Maquiladora Health & Safety Support Network
Red de apoyo sobre salud ocupacional en las maquiladoras

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February 24, 2011

Health and Safety Evaluation Report
Alta Gracia Project garment plant
Villa Altagracia, Dominican Republic

The following is an evaluation report of a follow-up visit on February 18, 2011, regarding the safety and health conditions at the Alta Gracia Project facility in Villa Altagracia, Dominican Republic. This report focuses on the status of safety and health conditions previously observed on two site visits on February 19 and June 18, 2010, by a team of volunteer members of the Maquiladora Health and Safety Support Network (MHSSN). This evaluation was solicited by the Workers Rights Consortium (WRC), based in Washington, DC, in collaboration with Knights Apparel in Spartansburg, SC, and the Alta Gracia Project's plant management on site. Knights Apparel is the business entity funding the Alta Gracia Project and its Villa Altagracia garment plant.

This report consists of safety and health issues previously observed and noted in the "Health and Safety Evaluation Report Alta Gracia Project garment plant Villa Altagracia, Dominican Republic", dated June 2010, current status of these conditions, additional conditions observed in this visit, and key elements and recommendations to maintaining safe and healthy conditions from this point forward. The recommendations made are based on a review of relevant Dominican laws, Kramer's professional experience in the United States, and "good professional practice" as performed by occupational safety and health professionals throughout the world.

The follow-up visit/evaluation was conducted by Mariano Kramer, volunteer for the Maquiladora Health and Safety Support Network (MHSSN). Kramer is a recently retired Cal/OSHA Senior Safety Engineer who coordinated the agency's enforcement program for an estimated 5,000 garment plants in the Los Angeles area and currently works in the Los Angeles area as a safety and health consultant and trainer.

The February 2011 visit observed the plant in full production with a workforce of approximately 133 employees organized into cloth cutting, four production modules, inspection and packing departments, as well as a spot remover room, plant engineering and maintenance operations. Two modules produce T-shirts while the other two produce "hoodie" sweatshirts, both with logo designs from various US universities. A walk-around was conducted with the Fanny Gil, maintenance supervisor, and later a meeting with the six-member safety and health committee was conducted to review current administration of the committee.

The workers at the facility are still represented by a union affiliated with FEDOTRAZONAS, a federation of "free trade zone" workers at nine facilities in the DR.

Plant management has rapidly responded to the MHSSN team's previous recommendations and, at the time of this writing, has already corrected the vast majority of the above-mentioned report's recommended corrections and changes.

I, as a volunteer for MHSSN, appreciate the opportunity to participate in this note-worthy project and wish all involved – Knights Apparel, plant management, the plant's union and workforce, and the WRC – much success in establishing a garment plant that can serve as a model in workplace health and safety, as well as in other important areas.

Mariano Kramer
MHSSN Volunteer

Section I: Plant Safety Issues observed ,June 2010

1. Receptacles with flexible cords.

Located on front wall on east side of plant to office

Located on east side of plant. Cord coming out from box has no protection from sharp edge of knockout.

Pedestal fan in module area

These are wall receptacle boxes /plates connected to flexible cords being used as fixed wiring (Title 8, 2500.8). The wall receptacle boxes are designed to be fixed and attached, not as a component for a portable cord set (Title 8, 2305.4 Approvals). Also conductors and cords that pass through openings in boxes and cabinets must be protected from abrasion (Title 8, 2473.1).

An evaluation of electrical power needs has to be made based on location of permanent equipment in relation to mounted receptacles. To minimize the use of extension cords, additional permanently mounted receptacles should be installed by a

qualified electrician using approved components for anticipated voltage and current loads.

February 18, 2011:

The above items have all been corrected and the temporary use of extension cords was only observed by maintenance personnel cutting wood strips.

2. Insulation on power cords open, exposing conductors. (same installation as Item #1 – eastside)

Outer sheath has pulled away from plug. This is usually the result of removing the plug by pulling on the cord from some distance away, creating excessive pull (Title 8, 2500.25).

This should be repaired immediately and employees instructed that removal of plugs should be done at the receptacle and not by pulling on the cord.

February 18, 2011:

These items have been corrected.

3. Open equipment ground on receptacle located on east wall.

Circuit tester revealed an open equipment ground (Title 8, 2360.2(c))
Equipment ground should be connected to receptacle.

February 18, 2011:

This item has been corrected. However, an identical condition was observed on two outlets located in the "Lavado" room and an outlet box/extension cord being used to operate a skilsaw for cutting wood.

4. Taped power cord and disconnected equipment ground on Pegasus sewing machine

Power cord is wrapped with tape which is coming off, exposing conductors (Title 8, 2500.25). Equipment ground on power cord is disconnected (Title 8, 2395.59).

February 18, 2011:

This item has been corrected.

5. “14 AWG Duplex” cord being used instead of industrial SO-rated cord as a power cord and to supply power to a receptacle. Location on column between module area and cutting area.

Flexible cords must be approved for use and location (Title 8, 2305.4, 2500.7) There is not enough information on the cord to determine type and whether acceptable for this installation (Title 8, 2340.21). Flexible cord cannot be used for fixed wiring (T8, 2500.8).

Power cord should be replaced with industrial SO-rated cord and cord supplying fixed receptacles should be installed in conduit.

February 18, 2011:

These items have been corrected by placing wiring in EMT metal conduit. However, there was open Romex observed between the two outlets located in the

“Lavado” room and fluorescent lighting/switches located in the generator and compressor room.

6. Discontinued circuit/conductors located on wall next to water dispensers (loading dock side)

Discontinued circuits must be completely removed or maintained as if in use (Title8, 2340.24)
Recommend that they be covered with a plastic or metal plate.

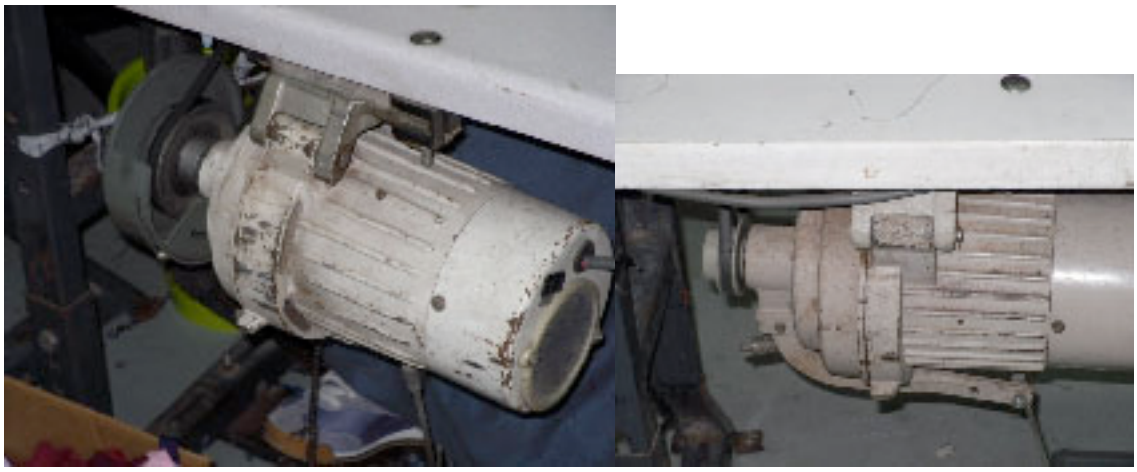
February 18, 2011:

This item has been covered by a metal plate.

7. Main and subpanels need to be identified as to voltage and current. Also, 220v and 110v commercial sewing machines must be duly marked to distinguish them (Title 8, 2340.21)

February 18, 2011:
This item has been corrected.

8. Unguarded lower pulley nip points on several sewing machines in Module area



The lower pulley nip points need to be covered to prevent inadvertent contact (Title 8, 4475). The following is an example of a guard that was made and installed on one of sewing machines at AltaGrcia which accomplishes full enclosure.

February 18, 2011:

These items have been corrected. Management has made an excellent effort in providing additional sheet metal guarding, obtaining full enclosure of hazardous belt/pulley nip points. This photo is an example.

9. Rotating shafts on portable fans are not guarded from contact Title 8, 4051. Rear covers had been removed.

New covers need to be installed.

February 18, 2011:

This item has been corrected. Sheet metal enclosures have been made and installed covering the rotating shafts (observed).

9. Entrance to compressor area has a 2'1" high break in elevation. It needs stairs or a ramp (Title 8, 3270)

February 18, 2011:

Three concrete stairs have been installed.

10. Drain opening on eastside walkway outside of plant is opened (Title 8, 3212) Hole needs to permanently covered or grated to prevent someone from tripping or stepping into it.

February 18, 2011:

Rebar grating with 1" spacing has been installed over drain opening (observed)

11. Unsecured drill press in maintenance shop (Title 8, 3328). The drill press needs to be bolted to the floor so that there is no possibility of tipping over during use.

February 18, 2011:

Drill Press has been bolted to the floor.

12. Lockout/Tag out (LOTO) system (Title 8, Section 3314)

According to Plant Engineer, maintenance personnel consist of one mechanic, one electrician and one janitor. Primary repair tasks involve minor belt adjustments and repairs to sewing machines and changing of fluorescent lights and ballasts.

When repairing sewing machines involving removal or disassembling the motor, the power cord will be disconnected in the junction box and a sign indicating under repair will be placed on the equipment. When changing ballasts and lights the appropriate circuit breaker in the subpanel will be turned off and the sign placed on the subpanel. None of these tasks were observed at the time of this evaluation.

An effective LOTO system requires the use of both locks and tags or other positive means for isolating all hazardous energy from the equipment being repaired. With respect to sewing machine repair this is accomplished by disconnecting the power cord at the junction box of the machine.

When changing ballasts on fluorescent lights there is no isolation of electrical energy – only turning off the circuit breaker, which can be inadvertently turned on. In the United States, energization or inadvertent re-energization has been the cause of many electrocutions when performing this task. There is a high degree

of risk of injury due to grounded objects such as metal hangers, support fixtures for the lights, etc. There is a risk of re-energization due to the potential need to operate equipment or turn on lighting that maybe on the same circuit that has been shutdown.

To prevent re-energization, the subpanel should be able to accept a lock whose key would be in the custody of the repairer until the task is completed. Another option would be the use of specifically designed LOTO devices that can be placed on the individual circuit breaker. The following is a photo of such a device.

February 18, 2011:

Locks have been installed on the doors of all circuit breaker panels (observed) with maintenance personnel in control of the key. Maintenance personnel will lock the circuit breaker after isolating power when working on overhead lights or other equipment that requires lockout.

Section II: Plant Health Issues

1. Chemical Exposures

The most immediate health issue in the plant is chemical exposures in the spot remover operation. Current solvents in use (as of June 18th) include methylene chloride (carcinogen), toluene (reproductive toxin), and hexane (nervous system disorders, including peripheral neuropathies, at high concentrations and frequent exposure).

The current local exhaust ventilation (LEV) system (as of June 18th) is ineffective because the sheet metal hood in the room is too small or narrow to allow the work to be done INSIDE the hood so that the airborne contaminants are exhausted outside the building.

The spot remover operation involves using a pneumatic spray gun to apply the solvent onto the garment (above left) and then drying and removing the solvent with a compressed air line (above right). Both these operations need to be done inside the hood.

The personal protective equipment (PPE) currently in use is also ineffective. The half-face, air purifying respirator in use was too large for the face of the worker, allowing airborne contaminants to enter at the chin and nose. It was not being used correctly (only one strap of the two were used), and the very hot, humid conditions make respirator use a health hazard in itself.

The gloves in use were too large for the worker, so she had to constantly take them on and off to handle the garments, which allows for dermal absorption of solvents via unprotected hands. The safety glasses were the right size, but the climatic conditions make their use uncomfortable.

The plant had obtained and made available to employees the Material Safety Data Sheets (MSDSs) for the chemicals in use in both the spot remover room and the cutting department, in compliance with Dominican laws and good practice. It is from these MSDSs that the information about chemical hazards is obtained.

Possible engineering controls, administrative controls and PPE "fixes" for these exposures include:

- Redesign and rebuild the LEV hood so that all the work can be done inside the hood and contaminants exhausted to the exterior. The exhaust stream from the fan should be prevented from re-entering the room, either by installing a chimney from the fan exhaust to the roof, or by sealing the other windows in the spot remover room;
- Cutting small holes into the right-hand side of the hood to allow the air line for the pneumatic spray gun and the air line for drying to pass into the hood for easier use of the spray gun and drying airline inside the hood;
- An effective LEV system can and should eliminate the need for respirator use;
- replace the more toxic solvents (methylene chloride and toluene) with less toxic substitutes, which may need to be tested to ensure effectiveness in removing spots;
- use of appropriately sized gloves (neoprene or nitrile, depending on which chemicals are finally selected for ongoing use) to prevent dermal exposures to any of the solvents;
- continued use of safety glasses to prevent absorption of solvents due to splashes;
- installation of an ANSI-compliant emergency eyewash (stand-alone plastic unit with enough water to maintain a 15-minute flow) for use in the event of a splash to the eyes or face;
- "hazard communication" training for all employees exposed to chemicals (including the cutters who use a spray adhesive for gluing the paper patterns onto the cloth) about the health hazards of the chemicals in use and how the control measures (if followed) will prevent adverse health effects.

Multiple systems are needed– substitution for less toxic chemicals and an effective LEV hood and appropriate PPE – to control chemical exposures and prevent adverse health effects because during actual work operations, single controls often do not work 100% all the time and with 100% efficiency. Also it is key that exposed workers understand what are the potential adverse health effects, so that they are both knowledgeable and motivated to correctly use control measures.

One other chemical exposure on site is the lead solder used in the maintenance shop. Lead never gets hot enough during soldering to emit airborne lead particulates, but the "dross," or liquid solder that cools off and leaves lead residue on horizontal surfaces, can get onto workers' hands. This lead solder dross is hazardous to workers when ingested via contamination of their hands used for eating, drinking and smoking.

The plant should establish protocols that maintenance workers thoroughly wash their hands after soldering and before eating. Drinking or smoking.

February 18, 2011:

The plant is has changed chemicals and is currently using Tide Liquid Laundry Detergent (See Attachment 5) as their spot remover. According to the manufacturer's MSDS normal/general ventilation is acceptable and in an industrial setting chemical goggles and rubber or neoprene protective gloves should be used. Management has required the use of chemical goggles and neoprene protective gloves for spot removal.

No soldering was directly observed. Soldering is minimal and maintenance personnel have been verbally instructed to wash their hands after performing this task.

2. Heat Stress and Illness

Short of sealing the building and installing central air conditioning equipment – which is costly and unlikely to occur – high temperatures inside the workplace will be both a production challenge and a health hazard. High climatic temperatures are increased inside the building by heat generated by equipment and people. See item #6 below for the chart documenting measured temperatures on site on June 18th.

Possible engineering controls, administrative controls and PPE "fixes" for heat exposures include:

- installing additional exhaust fans in the roof to remove heated air near the roof and draw in relatively cooler air at ground level through doors and windows;
- applying a coating to the roof's exterior that will reflect the energy of the sun and thereby reduce the ambient temperature inside the building. What is typically used for this purpose is plain white paint or a reflective silver paint;
- space out machinery inside the building (already done at Alta Gracia) so as to allow air currents to provide some cooling, and so machine operators also have some space around them as well;
- deal with the anticipated adverse health effects by establishing mandatory water breaks for workers at a given "trigger temperature" (such as 90 or 95 degrees F) so that they stay hydrated and can move away from hot equipment periodically;
- conduct a heat illness training with all employees so that they are aware of the different types of heat illness, what the signs and symptoms of these illnesses are, and the key activities (hydration and periodic rest) to reduce adverse

effects. There are lots of Spanish-language heat illness materials available from LOHP and other sources on the Internet.

February 18, 2011:

Although high temperatures were not observed on this visit, this issue still remains a concern for workers and the safety and health committee. The previously recommended engineering solutions were discussed with the safety and health committee.

1. Swamp coolers placed in hotter areas of the plant. This was ruled out since the increased humidity could affect the quality of the fabrics being processed.
2. Installing additional exhaust fans near the roof eave line to remove interior heated air just below the metal roof and draw in relatively cooler air at ground level through doors and windows.
3. Applying specialized reflective coatings to the top surface of the roof, increasing heat reflectivity and emissivity.
4. Installing more pedestal fans in the plant
5. Establishing and implementing a heat illness prevention program which includes training, procedures for supplying water, recovery stations and dealing with heat stress emergencies.

Of the above remedies the committee inclined towards trying the installation of exhaust fans at locations within the plant where higher temperatures occur. Also applying reflective coatings to the roof surface remains a viable option (See attachments 1-5). Studies on the affect of heat loads through application of reflective coatings seem to show reductions of 20% to 25%. (See attached reports). Installing additional pedestal fans is not particularly desirable since you are simply moving heated air around without any temperature change.

Definitely establishing a heat illness prevention program is a must and should be a priority to have ready for the hot months to come.

3. <u>Airborne Cotton Dust</u>

Airborne cotton dust can be an irritant or sensitizer for workers' respiratory system, a serious lung hazard in textile plants ("brown lung" or byssinosis), and at high enough concentrations and the right circumstances, a combustible dust. Short of a LEV system installed on all machinery generating dust to completely capture and eliminate airborne dust, there are other ways to reduce dust levels.

Possible engineering controls, administrative controls and PPE "fixes" for dust exposures include:

- Using mobile industrial strength vacuum cleaners to periodically vacuum work stations and equipment to capture and remove dust on equipment and horizontal surfaces. The schedule depends on the amount of dust generated –

it could be one or two times a day at logical time periods, and certainly at the end of the shift. Blowing dust around with air hoses should be prohibited, as that will increase suspended dust concentrations and create, in inaccessible locations, areas where dust will settle and accumulate. At Alta Gracia, each of the four modules might be supplied with its own vacuum and workers can take turns doing the vacuuming during the day in each module;

- Personal paper dust masks can be made available, especially if some workers are particularly sensitive to airborne dust, but even dust masks are hot and deliberately make breathing more difficult;
- Establish work procedures to regularly vacuum areas, train workers on the reasons why this is advisable, and ensure that these procedures are followed.

February 18, 2011:

Observed employee operating shopvac during production. Per management and the S & H committee vacuuming is conducted continuously during production.

4. Bloodborne Pathogens Exposures from Tagging Guns

Over the last decade, possible bloodborne pathogen exposures from the use of tagging guns has been recognized in garment plants, warehouses and retail stores in the United States. The hazard comes from workers puncturing their fingers and hands with the gun's needle, which then becomes contaminated with the worker's blood. A second worker later also punctures their hands with the same needle, and thereby mixing blood and any infectious diseases it carries (hepatitis B and C, HIV).

The control measures for this in California are to establish a full-blown "Bloodborne Pathogens Exposure Control Plan," assign each tagger with his/her own tagging gun, and provide cleaning materials (such as alcohol) to periodically disinfect the needle. At Alta Gracia, the rotation of workers through the packing department would require too many guns for everyone, and a BBP-ECP would be over-kill, but there related control measures:

- Label each of the guns (1, 2, 3 or A, B, C, etc) and establish a protocol that when employees are working in the packing department they use the same gun the entire day or time period (for example, Marta uses only gun #3 for her shift). They will disinfect the gun when they begin to use it, and at the end of the shift or time period after they have used. Common alcohol can be used as a disinfecting agent;
- Conduct a training with the workers about the procedure, and the reason why it exists – the adverse health effects of bloodborne pathogens such as hepatitis or AIDS.

February 18, 2011:

No tagging gun use was observed. S & H committee members indicated that tagging is no longer performed at this plant. However, prior to relocating this task, management had implemented the above recommendations during tagging gun operations.

5. Other H&S Aspects in Compliance on Site

The following aspects of plant operations were found to be in compliance with Dominican law and/or good OHS practice:

- Lighting levels were in compliance with Dominican law (Resolución No. 04/2007, Section 1.10);
- Noise levels were in compliance with Dominican law (Resolución No. 04/2007, Section 3.1);
- Potable drinking water was available in close proximity to work areas (Resolución No. 04/2007, Section 1.16);
- Toilets for men and women were available in compliance with Dominican law (Resolución No. 04/2007, Section 1.19);
- Portable fire extinguishers and emergency exits were available in compliance with Dominican law (Resolución No. 04/2007, Section 1.39-1.41);
- First aid kits were available in compliance with Dominican law (Resolución No. 04/2007, Section 1.20);
- Anti-fatigue mats were available for workers in the inspection and packing departments whose assigned work required standing in a fixed position for extended periods of time.

6. Key Parameters Measured on Site on June 18, 2010

Location	**Lighting (lux)**	**Noise (dBA)**	**Temperature (C/F)**
Cutting table #1	880	68-72	32.8 / 91.0
Cutting table #2	777	68-72	33 / 91.4
Module #1	960	72-75	32.8 / 91.0
Module #2	1,000	72-75	32.8 / 91.0
Module #3 – location A	1,140	72-76	32.3 / 90.1
Module #3 – location B	945	72-77	32.5 / 90.5
Module #4 – location A	990	70-77	32.3 / 90.1
Module #4 – location B	795	72-81	31.7 / 89.1
Module #4 – location C	706	72-75	31.9 / 89.4
Spot remover room	435		
Packing department – location A	790	69-72	31.8 / 89.2
Packing department – location B	680	69-72	31.9 / 89.4

DR lighting requirements for work stations = 300 lux.

DR noise limits at work stations = 80 dBA.

February 18, 2011:

No changes in work conditions were observed that would change lighting, noise and ambient temperature levels that were determined in June 2010.

Other safety and health concerns observed on February 18, 2010:

1. Maintenance Shop – tabletop grinder with abrasive wheels did not have protective hood guarding and adjustable tongue guards and work rests. The abrasive wheels being used did not have any rpm rating to ensure that the motor rpm exceeded the rated rpm of the wheel. (Title 8, Section 3577(b), 3577(e), 3578(g), 3580(a)

2. Portable skilsaw being used attached to an extension cord which was plugged into the outlet. There was no Ground Fault Circuit Interruptor (GFCI) to protect against a ground fault or short circuit while using this equipment. (Title 8 Section 2360.3)

3. Observed employees using compressed air hoses to clean their clothing. There are several compressed air gate valves outlets above the sewing modules. The compressed air is used for cleaning machinery and work areas by maintenance and cleaning crews. Operating pressure is 40 – 50 psi.

   Compressed air cannot be used to clean clothing unless it is below 10 psi. (Title 8 Section 3301(a)) This issue was discussed with the safety and health committee and corrective action will be taken. All gate valves will be locked with access only to maintenance personnel. Separate cleaning stations will be provided with compressed air reduced to 10 psi.

4. Employees using up-ended pallet as a ladder to climb in and out of the truck they were unloading. The truck had been parked several feet into the building and not at the loading dock where there would be no break in elevation between the rear-end and the loading dock.

5. Unguarded sprocket chain on small press (Title 8, CCR Section 4075)

Section III: Key Elements for Maintaining Safe and Healthy Conditions

Two key elements for establishing and maintaining safe workplaces anywhere are effective health and safety committees, and comprehensive employee training programs.

First, Dominican law [Decreto Número 522-06, Artículo 4; Resolución No. 04/2007, Sección 6] requires the establishment of a joint labor-management safety committee on site, which Alta Gracia's plant management has already initiated with the Labor Department.

Members of plant-level H&S committees can play essential roles in the following critical activities on site: conducting periodic facility inspections; conducting investigations of the cause and prevention of accidents and illnesses; verifying the implementation of corrective actions and evaluating their effectiveness; and conducting employee training sessions.

It is important to have roughly equal numbers of management and hourly employees on safety committees, and all committee members need to have sufficient training to be able to recognize hazards on site and to be familiar with common control measures. All committee members need to receive enough training and authority from management so that they have the knowledge, power and confidence necessary to be active and effective committee members.

In order to carry out their duties as H&S committee members, management representatives must not have so many assigned tasks or responsibilities that they have no time for committee work, and worker representatives must be granted release time from production duties to complete committee assignments.

Second, employee training programs are important for several reasons. Dominican law [Decreto Número 522-06, Artículo 9; Resolución No. 04/2007, Sección 6 and 7] requires employers to inform employees exposed to workplace hazards as to the nature of these hazards, and how the employer will reduce exposure and prevent adverse health effects. Employees who are informed of such hazards are more motivated to follow plant procedures to control the hazards, and often can propose additional, previously unrecognized hazard control measures.

Among the training topics that the plant should conduct on site are:

- new employee safety orientation;
- ergonomics and repetitive motion hazards and control measures;
- chemical use and exposures on site (including airborne cotton dust) and control measures;
- heat illness signs, symptoms and control measures;
- bloodborne pathogens exposures and control measures
- correct use of personal protective equipment;
- fire prevention and fire extinguisher use (if permitted);

- emergency action plans (evacuation) for fires and earthquakes;
- lockout/tagout procedures for maintenance personnel;
- effective functioning of health and safety committees.

Many operations the size of Alta Gracia establish a schedule of monthly meetings 20-30 minutes long to cover one or more topic areas appropriate to their operations. The topics above, and others as required or needed, could be covered in 12 monthly meetings during the course of a year.

One training resource for the plant is UC Berkeley's LOHP, which has developed Spanish-language trainings for virtually all of the topics above. Information related to possible training programs and the costs involved is available from OHS team member Valeria Velazquez at vvelazquez@berkeley.edu .

February 18, 2011:

During my visit I met with the Alta Gracia Safety and Health Committee to get an idea of what has been implemented to date. The committee is composed of six members representing management and the union.

They had met in December to review the June safety and health evaluation and another audit. They are currently waiting for the Fire Department to do first aid, fire extinguisher, emergency evacuation and fire prevention training. However, the fire department has other projects that prohibit them from doing this training anytime soon. Fanny Gil, the maintenance manager had developed some checklists but they were not all inclusive for all hazards in the plant. There were no recorded Safety and Health Committee meeting minutes, inspections or training records to review.

Recommendations:

Although the plant has corrected the vast majority of items found in previous visits by safety professionals, it is critical that the committee focus on quickly developing a written Alta Gracia safety and health program and implementing routine inspections, training of employees, evaluation of injuries, illnesses and near-misses, etc.

As with any administrative system, the hardest part is at the beginning where you are setting up all your systems. During this period the safety and health committee should meet every two weeks, assigning specific tasks to individual members and monitoring their completion. Once a couple of inspections have been completed and all initial training has been conducted, then the committee can go back to meeting every month.

Regarding inspections, the checklists that have been developed are a start but have to be further developed to include all hazards at Alta Gracia. Once this is done you have a reference from which anyone can conduct meaningful, comprehensive inspections of their work area. Routine inspections the size of Alta Gracia should be done at least every quarter.

Regarding training, employees need to be instructed in hazards and controls relative to their jobs, their own responsibilities in complying with safety and health rules and what are the consequences for not complying.

Among the inspection topics where checklists should be developed are:

- safety and health training of new employees
- machine guarding – sewing machines, cloth cutters
- lockout & tagout procedures
- maintenance of electrical equipment throughout the plant
- fire prevention – disposal of combustible materials, keeping fabric to be cut and assembled down to a minimum, enforcing smoking areas, etc.
- fire suppression – monthly inspection of fire extinguishers
- emergency procedures – including medical emergency response and annual fire drills
- sufficient supply of potable, cool water
- sufficient and adequate supply of first aid materials

Among the training topics that the plant should conduct on site are:

- new employee safety orientation;
- ergonomics and repetitive motion hazards and control measures;
- first aid/CPR training
- chemical use and exposures on site (including airborne cotton dust) and control measures;
- heat illness signs, symptoms and control measures;
- correct use of personal protective equipment;
- fire prevention and fire extinguisher use (if permitted);
- emergency action plans (evacuation) for fires and earthquakes;
- lockout/tagout procedures for maintenance personnel;
- machine guarding hazards on equipment used;
- electrical safety hazards;
- safe use of ladders and any other worker positioning equipment;
- effective functioning of health and safety committees.
- Safety program administration, supervisor responsibilities, disciplinary action etc.