2010-2011 GRAND JURY REPORT

Cooperative Extension Riverside County - Blythe

Background

The University of California Cooperative Extension Riverside County is an educational program cooperatively funded by the University of California, Riverside County and the federal government to provide research based education to county residents in agriculture, nutrition, consumer sciences and 4-H youth.

Cooperative Extension Riverside County (CERC) has a long standing Memorandum of Understanding (MOU) between the County of Riverside and the Regents of the University of California dating back to 1917 (updated 2002). The MOU states: "…the county will provide office space at the Blythe and Indio County Administration Centers. No fees will be charged to the university for the occupied space."

Along with office space, the County of Riverside also provides clerical, support staff, and operational funds.

The funding sources for Fiscal Year (FY) 2009-2010 were:

- 52% from the University of California.
- 24% from county government.
- 19% from federal government, and
- 5% from grants

University of California Cooperative Extension (UCCE) has a current estimated budget of $2.7 million for FY 2010-2011.

The Cooperative Extension provides research and education in Riverside County in the following areas:

- Vegetable crop production
- Integrated pest management
- Field crop production
- Plant pathology.

In the Palo Verde Valley, which includes Blythe, a Crop Production/Entomology Advisor is responsible for designing and implementing applied research programs related to crop production with emphasis on maximizing production quality and economic returns.

The program brochure indicates that, "The Advisor is expected to address pest management, implementation of Integrated Pest Management (IPM) practices and crop

water use efficiency." The Advisor requires a research chemical laboratory (lab) to conduct the necessary testing. This lab is located in the Riverside County Administrative Center Building, Blythe a single story office complex. This building provides office space for the following departments:

- Riverside County Board of Supervisor, District 4
- Agricultural Commissioner
- County Assessor
- Community Action Partnership
- Facilities Management Department
- Department of Child Support Services
- Veteran Affairs Department
- Environmental Health Department
- Information Technology Department Offices
- Cooperative Extension

The focus of this investigation is on the health and safety of county employees who are working in the building, as well as residents and visitors who come to the center to receive services and conduct business.

Findings

1. **Improper Storage of Toxic Chemicals with Flammable Chemicals**

A variety of flammable and toxic chemicals used in the lab are stored in a flame resistant (color coded yellow) metal cabinet in the workroom located in Cooperative Extension Department, but not all chemicals are stored in this cabinet. Two examples of stored chemicals are *Acetone* and *Potassium Cyanide.*

The Material Safety Data Sheet (MSDS) classified Acetone as **EXTREMELY FLAMMABLE** and the vapors of Acetone may cause a flash fire and are harmful if inhaled. The MSDS states, "…the Flash Point of Acetone is -4° F and should be handled under a vent hood with a proper ventilation system". Potassium Cyanide is classified as **EXTREME HEALTH HAZARD, POISON.** MSDS states, "…Do not store near combustibles or flammables because subsequent fire fighting with water could lead to cyanide runoff. Do not store under sprinkler system".

Handling and storage for both chemicals should be in a cool, dry, well-ventilated location. The workroom where the chemicals are stored is maintained as an office space and is part of the buildings air conditioning system.

2. **Improper Ventilation in the Cooperative Extension Area**

The County Administrative Center in Blythe is designed to be office space with gaps under the doors, and centralized air conditioning units that serve multiple areas. A drying oven is located in the lab. The heated air from the oven is ventilated into the lab area. The air conditioner for the lab area also controls the temperature in a nearby conference room and a small office. The thermostat for the air conditioner is located in this conference room. At the request of Cooperative Extension Riverside County, the Maintenance Department adjusted the controls for the air conditioner to maintain a temperature of 68° F. Office employees in nearby offices stated this resulted in "the conference room and office areas being unbearably cold".

The County Administrative Center building was designed and built in 1997 to accommodate various departments in an open concept. Board of Supervisors Policy H4 states, the Facilities Management Department will:
"Set air conditioning and heating controls to comply with settings so as not to cool below 76° F, and not to heat above 68° F. Where a single temperature set point is, or where a system cools and heats simultaneously, the equipment will be operated in a manner that minimizes the use of electrical energy."

The different sections of the building all join through open spaces therefore anything that enters the air system in the lab will be circulated throughout the entire building.

MSDS states a hood is required for the proper handling of most chemicals used by the lab personnel. However, there is no laboratory hood located within the lab area. The MSDS do not identify a quantity level of unsafe hazardous materials; therefore all volumes and quantities must be treated as hazardous.

Riverside County Economic Development Agency, Facility Maintenance conducted an investigation into the ventilation of the lab area and wrote a report a section which is identified as "Plan B" dated May 3, 2011, which recommended necessary changes so the lab could become a self-contained unit.

- "Remove all existing ductwork (supply and return air) from AC 301 to this area.
- Install a new rooftop package unit and ductwork solely dedicated for the lab. Estimated cost $10,000.00.
- Install an appropriately sized exhaust fan to adequately ensure a negative pressure room. Estimated cost $1,300.00."

3. **No Hazardous Materials Handler Permit**

California Health and Safety Code Chapter 6.95 and Riverside County Ordinance 651 states, "…any regulated substance or Federal Extremely Hazardous Substance or California Acutely Hazardous Substance below five gallons requires a Hazard Materials Business Emergency Plan and a permit with the County of Riverside Community Health Agency, Department of Environmental Health." At the time of this report, the Cooperative Extension has not submitted a Hazard Materials Business Emergency Plan to the proper authorities.

4. **No Hazardous Materials Identification on Building**

In accordance with National Fire Protection Association (NFPA) 704, (Exhibit #1) requirements for handling hazardous materials and California Health & Safety Code, Chapter 6.95, Section 25000-25520, requires that there should be identification on any building that stores or uses hazardous materials. This advises all persons and especially firefighters of the types of chemicals that are maintained within the building.

5. **No Hazardous Waste Generator Permit**

County of Riverside Hazardous Waste Generator form (HWG form dated 12/2005) identifies one type of waste as "Pesticide: Unusable portions of active pesticides, unrinsed empty containers, rinse water". For example the MSDS for Potassium Cyanide states: "Dispose of container and unused contents in accordance with federal, state and local requirements". The lab personnel stated the chemical containers were washed in water and rinsed 3 times. At the time of this investigation, there was no Hazardous Waste Generator Permit.

6. **Improper Form Used for Hazardous Materials Inventory**

The inventory list of chemicals (Exhibit #2) is not recorded on the correct form required by the County of Riverside. The correct form is Office of Emergency Services (OES) Form 2731 (Exhibit #3). A separate form is required for each chemical and updated when a chemical is changed or moved.

Recommendations

Riverside County Board of Supervisors
Cooperative Extension Riverside County
Riverside County Agricultural Commissioner
Riverside County Economic Development Agency

1. The Cooperative Extension Riverside County, Blythe store all chemicals in compliance with the appropriate MSDS.

2. The Cooperative Extension Riverside County, Blythe remodel the lab as a self-contained unit by implementing “Plan B” of the Riverside County Economic Development Agency, Facility Maintenance Report dated May 3, 2011.

3. The Cooperative Extension Riverside County, Blythe create a Hazardous Materials Business Plan and obtain a Hazardous Materials Handlers Permit, as required by Safety Code Chapter 6.95 and Riverside County Ordinance 651.

4. The Cooperative Extension Riverside County, Blythe place hazardous materials identification plaques on all entrances into the County Administration Center Building, Blythe in accordance with NFPA 704.

5. The Cooperative Extension Riverside County, Blythe obtain a Hazardous Waste Generator Permit, (HWG Form 12/2005).

6. The Cooperative Extension Riverside County, Blythe conform to Office of Emergency Services (OES) Form 2731 used for inventory of hazardous materials.

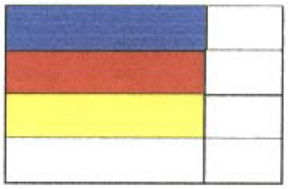
Hazardous Material Code Identification

NFPA 704, 1996 Edition

Identification of Health Hazard Color Code: BLUE		Identification of Flammability Color Code: RED		Identification of Reactivity Stability Color Code: YELLOW	
Type of Possible Injury		Susceptibility of Materials to Burning		Susceptibility to Release of Energy	
Signal		Signal		Signal	
4	Materials that, under emergency conditions, can be lethal.	4	Materials which will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature, or which are readily dispersed in air and which will burn readily.	4	Materials that in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperature and pressures, are shock sensitive and react explosively with water.
3	Materials that, under emergency conditions, can cause serious or permanent injury.	3	Liquids and solids that can be ignited under almost all ambient temperature conditions.	3	Materials that in themselves are capable of detonation or explosive reaction but require a strong initiating source or which must be heated under confinement before initiation, are shock sensitive or which react explosively with water.
2	Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.	2	Materials that must be moderately heated or exposed to relatively high ambient temperature before ignition can occur.	2	Materials that readily undergo violent chemical change at elevated temperatures and pressures. Also materials which may react violently with water or which may form potentially explosive mixtures with water.
1	Materials that, under emergency conditions, can cause significant irritation.	1	Material that must be preheated before ignition can occur.	1	Materials that in themselves are normally stable, but which can become unstable at elevated temperatures and pressures or which may react vigorously with water. Also materials that change or decompose with exposure to air, light or moisture.
0	Materials that, under emergency conditions, would offer no hazard.	0	Materials that will not burn.	0	Materials that in themselves are normally stable, even under fire exposure conditions, and which are not reactive with water.

SPECIAL (WHITE)	
W	REACTS VIOLENTLY OR IN A DANGEROUS MANNER WITH WATER.
	REQUIRES SPECIAL DISPOSAL
OX	SUBSTANCE YIELDS OXYGEN TO SUPPORT COMBUSTION. REACTS TO OXIDIZE FUELS OR COMBUSTIBLES.
COR	ACID, ALKALI OR OTHER MATERIALS THAT WILL CAUSE SEVERE DAMAGE TO LIVING TISSUE.
	MATERIALS POSSESSING RADIOACTIVITY HAZARDS.

The identification systems are focused on the hazards of the materials under fire or spill conditions. This system is used only for the storage of chemicals and may be set up in a number of different designs. The color and number codes are as described above. The hazard number ratings will be either inserted into, or placed next to or below the corresponding colored box. Examples of the various identification systems that may be seen on bottles, drums or other containers are shown below:



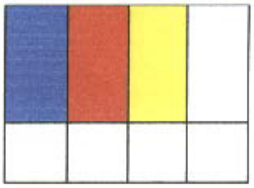


Exhibit #1

Chemical Inventory List – UCCE Blythe CA laboratory

Chemical name	**Active ingredient**	**Amount (metric)**
Asana	Esfenvalerate	473 ml
Acetone	Acetone	946 ml
Actara	Thiamethoxam	100 g
Admire Flex 4	Imidacloprid	475 ml
Admire Flex 4	Imidacloprid	475 ml
Admire Flex 4	Imidacloprid	475 ml
Admire Pro	Imidacloprid	1 L
Agri-Flex	Thiamethoxam	75 ml
Agri-mek	Abamectin	50 ml
Ammonia	Ammonia	3.8 L
Avaunt	Indoxacarb	100 g
Captan	Captan	20 g
Capture	Bifenthrin	120 ml
Coragen	Chlorantraniliprole	946 ml
Coragen	Chlorantraniliprole	946 ml
Coragen	Chlorantraniliprole	946 ml
Dipel Df	*Baccillus thuringiensis*	454 g
Durivo	Thiamethoxam	500 ml
Dyne Amic	Methyl esters of fatty acids	200 ml
Dyne Amic	Methyl esters of fatty acids	200 ml
Dyne Amic	Methyl esters of fatty acids	200 ml
Ethyl Acetate	Ethyl Acetate	3.25 L
Fluon	Teflon	236 ml
Fulfill	Pymetrozine	50 g
Fulfill	Pymetrozine	100 g
Histo Clear 2	Histo Clear 2	3.8 L
Induce	Alkyl aryl polyoxylkane ethers	200 ml
Leverage	Imidaclophid	475 ml
Movento	Spirotramat	475 ml
Movento	Spirotramat	475 ml

Exhibit #2

Mustang	Zeta cypermethrin	50 ml
NN1-0101 20 SC	Pyrifiuquinazon	200 ml
NN1-0101 20 SC	Pyrifiuquinazon	50 ml
Oberon	Spiromesifen	120 ml
Oberon	Spiromesifen	200 ml
Permount	Permount	100 ml
Potassium Cyanide	Potassium Cyanide	100 g
Radiant	Spinetoram	100 ml
Scorpion	Dinotefuran	100 ml
Switch	Cyprodinil	100 g
Synapse	Flubendiamide	50 g
Synpse	Flubendiamide	50 g
Thionex	Endosulfan	473 ml
Thionex	Endosulfan	473 ml
Venom	Dinotefuran	50 g
Venom	Dinotefuran	100 g
Vetica	Fluebendiamide	100 ml
Vetica	Fluebendiamide	1 L
Voliam xpress	Chlorantraniliprole	200 ml
Voliam xpress	Chlorantraniliprole	500 ml
XenTari	Baccillus thuringiensis	453.59 g

Exhibit #2

UNIFIED PROGRAM CONSOLIDATED FORM
HAZARDOUS MATERIALS

HAZARDOUS MATERIALS INVENTORY – CHEMICAL DESCRIPTION

(one page per material per building or area)

☐ADD ☐DELETE ☐REVISE 200 Page ___ of ___

I. FACILITY INFORMATION

BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As) 5

CHEMICAL LOCATION 201 | CHEMICAL LOCATION CONFIDENTIAL EPCRA ☐ YES ☐ NO 202

FACILITY ID # | MAP# (optional) 203 | GRID# (optional) 204

II. CHEMICAL INFORMATION

CHEMICAL NAME 205 | TRADE SECRET ☐ Yes ☐ No 206
If Subject to EPCRA, refer to instructions

COMMON NAME 207 | EHS* ☐ Yes ☐ No 208

CAS# 209 | *If EHS is "Yes", all amounts below must be in lbs.

FIRE CODE HAZARD CLASSES (Complete if required by CUPA) 210

HAZARDOUS MATERIAL TYPE (Check one item only) ☐ a. PURE ☐ b. MIXTURE ☐ c. WASTE 211 | RADIOACTIVE ☐ Yes ☐ No 212 | CURIES 213

PHYSICAL STATE (Check one item only) ☐ a. SOLID ☐ b. LIQUID ☐ c. GAS 214 | LARGEST CONTAINER 215

FED HAZARD CATEGORIES (Check all that apply) ☐ a. FIRE ☐ b. REACTIVE ☐ c. PRESSURE RELEASE ☐ d. ACUTE HEALTH ☐ e. CHRONIC HEALTH 216

AVERAGE DAILY AMOUNT 217	MAXIMUM DAILY AMOUNT 218	ANNUAL WASTE AMOUNT 219	STATE WASTE CODE 220

UNITS* (Check one item only) ☐ a. GALLONS ☐ b. CUBIC FEET ☐ c. POUNDS ☐ d. TONS 221 | DAYS ON SITE. 222
* If EHS, amount must be in pounds.

STORAGE CONTAINER
☐ a. ABOVE GROUND TANK ☐ b. UNDERGROUND TANK ☐ c. TANK INSIDE BUILDING ☐ d. STEEL DRUM ☐ e. PLASTIC/NONMETALLIC DRUM ☐ f. CAN ☐ g. CARBOY ☐ h. SILO ☐ i. FIBER DRUM ☐ j. BAG ☐ k. BOX ☐ l. CYLINDER ☐ m. GLASS BOTTLE ☐ n. PLASTIC BOTTLE ☐ o. TOTE BIN ☐ p. TANK WAGON ☐ q. RAIL CAR ☐ r. OTHER 223

STORAGE PRESSURE ☐ a. AMBIENT ☐ b. ABOVE AMBIENT ☐ c. BELOW AMBIENT 224

STORAGE TEMPERATURE ☐ a. AMBIENT ☐ b. ABOVE AMBIENT ☐ c. BELOW AMBIENT ☐ d. CRYOGENIC 225

%WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1 226	227	☐ Yes ☐ No 228	229
2 230	231	☐ Yes ☐ No 232	233
3 234	235	☐ Yes ☐ No 236	237
4 238	239	☐ Yes ☐ No 240	241
5 242	243	☐ Yes ☐ No 244	245

If more hazardous components are present at greater than 1% by weight if non-carcinogenic or 0.1% by weight if carcinogenic, attach additional sheets of paper containing the required information.

NFPA HAZARD INDENTIFICATION: HEALTH___ FLAMMABILITY___ REACTIVITY___ SPECIAL HAZARD___ 246

HAZARD CLASS OR DIVISION #_____ UN# _____
If EPCRA, Please Sign Here

Report Issued: 06/28/2011
Report Public: 06/30/2011
Response Due: 09/26/2011