CENTER FOR PUBLIC ENVIRONMENTAL OVERSIGHT
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TO: Hazard Evaluation and Emergency Response Office, Hawai'i Department of Health
FROM: Lenny Siegel, Executive Director, CPEO
SUBJECT: Comments on the July 2011 Remedial Action Work Plan for the Emergency Generator Installation Site, Kekaha, Kaua'i, Hawai'i
DATE: October 21, 2011

Members of the Kekaha community have asked CPEO to review the July 2011 Remedial Action Work Plan), as well as the associated Environmental Hazard Management Plan, for the Emergency Generator Installation Site in Kekaha, and we appreciate the opportunity to offer our comments. We have also reviewed a series of prior studies at this site, including the 2005 Site Inspection Report, the 2010 Environmental Assessment, the 2010 Site Investigation Report/Phase II Environmental Assessment, and the 2011 Targeted Brownfields Assessment.

The fundamental problem with the Remedial Action Work Plan is that it proposes ***no*** *remedial action*, just the placement of gravel on contaminated soil and the installation of a cattle fence and boulder barriers. We believe the presence of the reported levels of site contaminants—near a residential area, adjacent to the Kula Aupuni Ni`ihau A Kahelelani Aloha school, on the edge of a surface-water ditch, and with both passenger and heavy vehicle traffic—requires some level of active cleanup, such as the excavation of hot spots and either off-site disposal or on-site consolidation and stabilization. In addition, we believe additional sampling may be necessary to identify those hot-spots.

We have been told that the Generator Installation project provides an opportunity to "clean up" an abandoned, contaminated piece of property as part of a planned reuse, but we believe that the entire Kekaha Sugar Mill complex can and should be addressed through a regulatory enforcement program that considers the properties' location and potential reuse. In the absence of redevelopment, both Hawai'i Department of Health and U.S. EPA have the authority to require cleanup to protect public health and the environment.

This is an environmental justice community, characterized by a long legacy of pollution, a large population of Native Hawai'ians and Asian-Americans, and an absence of self-

government. It is therefore essential that the response strategy for the Generator Site as well as other properties associated with the former Kekaha Sugar Mill be protective.

In developing a plan for "remedial action" with no treatment or excavation, the Agricultural Development Commission and Hawai'i Department of Health have made a series of findings and decisions that we find questionable.

1. They assume an industrial use, which means that a weaker exposure standard is applied. The documents say the project parcel is zoned for agriculture, and it is adjacent to a residential area. Community members would prefer that the generators be located elsewhere, yet they were not consulted. After observing the site infrastructure we see no overriding reason why the generators could not be located elsewhere. Recognizing that the reasonably anticipated future land use could entail residential use, gardens, or schools would only lead to a more protective exposure standards as well as smaller decision units.

2. *By combining multiple samples for the main generator site into three samples, each for one-acre decision units, toxic hot spots may have been missed or averaged away.* If smaller decision units had been used, as in the Targeted Brownfields Assessment, higher levels probably would have been found within some of those portions of the original three decision units. For example, hotspots comparable to the 1,800 ng/kg dioxin result in the Targeted Brownfields Assessment's FHMA-03 (Former Herbicide Mixing Area-03) decision unit would likely have been found in the adjacent Decision Unit 3, where the average dioxin concentration was 1,225 ng/kg.

3. *During the course of the investigations of the project area, Hawai'i Department of Health weakened its exposure standards for arsenic.* The new commercial/industrial standard for bio-accessible arsenic is 95 mg/kg, compared to the earlier 20 mg/kg—the recognized background concentration. Thus, with a stroke of the pen, the previously unacceptable levels of bioaccessible arsenic (47.5 mg/kg and 47.3 mg/kg in Decision Unit 3 and FHMA-05, respecitvely) were declared acceptable.

4. *Hawai'i has less protective exposure guidelines for dioxins than U.S. EPA and numerous other states.* For example, U.S. EPA has proposed a commercial exposure standard for total equivalent dioxins, based upon non-cancer health effects, of 950 ng/kg. At 1,225 ng/kg, Decision Unit 1 exceeds that level. (We recognize that until EPA completes its IRIS Assessment, which is held up primarily by political opposition from industry groups, standards will remain in flux.)

We are not questioning the competence or integrity of Department of Health scientists. Rather, we believe that the scientific judgments represented in the Hawai'i dioxin standard are built upon questionable philosophical assumptions, starting with acceptable excess-lifetime-cancer-risk levels of one in 10,000 (10^{-4}). DOH argues that regulating these substances at very low levels is meaningless because they are widespread in the environment and food chain at comparable or even higher levels.

We disagree. The ubiquitous presence of dioxins above naturally occurring background and protective health-based standards suggests a greater, not a lesser, need to limit additional exposures. In fact, unless environmental hotspots are addressed, the presence of these hazardous substances in the food chain can only increase. Furthermore, in our experience drinking water

standards are lowered (made more protective) if the drinking water "relative source contribution" is low—that is, if the generic food contribution to toxic exposure is high.

In its June 2010 review of dioxin soil exposure standards, the Department of Health bases its approach on several factors, including:

> HDOH's acknowledgment that remediation of large tracts of agricultural lands where trace levels of dioxins associated with the past use of pentachlorophenol and other agricultural practices have been identified is impractical and unnecessary from a health risk perspective...

We thus fear that the Department of Health's adoption of less protective exposure standards than other jurisdicitons is driven by the enormity of the problem. We believe that practicality and cost should be resolved in the risk management stage of remedial decision-making, not in the establishment of exposure standards. While there may be agricultural lands in Hawai'i where complete remediation to health-based standards is indeed impractical or even unnecessary, property on the edge of residential Kekaha is not one of those areas.

5. *No excavation is planned.* Despite the decision to use the commercial-industrial standard of 1,500 ng/kg, total equivalent dioxin levels in FHMA-03 (1,800 ng/kg) exceed those standards. This decision unit is bounded by a ditch that flows along the community. The ditch is reportedly visited by several endangered bird species and is fished by residents. Across the ditch there appears to be an active farm. Yet there is no plan to remediate FHMA-03. *This is inexcusable!*

Furthermore, the original plan to excavate FHMA-05 and FHMA-06, near the Kula Aupuni school, has been abandoned in favor of managing the soil in place. At this point, it appears that the entire investigative exercise was undertaken with the objective of conducting *no* active remediation.

We Recommend

To protect the residents and students of Kekaha and enable the redevelopment of the community consistent with community values, particularly its Native Hawai'ian traditions, we recommend:

A. **Excavation of toxic hot spots**. The contaminants of concerns are persistent, and if left in place they could be spread, over a period of years, by human activity—such as construction, excavation, and vehicle operations—and natural conditions, such as flooding or erosion along the northern ditch. Instead, contaminated soil should be excavated and either shipped off site to a suitable location or consolidated on-site in a stable disposal cell.

   In the absence of additional sampling to identify hotspots, we urge the excavation of Decision Unit 1 and FHMA-3, because of unacceptable total equivalent dioxin levels, and Decision Unit 3 and FHMA units 5, 6, and 2 because of unacceptable bio-accessible arsenic levels.

B. **A Dust Suppression and Air Monitoring Plan should be developed for this site before construction work is approved.** While ADC proposes a rudimentary dust suppression plan during construction, there is no air-monitoring plan. To develop background levels, air

sampling should be conducted prior to any work. Air monitoring should be performed with real-time monitors capable of measuring particulate matter (PM) less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes or less for comparison with background. PM-10 is important in that it's small enough to lodge in lung tissue. Equipment alarms indicating unacceptable dust releases should trigger a suspension of work and additional dust suppression.

C. **Development and implementation of a robust, transparent, long-term management plan if contaminated soil is to be left in place**. The Draft Environmental Hazards Management Plan (EHMP) is a good start, but it is not sufficient. Monitoring and maintenance requirements should be more specific, and there should be contingency plans should monitoring or inspection determine a failure of engineering or institutional controls. Most important, there should be a plan to inform the public—all residents, employees, and students in the area—about the details of the EHMP so community members can report possible failures of engineering or institutional controls, and there should be protocols for informing the public if such controls are breached.

The long-term management plan should be developed in sufficient detail now to estimate the costs of such management over the life of the contamination. It may be that the long-term costs of proper monitoring and maintenance will be greater than conducting a more complete cleanup in the short run. And as we've said above, *excavating the soil with highest concentrations of arsenic and dioxins will best protect public health, safeguard the natural environment, and help ensure that local residents have maximum flexibility in shaping future land uses in their community*. That should be the goal of the Remedial Action Work Plan.