - *“Green” capping*: Traditional capping involves a 6 – 9 inch barrier of cement. “Green” capping would use a 6 – 9 inch layer of natural materials, such as sod, as a barrier.
 - [“Operation Paydirt”](#) offers a scientifically-proven method to neutralize hazardous lead (Pb). Operation Paydirt provides the science to transform lead so that it is no longer harmful and a citywide implementation strategy with the potential of creating a model for all cities facing a similar threat. A team of scientists, architects, community groups and city officials are developing this strategy. The estimated cost to treat New Orleans soil is \$300,000,000.” – <http://www.fundred.org/about/operation-paydirt.php>
 - Operation Paydirt is a project that could be used as a reference for the residents of South Prescott, because it deals with addressing lead contamination in an urban and residential area of the US. Please see the **Operation Paydirt Fact Sheet** at the end of these notes for more information.
 - Steve Calanog/EPA pointed out that the method they chose may become a template for treating large scale, lead contaminated soil in residential areas elsewhere in Oakland and the U.S., and could provide long term jobs as the work occurs in other areas

Public/Technical Advisor Comments

- How much soil was hauled off in the past emergency lead contaminated soil removal?
 - Steve Calanog/EPA was not sure of the total amount, but EPA removed 1 – 2 feet of soil.
- Will the cleaning up of the lead contaminated soil require the relocation of residents?
 - Relocation was put on the parking lot list for more detailed discussion at the March 29 South Prescott Lead Cleanup meeting.
- Would like to focus on addressing relocation for the remediation of the AMCO Superfund Site before discussing the relocation for the lead assessment cleanup.
 - Relocation was put on the parking lot list for more detailed discussion at the March 29 South Prescott Lead Cleanup meeting; relocation in relation the AMCO Site will be discussed at the next AMCO CAG meeting after that, date to be determined
- How did the lead get in the soil?
 - There could be a dozen causes of lead contamination, mostly related to the history of the neighborhood since it is the oldest neighborhood in Oakland. This neighborhood predates trash service and regulation preventing lead contaminated materials (lead based diesel, paint, etc.) from being used and disposed of improperly.
- How long does phosphate mobilization take?
 - Weeks or months, depending on the soil type. EPA would perform a pilot study prior to implementation of this option, which would inform them of the soil type.
- Is there anything that might cause the compounds to break down?
 - Possibly, but it depends on the soil type.
- Does the community get to prioritize the technologies they prefer?
 - Yes, community acceptance would be considered in addition to the cost and feasibility of each option.

- EPA will hold a workshop to discuss each option in greater depth.
- Will EPA only remediate the properties that were previously sampled?
 - EPA will open up a dialog with the community, including those that were not sampled. EPA will sample additional properties as necessary. EPA will work with the owner to determine if they want the soil to be removed.
- Would like to set a date to get more information about the Lead Assessment.
 - **Next CAG meeting:** March 29, 2010 from 6:30 – 8:30 at Mandela Gateway Apartments.

Indoor Air Sampling Update

- EPA is dealing with contracting issues, which is slowing down the ability to finish quality analysis and provide sampling results to the CAG, as well as with the ability to do a further round of sampling. EPA has shared the results with each individual homeowner with the understanding that some of the numbers were flagged for further review and may be corrected later.
- EPA will push to do the second round of sampling as soon as possible.
 - Community will look into grants for doing their own indoor air quality sampling.

TASC Technical Assistance Needs Assessment

EPA Discussion

- EPA has contracted E2 to subcontract a technical assistant.
 - John Schweizer has been the AMCO Superfund Site Technical Assistant for many years and was recommended by the community for that role. John Schweizer has the skills to provide the following services to the residents in the AMCO CAG:
 - Evaluate the feasibility of phytoremediation and recommend species that could be used for the remediation of the AMCO Superfund Site and South Prescott Lead Cleanup:
 - Salt tolerant
 - Uptake rates
 - Time constraints
 - What kind of protection is provided to prevent people from accessing lead?
 - Who will pay for it?
 - Side effects
 - Examine lead indicator study: Could look into potential responsible parties, if EPA has not made progress on that front.
 - EPA's Office of Regulatory Enforcement has been and is looking into AMCO's Potentially Responsible Parties, the people and/or companies responsible for contaminating the Superfund Site. Legally this is EPA's domain.
 - Evaluate and comment on indoor air data.
 - Evaluate and comment on soil data.
 - Research grants to pay for air quality monitoring systems that could be installed in resident's homes.
 - Could work with EPA's contractors as needed.
 - John Schweizer and Steve Calanog/EPA could provide a 40 hour Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training to residents free of charge, which will allow the residents that complete the training to work on a wider range of tasks in the remediation of the AMCO Superfund Site and cleanup of the lead contaminated soil in the South Prescott neighborhood.
 - Could formally meet with the residents on a regular basis to answer questions and provide input and assistance throughout the entire Superfund process.

Public/Technical Advisor Comments

- A community member suggests looking into utilizing the plants that are already growing well at and around the AMCO Superfund Site for phytoremediation.
 - EPA said that the plants at/around the AMCO Superfund Site are doing well, because they are not growing where the contamination is, but that they would think about this suggestion.
- How will information from the Technical Assistant be distributed to the community?
 - The Technical Assistant could commit to a once a month meeting with the community to distribute information.
 - The Technical Assistant could also create a newsletter and/or presentations.
- Margaret Gordon has several different email listservs that could be used to spread the word about the CAG and developments with the AMCO Superfund Site. She would be willing to distribute information from John Schweizer to the organizations she participates in.
- How long does it take to clean up Superfund Sites?
 - It takes approximately 13 – 25 years to clean up EPA Superfund Sites.
 - Depends on the nature and extent of the contamination at the site, legal issues and community issues.

CAG Meeting Feedback

- Improve meeting dynamics by taking a more professional approach.
- Add questions to a list that can be responded to at the *end* of the meeting.
- Work on not getting distracted from the topic at hand.
- Create a friendly space where people are comfortable asking questions.
- Focus on the task at hand, which is to clean up the AMCO Superfund Site and not allow other people's agendas and opinions to distract from the focus of the meeting.
- Speak up, be clear and take turns for the interpreter, note taker and those that are hard of hearing.
- EPA is only present to provide information about the project, but the group belongs to the community.
- EPA asked if the residents are interested in bringing in a neutral, professional meeting facilitator even if they are not part of the community.
 - The residents are interested in having a neutral, professional meeting facilitator lead CAG meetings.

Parking lot items

- Possibility of training someone from the community to be a facilitator for meetings and do outreach
- Presentation from West Oakland Sustainability Alliance regarding their work and ideas
- Planning for how to deal with cumulative impacts
- Budget for lead cleanup
- Next round of indoor air sampling

March 29 Lead Cleanup meeting Agenda, 6:30-8:30, Mandela Gateway Apts. Community Room

1. Steve Calanog will discuss the different possibilities for lead remediation in greater detail and describe a timeline for next steps on the agency side.
2. Timeline, next steps for outreach and further community needs/possibilities for collaboration

Operation Paydirt Fact Sheet



OPERATION PAYDIRT FACT SHEET

What is lead pollution?

- Lead contamination in the environment is due to human activities. Gasoline lead additives and lead-based paint are a major source of environmental contamination. Mining and smelting are additional contributors of environmental pollution.
- According to the Bureau of Mines, the total amount of lead put into gasoline and paint during the 20th century was approximately 12 million tons.
- A rapid phase-down of the use of lead as an additive to gasoline began in 1986 in the United States. It was entirely banned in 1996 with some exceptions.
- The addition of lead in house paint was banned in 1978.
- Although the use of lead is now limited, residual contamination from both gasoline and paint is present in soil and dust and continues to be a problem in many cities. Resuspension of soil and dust is a major contributor to the ongoing dispersal of lead. (These are conclusions by many researchers including Gabe, Filippelli, Laidlaw. See Mielke et al. "New Orleans Soil Lead (Pb) Cleanup Using Mississippi River Alluvium: Need, Feasibility and Cost, Environmental, Science, and Technology, 2006.)

How does lead poisoning affect children?

- According to the Centers for Disease Control (CDC), approximately 310,000 U.S. children aged 1-5 years have blood lead levels greater than 10 micrograms of lead per deciliter of blood, the level at which CDC recommends public health actions be initiated.
- Lead poisoning compromises healthy brain development. Because lead poisoning often occurs with no obvious symptoms, it frequently goes unrecognized. Lead poisoning can affect nearly every system in the body, causing disease and at very high levels it causes seizures, coma, and even death.
- Children are especially sensitive to lead because their stomach and intestines absorb up to 50% of the lead they ingest, whereas adults absorb about 10%, according to CDC. Children also play in the exterior soil and put hands and objects in their mouths.
- According to the Mayo Clinic and many studies, correlations are found between lead poisoning, learning disabilities, and violent crime.
- Childhood lead poisoning is the single greatest predictor of school disciplinary problems, which in turn are the major predictor for juvenile crime. (Denno, Fordham University School of Law.)

How much lead pollution is in New Orleans?

- Because New Orleans has been comprehensively tested and mapped, it is acknowledged as among the most lead polluted cities in the country. (Howard Mielke, PhD, Research Professor Tulane /Xavier Center for Bioenvironmental Research)
- The contaminated soil conditions existed before Katrina from lead paint and gas emissions and are considered "historic lead."
- There are approximately 86,000 properties in New Orleans currently exceeding the EPA standard (400 parts per million) for lead in bare soils where children can play.

- In New Orleans, prior to Hurricane Katrina, 14% of the children in the entire city, and 20-40% of the inner city children had blood lead levels greater than 10 micrograms of lead per deciliter of blood, the level at which CDC recommends public health actions be initiated. (See Mielke's comparison of census tract data and the universal blood lead screening dataset undertaken by the Louisiana Department of Health.)
- It is significant that 10 census tracts in New Orleans had a median surface soil lead level >1000 mg/kg (2.5 times the U.S. standard).
- If health effects occur at Blood Lead Levels greater than 2 micrograms of lead per deciliter of blood (recognized by many scientists as associated with learning problems), then more than 90% of the children in New Orleans are at risk. (See Mielke's comparison of census tract data and the universal blood lead screening dataset undertaken by the Louisiana Department of Health)
- Annual costs of lead poisoning in New Orleans are estimated at \$76 million in health, education, and societal harm according to a national calculation set forth by Landrigan, et al., published in Environmental Health Perspective, 2002. (See Mielke et al. "New Orleans Soil Lead (Pb) Cleanup Using Mississippi River Alluvium: Need, Feasibility and Cost, Environmental, Science, and Technology, 2006.)
- New Orleans requires a community-wide clean soil program because of the extent and quantity of lead accumulated in the soil.

How will OPERATION PAYDIRT address this serious problem?

- PAYDIRT will employ a "TLC" ("Treat, Lock and Cover") scientific method to make the soil lead-safe. Contaminated soil is TREATED with phosphate amendments such as Apatite II (a mineral derived from the fish industry) that render or LOCK the lead into a stable mineral formation that renders the lead non-bioavailable (not able to be readily absorbed into the body). Finally, the site is COVERED with 3-6" of clean soil for another level of safety. PAYDIRT Verification Sites are currently underway within the most contaminated areas in the city, to investigate the most effective methods to undertake such a strategy.

What constitutes the \$300 million?

- This is the estimated cost of treating 86,000 properties using projections based on a pilot project undertaken by Howard Mielke, PhD.

Which US cities have the highest levels of pollution?

- Larger cities have pockets of high lead exposures. Various studies demonstrate that Baltimore, Providence, Detroit, Cleveland, Chicago, Washington D.C., Indianapolis, Los Angeles, Oakland, Minneapolis/St. Paul, Milwaukee, El Paso, Honolulu, and Philadelphia are among them. The work of OPERATION PAYDIRT in New Orleans is to develop a process that can be applied to all lead-affected cities.

Which major scientists have recognized NOLA's problems?

- Among the leading scientists, regulatory agencies and research organizations that recognize the issue include:
 - Mark Johnson (Syracuse)
 - Gabe Filippelli (Indianapolis)
 - Rolf Tore Ottesen (Norway)
 - Howard Mielke (New Orleans)
 - Mark Laidlaw (Australia)
 - Environmental Protection Agency
 - Department of Environmental Quality
 - U.S. Geological Survey