Kilauea (Kauai) Community Pesticide Investigation

Hawai‘i Department of Health
Hazard Evaluation & Emergency Response (HEER) Office

Kilauea Community Meeting
March 30, 2011
Kilauea Community Meeting
Agenda

- 6:00 pm  Information session for medical community
- 6:30 pm  Community information session
- 7:00 pm  Welcome by Director Loretta Fuddy
  - Brief presentation on the continuing investigation: Gary Gill & DOH Team
    • Arsenic and Health Overview: Alvin C. Bronstein MD, Hawaii Poison Center
- 7:30 pm  Information session & one on one discussions
The Problem in Kilauea: Residential Exposure to Pesticides

- Neighborhood built on former sugar mill site
- 2 lots built on top of old pesticide mixing area
  - Arsenic in soil: up to 80x acceptable level
  - Dioxin in soil: up to 15x acceptable levels
- Potential exposure occurs through SOIL INGESTION
- No immediate health effects under typical conditions
- Toddlers eating large amount (teaspoons) of soil could experience acute health effects
Current Conditions in Kilauea:

- Highly contaminated area limited to ditch area and one adjacent residence

DOH Hazard Management Activities:
- Site assessed for exposure risks
- Residents informed of risk reduction actions they can take
- Ditch area signed and fenced
- Coordination with District Health Office
- Survey of neighborhood for other potential risks
- Consultation with medical toxicologists
Overlay of Former Kilauea Sugar Mill

- Former General Store
- Former Gym
- Location of Former Pesticide Mixing Operations
- Former Vehicle Maintenance
- Former Stock Building
Former Kilauea Sugar Mill Area
Preliminary Pesticide Investigation
March, 2011

Approximate Boundaries of Former Mill
Exposed Soil Meets Residential Action Levels
Exposed Soil Exceeds Residential Action Level
Exposed Soil Exceeds both Residential and Commercial Action Levels
Subsurface contamination identified above action levels

Stormwater culvert (underground)
Open Drainage
Proposed areas (five) for additional surface samples (specific DUs to be determined)
Daycare center with outside play area
Highest Risk: Ditch Area

Exposure hazards:
- Children playing in exposed soils
- Accidental ingestion of soil

Looking west, work storage area in ditch

Repaired fence & new signage
Residential Home Affected
(No Children Residing)

Exposure hazards from:
• Gardening
• Accidental soil ingestion

Clean fill in planting beds
No exposed, contaminated soils
Environmental Health Assessment

- How are people exposed?
  - Accidentally eating contaminated soil
    - Children playing in dirt
    - Gardening
    - Not washing fruits & vegetables thoroughly
    - Tracking dirt into homes
- Message to residents
  - Keep bare soils covered
  - No digging until data available on subsurface
  - Wash hands, remove shoes
  - Keep children from playing in dirt
  - No access to ditch area
- Health questions
  - See your doctor if you have concerns
  - DOH will work with health provider to assist

- 125 Calls over 11+ years
- No deaths, major medical outcomes or permanent effects reported
- No Calls from Zip Code 96754
- Exposure Summary
  - Elevated urine arsenic levels (diet related)
  - Grants Ant Stakes (reformulated in 2007)
  - No chelation treatment
Outreach Actions to date

- Face-to-face & telephone contact with residents, owners and businesses
- Private meeting for affected neighbors 3/9
- Briefings for Governor, Kauai legislators, County officials 2/28 - 3/10
- Talk story with community leaders
- Site visits with ex-mill employees
- Legislative Briefing 3/16
Planned Next Steps

- Further Sampling: April
  - Subsurface investigation
  - Drainage towards ocean
  - Additional discovery

- Identify feasible solutions and present to community

- Select appropriate remedy and implement beginning summer, 2011
Questions?

For further information, contact the Hawaii Department of Health, Hazard Evaluation & Emergency Response (HEER) Office at (808) 586-4249

– Fenix Grange, Site Discovery & Remediation
– Dr. Barbara Brooks, Toxicologist