

Occupational Health and Safety Assessment of Huey Chuen (Cambodia) Co. Ltd.

May 2011

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1. Executive Summary and Recommendations

1.1 Summary and Major Findings

An independent investigation of Huey Chuen (Cambodia) Corp Ltd was conducted in May 2011 in response to a request from PUMA to the Fair Labor Association to respond to allegations reported by Reuters on the 13th April 2011.(1)

The investigation was carried out through individual and group interviews with a large number of stakeholders, direct observation and testing, citing and reviewing of appropriate documentation, job task analysis and risk assessment. A thorough review of the PUMA and FLA Codes of Conduct was undertaken. A review of all Cambodian Labor Laws and Prakas¹ was undertaken and relevant internationally recognized standards are referenced where the local standards were inadequate or none existed.

Non Compliance with Cambodian Labor Law, FLA and PUMA's Code of Conduct and internationally recognized standards

There were multiple breaches of the Cambodian Labor Law found in this investigation. For example hours of work, number of consecutive days of work, multiple occupational health and safety issues including chemical storage and use, machine safety, clinic facilities, lighting, heat and welfare facilities . The Ministry of Labor and Vocational Training, Department of Labour Inspection agreed on the 21st April 2011 that the workers can do 2 hours over time per day and can work one Sunday but must have the next one off. They can do 2 Sundays in one month but not consecutively.

The Huey Chuen factory does not comply with the PUMA and FLA Codes of Conduct. There were multiple breaches noted including treatment of workers, hours of work and multiple occupational health and safety issues.

Huey Chuen does not comply with internationally recognized standards of practice. For example hours of work, treatment of workers and multiple occupational health and safety issues including chemical safety, fire safety, electrical safety, heat, light and sanitation.

Many of the findings are consistent with those found in a recent PUMA audit.

Responding specifically to the allegations made in the Reuters article and outlined in the Terms of Reference from the Fair Labor Association.

- **Fainting by a large number of workers during work shifts on April 9 and April 10 at the Huey Chuen factory**

¹ A prakas is a proclamation. A proclamation is a ministerial or inter-ministerial decision signed by the relevant Minister(s). A proclamation must conform to the Constitution and to the law or sub-decree to which it refers.

It has been noted that the workers have been fainting for many months. According to the interviewees approximately 4-5 workers lose consciousness every month. According to the clinic statistics up to 12 workers are in a 'coma'² every month.

On the 9th April workers lost consciousness and were taken to hospital.

It would appear from all interviews and government reports that 4 workers were unconscious. The remaining workers appeared very upset and distressed and then fell to the ground. A total of 104 workers were taken to 5 different hospitals and all were discharged within 2 hours. On the 10th April at 0650 2 workers 'fainted'. At approximately 0800 121 workers were reported to have fallen to the ground. They did not appear to have lost consciousness. There is no official report from the 10th April. In Khmer they have said 'fall down'. They do not mention if the people were conscious or unconscious.

The worker who fell on the 5th May 2011 was unconscious and the nurse stated to the investigator that this was commonly seen in the factory. The statistics appear to verify this. It appears from the number of people interviewed that there may be more than 4 people who lost consciousness. There may have been as many as 10 in total.

- **The possibility that such fainting and subsequent illness might be attributable to the use of raw materials or chemicals at the workplace without proper ventilation**

There is a strong possibility that the fainting and illnesses reported are due to the chemicals used in the factory. There are a large number of fans attempting to dilute the organic solvents but this does not appear to be sufficient in some areas. Associated with this is the high ambient temperature which would add to the vapours through evaporation. This should be formally tested.

The workers are being exposed to the chemicals through inhalation, absorption through their skin and ingestion. There are multiple pots of organic solvents open. Smell is not a good indicator of ppm (concentration in the air – parts per million) of a solvent but there was a strong smell of solvents near to where the workers were applying this. It was particularly noticeable where the temperature was above 40^o C.

The personal protective equipment is inadequate and inappropriate.

PUMA has stated in their Environmental Handbook that they do not allow the use of Toluene. The PUMA representative confirmed this. Chemical number 348 from Greco is listed on its web site as containing Toluene. This is found in the list supplied and the MSDS was supplied however the word toluene is omitted from the MSDS (Material safety Data Sheets) (2) and see Annex 15.10.

- **The possibility that such fainting and subsequent illnesses might be attributable to exhaustion associated with excessive hours worked**

The workers and management have stated that they had worked from the 27th March to the 9th April straight (14 days). During this time they have worked 4 hours overtime **per day** on the weekdays and on the 25th March, 1st April and 8th April the workers on the second floor felt compelled to work a **24 hour shift** starting at 0700 on the Friday morning and finishing at 0700 on the Saturday morning. They also worked on the Sundays i.e. 27th March and 3rd

² The use of the term coma is from the clinic statistics. This would normally refer to a very severe state of altered consciousness. The investigator believes from the reports that this would be a syncopal episode i.e. fainting from which recovery occurs within a short period of time.

April. The workers were expecting to work on Sunday 10th April but after the further fainting episode which took place in the morning the management sent the workers home.

Workers on the 1st and 5th floor have not worked over night but have worked the weekdays with 4 hours overtime **per day** and the Saturday and Sundays.

The workers who initially fainted on Saturday the 9th April 2011 were from the 5th floor as the 2nd floor workers had already left the factory when they finished their 24 hour shift at 0700. The workers on Sunday were from all over the factory.

The total number of hours worked by the second floor in the 4 weeks prior to the 10th April was 299.5 hours. This is broken down into 131.5 hours overtime and 168 hours normal time. The workers usually work 48 hours a week. The calculation has taken into account that they have worked consecutive Sundays which the investigator has considered overtime.

The total number of hours overtime worked in the preceding 4 weeks by the 1st and 5th floor was 96 hours with some workers doing 104 hours. They have worked 4 hours over time during the weekdays and on Sundays with no days off. Some workers continued to work part of Saturday and a few hours on Sunday before the incidents.

Workers report they are travelling to work up to 1-1/2 hours each way. They are usually standing in the back of an open truck. This transportation is not provided by the factory but paid for by each worker.

Workers who worked the night work were given a 30 minute break at midnight. They were given food.

Workers who worked the 4 hours overtime were given a food allowance and a packet of noodles.

Workers buy their lunch from the outside stalls. The workers spend between 1500 to 2000 riel on a meal on average (US\$1=4200 riel).

- **The extent to which use, handling and storage of raw materials and chemicals at the plant are consistent with national and international law and practice, the FLA Workplace Code of Conduct and benchmarks, and the PUMA Code of Conduct and other standards**

The storage and handling of chemicals does not comply with international standards. Chemicals are incorrectly stored. Chemicals are poorly labelled. Not all Material Safety Data Sheets are available in Khmer or English. Workers have not been trained in the use of the chemicals. They are not using appropriate PPE and are unaware of the hazards. Despite repeated requests and searching the specific company's web sites not all MSDS were available. Toluene is being used in the factory.

- **Any other issues that might arise during the course of the investigation**

There were multiple breaches of the PUMA and FLA Codes of Conduct. For example hours of work, abuse of workers and occupational health and safety issues.

There were multiple non compliance issues with the Cambodian Labor laws including hours of work and occupational health and safety issues.

There is also an indication that the overtime is caused by a surge in orders from September 2010 onwards. It would appear there is a lapse from PUMA compliance and sourcing teams to check on the productions capacity.

Conclusion

There were multiple episodes of fainting in the factory.

There are multiple possible causes for this.

These include:

- Excessive working hours which are above those permitted by Cambodian Labor Law.
- Chemical use and storage is hazardous and could be leading to excessive exposures for the workers.
- Non compliance with recognized international occupational health and safety standards including heat, light, noise, sanitation hours of work and fatigue management.
- Non compliance with PUMA's and FLA's Codes of Conduct which include issues of workplace bullying, excessive hours of work, poor sanitation, noise and light.

1.2 Recommendations

There are multiple recommendations to be found throughout this report.

The priorities for this factory would include:

- Implementation of a complete occupational health and safety management system
- Fire safety training
- Chemical management including storage, labelling, MSDS, training of workers and PPE
- Hours of work comply with all laws and Codes of Conduct
- Training on how to effectively supervise
- Install a cooling system
- Ensuring electrical systems are safe and comply with international standards
- Ensure that all heavy machinery has warning systems
- Personnel are restricted from walking near heavy machinery or vehicles
- Effective consultation between workers and employers
- Discussion with PUMA about perceived and real pressures imposed on the factory to produce shoes

2. Introduction and Scope of Report

This investigation was conducted at the request of the Fair Labor Association. PUMA has requested the FLA to commission an independent investigation to respond to the allegations found in the corrected Reuters report dated 13th April 2011. PUMA issued a reply to the Reuters initial report on the 12th April 2011.

The investigation has been carried out with the assistance of interpreters. For the international investigator this has been from Chinese to Khmer to English and back. Interpreters were also required from Chinese to English and back and Khmer to English and back. Some of the nuances may have been lost in the translation so questions were repeatedly asked and to different stakeholders for verification.

The local consultant conducted the interviews in Khmer and translated these to the international consultant.

2.1 Terms of Reference given by the Fair Labor Association

The Investigator will examine ALL allegations of violations of local and national labor laws and the FLA's Code of Conduct as alleged in an April 10, 2011 report by Reuters and other sources including:

- Fainting by a large number of workers during work shifts on April 9 and April 10 at the Huey Chuen factory
- The possibility that such fainting and subsequent illness might be attributable to the use of raw materials or chemicals at the workplace without proper ventilation
- The possibility that such fainting and subsequent illnesses might be attributable to exhaustion associated with excessive hours worked
- The extent to which use, handling and storage of raw materials and chemicals at the plant are consistent with national and international law and practice, the FLA Workplace Code of Conduct and benchmarks, and the PUMA Code of Conduct and other standards
- Any other issues that might arise during the course of the investigation

2.2 Scope

The investigation and assessment was carried out from the 3rd May 2011 to 13th May 2011. The investigation was only carried out at the factory where the episode of fainting has taken place. The company has one other site which was not in the Terms of Reference.

3. Methodology

Interviews were conducted with PUMA representatives, Huey Chuen managers, workers in the factory on all floors, nursing staff and representative from the Khmer Federation Union. These interviews were conducted with the workers separately and in small groups. These interviews were conducted in working time and out of working time within the factory compound.

All available reports on the issue were cited.

Documentation was requested and cited. Verification of issues was provided with the assistance of the Administration staff who were also interviewed informally.

A summary of a recent PUMA audit was given to the investigator.

The factory site was inspected.

Photos and short movies were taken for verification.

Testing for temperature, noise and light were carried out.

Testing for toluene an organic solvent which is banned by PUMA was carried out using a Drager Accuro Pump and toluene 50/a tubes.

No other testing for chemicals was able to be carried out. This was due to the provision of the MSDS once the investigation had started and thus insufficient time to import some of the necessary equipment. Some of the chemicals require very specific testing which is unavailable in Cambodia for example isocyanates.

No testing for air flow or local exhaust extraction was able to be carried out as this requires a specific anemometer.

Thorough review of all Codes of Conduct cited in the Terms of Reference and thorough review of all Cambodian Laws and Prakas was undertaken.

International Standards have been applied where no adequate local law exists.

A risk assessment was carried out on all specific occupational health and safety issues.

4. Overview of the site - Site Location, Surrounding Land Uses and Layout

The factory is located in Phnom Penh Cambodia. The factory is rented. It occupies only part of the compound and uses only the 1st, 2nd and 5th floors of the main building.

The factory has multiple buildings used as the warehouse, dangerous goods storage, repair workshop and rubbish area.

The factory started operating in 2006.

This factory makes shoes which are only bought by PUMA.

The factory shares the site with a garment manufacturer.

The entrance to the factory is through a guarded sliding door.

There is only room for one vehicle to enter or exit at one time.

Traffic through this entrance and exit is poorly regulated with the workers needing to walk in the same area as the trucks, bikes and cars.

There is a large area in the front of the building where the workers could safely meet in the event of an emergency.

The road is a major thoroughfare for Phnom Penh and carries a large amount of traffic.

The workers buy their food from the street stalls located on the edge of this road at lunchtime.

There are 3 stairways for the workers to exit in the main building.

Workers from the 5 floors exit through the front of the building. Up to 5000-6000 workers would be using this exit and these stairs.

The final warehouse at the back of the compound has 2 exits.

The dangerous good storage consists of two small rooms with no ventilation or fire extinguishers located within the rooms. They both contain large quantities of potentially explosive material. The temperatures measured within the rooms were 37-43^oC. There is no warning system located within these storage facilities.

There is a warehouse which houses incoming materials and chemicals. A large amount of fuel is stored here. There are 2 exits.

There is a chute from the 5th floor to the warehouse where the truck is loaded with the final boxes which are weighed prior to loading.

There is a lift where the goods are taken from the 2nd floor to the 5th floor.

Traffic is freely moving throughout this area. There is no traffic regulation.

Loading and unloading takes place at the back of the main building.

5. Introduction to the Factory

Huey Chen (Cambodia) Co. Ltd employs a total of approximately 3400 workers with approximately 280 men. There are 39 Chinese workers and 5 workers from Taiwan.

Government Inspections

According to the management the factory is visited by the Ministry of Labour and Vocational Training every 2 months. Two reports from the Department of Occupational Health and Safety, the Department of Labour Inspection and from the Ministry of Environment were cited. These were from the last six months. It is unclear how thorough these inspections were. No problems were identified by the Labor Inspectors. No non compliant issues were reported from the Labour Inspectors.

From the Ministry of Environment the report says that the factory should comply with disposal of solid and liquid waste according the law but they do not state how this should be done.

The Department of Occupational Health and Safety has said in the reports from the last three to six months that the factory should hire a doctor, should build 10 more toilets and only 20% of the workers were using masks. They recommended the workers should use masks.

Absenteeism and Workforce Turnover rates

Absenteeism rates are from 3-89% from random assessment of the daily absentee rates in the last 6 months. The rate where it was high was not a public holiday. On the 26/8/2010 the rate 17%, the 27/8/2010 it was 13% ,the 28/8/2010 89% ,the 30/8/2010 6% and the 31/8/2010 it was 12%.

Discussion with administration reveals that they were not busy, they did not have orders or they were waiting for materials. The workers were paid 50% of their wages when there was no work available. This is consistent with the awards from the Arbitration Council.

Reasons given for absenteeism were mostly due to what the factory has classified as 'busy' or 'rest no work'. In September 2010 the absentee rates are very low at around 3%. 'Busy' is defined as all reasons for leave including annual and sick leave. 'Rest no work' is defined as no work in the factory is available.

According to Mr Charlie Chang the Deputy Manager the workforce turnover rate is 4%. According to the documents cited the workforce turnover is between 4-8%.

Workers Compensation – National Social Security Fund

The company pays into the National Social Security Fund. There have been 20 cases of Workers Compensation paid since its registration in 2008.

Reasons for Workers Compensation include: electric shock (multiple), metal dropped on leg, bucket dropped on the back of the head, hit by a trolley, particles from sanding in eyes, fingers hit by buttoning machine, machine falling and hitting person, metal dropped on head, fingers or hand caught in machines(multiple) and hit by forklift equipment.

Medical Issues

A pre-employment medical is conducted. Workers must pay for this and are reimbursed 6 months later. If they started work prior to 2009 they needed to pay for their medical check-up themselves.

There are no ongoing periodic medical check-ups.

Vaccination for tetanus takes place in the factory. No other vaccination takes place.

There is no health promotion program although there are several posters in relation to HIV on the wall.

There is no formal health protection program in place.

Workers who require an Ante Natal Check must apply for annual leave.

Workers who require sick leave will have leave without pay.

Workers do not wish to take sick leave due to this. They appear to be presenting to work sick.

Workers who do not show up for 3 consecutive days without notice to the factory can be fired.

Collective Bargaining Agreements (CBA) on sick leave and special leave

The factory management has a CBA with The Cambodian Union Federation. The duration of the CBA is from 23/07/10 to 23/07/12. Both parties agreed that a worker's wage will not be deducted when they take sick leave with a doctor certificate i.e. the factory will provide paid sick leave.

The CBA also stipulates that workers are given 7 days special leave per year and these 7 days will not be deducted from workers' annual leave.

Both these agreements are not in practice.

Work Hours

The normal hours of work are from 0700-1200 and 1300-1600. The workers are given one hour for lunch.

The factory has been busy since September 2010. Approximately 70% of the workforce is doing overtime. Overtime can be up to 4 hours a day.

There have been multiple instances of the workers working 24 hour shifts.

There are 2 shifts in some areas for example the electronic sewing section.

The 2nd shift is from 1900 to 0700 but sometimes it is 1800 to 0400.

The workers do one week of day work and one week of night work.

Contracts

The workers are employed in some areas on fixed duration contracts. This appears to apply to the male workers. At the end of the contract they are paid severance of 5% and are reemployed again under a fixed duration contract. Some workers are employed under an undetermined duration contracts.

Most of the male workers were working in the warehouses and packing.

An example of a contract has been cited. Wages, working hours, maternity leave, absenteeism, annual leave and special leave and internal work rules are outlined.

Wages

The workers earn a basic salary of US\$61 a month.

They are paid by piece rate. If they reach above the basic salary they are paid this and the piece rate. If not they will receive the basic wage.

In the garment industry the ILO BFC uses as a benchmark that approximately 75% of workers should be receiving above the basic salary.

It is difficult to calculate what percentage of workers reach above the basic salary. The investigators do not believe it reaches the ILO BFC benchmark of 75%. The investigators have looked through the wages paid to workers in the last 6 months.

It is difficult to calculate the salaries with the piece rate system.

The calculation is a combination of the normal salary and overtime, public holidays, and Sunday 200%. The administration staff could not provide the formula.

The workers who have more senior positions are given a position allowance.

They are paid the basic salary and the allowance on top of this.

Overtime is calculated at the basic rate not the total %.

The factory does have some internal regulations as required by the Law.(see below)

A record has been cited concerned with worker induction training. Within this training the following is discussed:

PUMA code of conduct, company internal rules and regulations, disciplinary practice, wages, wage calculation, leave i.e. annual leave, sick leave unpaid leave and other benefits. The induction training also includes some issues of welfare, safety electricity, machinery, toilets, masks and infirmary.

Approximately 70 workers joined the 2 day training on the 11th April and 25th April 2011.

6. Documentation

- Accidents and workers compensation
- Salaries and workforce
- Absenteeism
- New workers
- Certification of the nurse and Medical Assistant
- Standard operating procedure to describe what to sew or paste etc
- Clinic statistics
- Repair of machinery records
- Contracts
- Training
- Resignations
- Internal Regulations

There is an inventory of:

- Equipment – requested not cited
- Materials bought and stored- requested not cited
- Maintenance records- in Chinese

There is a list of chemicals stored on site. The names of the chemicals are not clearly identified. There is no formal register.

Not all of the MSDS for these chemicals are available. Not all of the MSDS are in Khmer or English.

They are not easily accessed by the workers. The workers have not been trained on the use of chemicals and the hazards associated with these.

There is no documentation on:

- Roles and responsibilities for workers
- Standard operating procedures concerned with the complete use of the machinery or chemicals
- Emergency Procedure Plans
- Meetings
- Maintenance program and procedures
- Instrument maintenance
- Training practices
- Monitoring program and records
- Transport records

Recommendations

All the above mentioned should be formally documented and stored safely.

7. Training

Documentation for training was provided for:

- First Aid training held on December 28 2009
- Fire safety training December 19 2009
- Induction training
- Training on the specific work procedures i.e. on the job training

Reason given for no further training was they were too busy.

Recommendations

A full training program should be instituted.

For example this should include such things as:

- regular fire safety training
- refresher training on occupational health and safety
- use of the machinery including forklift trucks
- use of PPE
- use of chemicals and the hazards
- hazard identification and risk assessment
- how to hold a meeting
- how to be part of an OHS committee
- HIV AIDS prevention
- other health promotion issues
- emergency preparedness

8. Processes Identified in the Factory

8.1 Process Description

- **Transportation and Storage**
 - Material and dangerous goods brought to factory
 - Material unloaded and put in warehouse
 - Dangerous goods unloaded and stored in factory area
- **Preparing material for cutting**
 - Checking material
 - Layering of material
- **Cutting**
 - Using dyes
 - Using scissors
 - Putting waste into the bins
 - Removal of waste from the bins
- **Stitching, which sews the upper section above the sole**
 - Sewing pieces together
 - Turning pieces inside out
 - Using upright metal object to ensure piece turned fully
 - The pieces that will form the upper part of the shoe are stitched or cemented together and the lace holes punched out
 - These pieces include the featherline, the vamp, the mudguard, the throat (with eyestay and lacing section), the tongue, reinforcements such as the saddle or arch bandage, the collar (with Achilles tendon protector), the foxing, and the logo
 - The upper looks not like a shoe but like a round hat, because there is extra material—called the *lasting margin*—that will be folded underneath the shoe when it gets cemented to the sole
 - The insole is stitched to the sides of the upper
 - Stiffening agents are then added to the heel region and toe box, and an insole board is inserted
- **Stock fitting**
 - Prepares the insole section
 - Hammering insole
 - Pressing shoe

- **Lasting**
 - Attaches the upper and its lining to a wooden foot shape, the last, in order to assemble the sole section to the upper
 - Ensuring shape by pressing

- **Bottoming**
 - Attaches the sole to the upper
 - Heating the shoe
 - Cooling the shoe
 - Applying glue
 - Applying cement using a paintbrush
 - Applying hot melt adhesive

- **Finishing,**
 - polishing
 - extracting the lasts
 - stamping the shoe brand and name on the sole or side – this is done during the process
 - inserting heel and sole pads

- **Treeing,**
 - which includes attaching laces and final cleaning and inspection

- **Quality control**
 - Standing and checking goods are of a certain quality
 - Putting on stickers

- **Packing**
 - Bar code
 - Check no metal
 - Putting in boxes
 - Sending down the chute to the warehouse
 - Putting on pallets
 - Weighing each box
 - Taking out to truck

- **Maintenance of the machines- engineering**

- **Storage and decanting of chemicals**

- **Travelling to and from work**

- **Welfare facilities in the workplace**
 - Workers were eating outside

- Toilets
- **Clinic**
- **Rubbish disposal**

9. Suppliers and Materials being handled

9.1 Chemicals Suppliers

Great Eastern Resins Industrial Co. Ltd. (GRECO)

http://www.greco.com.tw/english/01_about/01_profile.php

Cherng Tay Plastics Technology

Nan Pao Resins Chemical Co, Ltd

Migh Prich Industrial Company

Max Bond

Ajar Trading Co Ltd

9.2 Chemicals used in the factory

These chemicals have been identified from the supplied MSDS and web sites.
The list appears incomplete.

Toluene

Methylene Chloride (4)

Tetrahydrofuran

Acetone

Ethyl Acetate

Cyclohexanone (5)

N,N-Dimethyl formamide (6)

Methyl Methacrylate

Isopropyl Alcohol

Methyl Isobutyl Ketone

Methylcyclohexane

Resin

Ethyl Acetate

Polyisocyanate

Hexane Diisocyanate

Butyl Acetate

Organic acid³

³ The only label on the tins and boxes is 'organic acid'. The actual chemical is unknown.

10. Interviews

10.1 Workers

Multiple random interviews have been conducted between the 3rd May and the 9th May. Workers were informed of why this interview was being conducted and were freely advised they could refuse. The workers were informed that the interview was confidential. Reasons for refusal included inability to leave the line as they needed to work. Attempts to interview some workers during work time were difficult in some cases as the line manager stood very close and the workers appeared intimidated.

Small group interviews were conducted at lunchtime where the workers felt they could freely express their views. Workers were interviewed separately and in groups. The separate interviews took place in the meeting room. The workers could still see the managers and administration staff so could have been worried about this. They did appear to talk freely to the interviewer. The workers were taken off the line.

The group interviews were conducted within the compound.

The group interviews were conducted at lunchtime and after work.

A total of 41 workers were interviewed.

Issues arising from the interviews

Fainting and Overtime issues

The workers report that there was already a problem on Friday night 8th April 2011. One worker from the 2nd floor has felt very sick. She was vomiting and when she asked to leave this was denied. The worker states she has hidden in a corner with a bucket all night. She did not feel that she could leave to go home.

Two other workers from the 5th floor also felt sick. One worker was taken by the administration staff to a nearby clinic at 1830. The clinic within the factory was not operating.

The workers state that they did not go to a party the night before.

According to the management there were 4 workers who have lost consciousness. From the interviews it appeared that there were more people than this who lost consciousness. It is unclear how many really have truly fainted but the investigator believes that were more than 4 and perhaps as many as 10.

Many workers have witnessed their colleagues falling down. Some were not unconscious but many were crying and very frightened.

Workers from the 2nd floor have given descriptions about what took place on Friday night and Sunday morning. They were not witness to Saturday morning.

One male worker aged 23 witnessed 2 female workers falling down on Friday night and he witnessed the 2 workers being sent out. On Sunday he heard about the workers falling

down. He was told to keep working. As more and more workers fell down the workers started to run out. It was very chaotic.

Female worker aged 31 from the 2nd floor worked until 0100 when she went to the toilet. She saw a lot of workers leaning and lying on the machines. The work has slowed. They continued to work until 0700. On Sunday 10th April starting from the 5th floor a few workers were carried to the infirmary. She didn't witness this at first. As more workers were brought down the stairs the workers rushed out of the building and saw the workers being carried down the stairs. Also workers from the 2nd floor then started to fall down.

2 workers from the first floor aged 20 stated that on Saturday in the morning after the 5th floor workers were carried down there were also workers from the 1st floor who were falling down. The people started to fall down in all sections of the 1st floor. At 11am all workers from the 1st floor were sent home.

The successive interviews were all consistent with these narratives.

Workers from the 1st floor appear to normally work overtime until 1800. Prior to Khmer New Year they had been asked to work until 2000.

Workers from the 2nd floor appear to normally work overtime until 2000. Prior to Khmer New Year they also worked over night and Sundays.

Some workers from the 5th floor appear to normally work overtime until 1800 and 2000. The slower lines are required to work until 2000. Prior to the Khmer New Year this remained the same and this still remains the same. It will depend on the targets reached.

The workers have been asked to work continuously for 14 days straight from the 27th March to the 9th April.

During this time they worked 4 hours overtime on Monday to Friday. The 2nd floor has worked all night 3 times in this period the 25th March, 1st April and 8th April.

The workers were given a 30 minute meal break at midnight and food was brought in.

The 2nd floor workers were not present on Saturday when the first fainting episode occurred.

They were expected to work on the Sunday 10th but due to the incident were sent home.

They did not attend to only collect their salaries. They were expecting to come to work but due to the incident of multiple workers falling down they were sent home by the management.

A meeting has taken place on the 4th May to advise the workers that they will be required to perform overtime. The Chinese managers have informed the workers if they do not wish to do this overtime they may lose their job permanently. They will not be allowed to return.

The word 'fire' was not used.

Multiple workers in various interviews have stated they felt threatened. The problem appears to be worse on the 2nd floor.

Some workers from the 5th floor did state that they were happy with their working conditions.

Sick leave

If a worker is sick this is deducted from their annual leave if they provide a certificate. If they do not then it is leave without pay.

Maternity leave

Payment for maternity leave is made after the worker returns not before she leaves or during her maternity leave. This does not comply with the Prakas.

Bullying and threatening behaviour

Workers have complained that the Chinese line managers are often rude and aggressive. (Personal witness of the Chinese line manager yelling and harassing the workers on the 5th May 2011)

Workers are discouraged from taking sick leave or annual leave.

Workers were not allowed to wear their shoes in the toilet. The floor is very dirty and no plastic slippers are provided.

Fines

According to workers from the 1st floor they are fined between 500-1000 riel for the following breaches:

- Missing a piece of leather
- Damaging a piece of leather
- Not meeting targets
- Not wearing head scarf
- Not putting hair up

The money is given to the 'good' workers but if there are no good workers the money goes into a box and is used for parties. The existence of the 'box' could not be verified.

Workers do not understand what chemicals they are using. They believe it is simply glue.

Workers did not understand why they pay the 1000 riel for union fees.

Workers did not feel they could refuse to do the overtime.

Workers were unclear about how they were being paid.

Workers are freely able to leave the line to go to the toilet or get some water to drink.

Workers report no fire drill has taken place for a very long time.

Workers appeared very unclear about what is in their contract.

Some of the workers would be unable to read or write and would be asked to put their thumbprint

Outside of work

None of the workers interviewed stated they had gone out at night to play traditional Khmer games in the preceding month or had been to a party on Friday night.

When the workers go home late at night the truck can take longer or they will walk for many hours. The truck does not go in a direct route but goes from area to area.

10.2 Management

Mr Charlie Chang the Deputy Manager was interviewed on the 3rd May 2011. According to Mr Chang the workers had been playing traditional Khmer games one month before the incident and did not have enough sleep.

The night before they fainted they had danced all night.

He stated that on April 9th at 0800 104 workers mostly from the stitching areas fainted and were taken to hospital. He stated that only a few workers really fainted and that the rest were frightened and fell down but were not unconscious.

The medical report stated that only 4 workers received oxygen as they were unconscious. On April 10th at 0650 2 workers from the stitching area fell down but there is a question as to whether they fainted. 121 workers at 0800 'fell to the ground' mostly from the assembly area but also from all over the factory.

They were all released from hospital within 2 hours.

All workers came to work the next day.

The NSSF is still investigating the incident.

Mr Chang has stated that the workers were doing 4 hours overtime in some areas as this was the busy time. He stated that the usually busy time was February to April but they had been busy since August 2010 and expected to be busy another 3 months from now. On the average 70% of the workers will do overtime.

Mr Chang felt that the reason the workers fainted was due to lack of sleep.

The factory was due to reopen on the 18th April 2011 but as the workers only arrived back on the 18th from their home province work commenced on the 19th.

Incentive payments were paid as follows:

Up to 3 years \$60 per year

From year 4-5 \$100

From year 10 \$200

They have a policy of no Child Labour. This documentation was offered.

They cite the workers ID card or Birth certificate or family book.

When the workers require medical assistance they will be asked to pay first and will be reimbursed 6 months later.

Most chemicals are imported from Taiwan with authorization from PUMA.

Some chemicals are imported from Vietnam.

10.3 Unions

On the 4th May at 1500 a meeting was held with the Leader and Deputy Leader representatives for the factory. The union is called Cambodian Union Federation.

Mr Som Paneth and Mr Pot Sovann were representing the union.

According to Mr Sovann around 0800 on the 9th April 2 people fell down. 15 minutes later 2 more people fell down. At around 1000 4 more people were unconscious. Then there were more and more people crying and falling down. The sirens of the ambulances made the workers frightened.

According to Mr Sovann there were three reasons why the initial workers fainted. 2 workers had travelled very long distances, one worker had not eaten enough food and one worker was already sick and had been 'coined'⁴ the night before. These workers were all from the 5th floor.

There was an agreement between the union and management for this overtime to take place and for continual days to be worked with the days worked to be given as holiday with Khmer New year.

Previously the Chinese workers had been yelling and insulting the workers but now that issue was addressed.

Mr Sovann felt that the management was very interested and willing to comply with the Labor Law and he felt if he brought issues to Mr Chang he was will to listen. They had asked for more fans to be installed on the 9th April and this was done.

There was no party in the factory. He does not know if there was one outside. Last year the workers were given ½ day off before Khmer New Year but not this year. There was a party on the 1st May in the factory but no alcohol was served.

Mr Sovann believes that the majority of workers who fell on Saturday were the same as those who fell on Sunday.

More new workers fell on Sunday.

There was a very chaotic scene at the clinic.

The military has investigated the incident but no report has been given.

Mr Sovann has not been at work himself recently as he felt very scared and upset and has had some sick days.

Other issues included the infirmary. Mr Sovann said it was too small and 'stuffy' for workers to rest there if they were ill. He has asked for the room to have more ventilation.

He is worried the same incident will happen again.

3000/3400 workers belong to the union.

Mr Sovann was aware of the workers working 24 hours straight.

Overtime payment should be:

1600-2200 150%

⁴ Coining or cupping refers to a traditional Khmer practice where a hot coin or cup is applied to the sick person's back and causes burns and blisters to the skin. There is no medical evidence that this helps in the healing process and the investigator believes this is more harmful than good.

Workers are given 500 riel every day worked for extra food.

Other stakeholders not wishing to be identified

Some workers spoke to us on the assurance there would be no possibility of identification. These workers are from all over the factory.

It appears that 4-5 workers are fainting and become unconscious every month. During our investigation one worker fainted and was brought to the clinic. Only oxygen was administered to her. The nurse needs to write a report to the administration staff if she wishes to access any other medication for example IV fluids. This request is then assessed and if approved the medicine is bought. The same procedure is in place for calling of an ambulance. The report must be written and only the administration staff can call the ambulance. The delay can be up to 1 or ½ hours.

11. Injuries and illnesses reported by the factory clinic

The annual report for the clinic for 2010 shows that 45 people were in a 'coma' but only 9 people were sent to hospital.

1919 people reported feeling dizzy and tired.

941 people reported having diarrhoea.

172 people had cuts and 80 people were burnt.

1109 cases are described as other.

There were 3122 with respiratory tract infections and 435 people with a fever (the cause not given)

For the month of March 2011 9 people were in a 'coma' but only 4 were sent to hospital.

417 people had an upper respiratory tract infection.

203 people had a fever

346 people were tired and dizzy.

274 people had diarrhoea, 118 people had cuts and 60 people had burns.

There were 240 cases of 'other'

The statistics for November December 2010 and January and February 2011 appear to show consistently high numbers of 'coma' cases, high numbers of diarrhoea cases, burns, cuts, fever and respiratory tract infections.

The workers do not appear to be taking time off for these illnesses as they will lose pay.

12. Explanation of some specific Occupational Health and Safety Issues

12.1 Chemicals used in the factory and their possible health effects

Polyisocyanates

Isocyanates are compounds containing the isocyanate group (-NCO). They react with compounds containing alcohol (hydroxyl) groups to produce polyurethane polymers, which are components of polyurethane foams, thermoplastic elastomers, spandex fibres, and polyurethane paints. Isocyanates are the raw materials that make up all polyurethane products. Jobs that may involve exposure to isocyanates include painting, foam-blowing, and the manufacture of many Polyurethane products, such as chemicals, polyurethane foam, insulation materials, surface coatings, car seats, furniture, foam mattresses, under-carpet padding, packaging materials, shoes, laminated fabrics, polyurethane rubber, and adhesives, and during the thermal degradation of polyurethane products.

Health effects of isocyanate exposure include irritation of skin and mucous membranes, chest tightness, and difficult breathing. Isocyanates include compounds classified as potential human carcinogens and known to cause cancer in animals. The main effects of hazardous exposures are occupational asthma and other lung problems, as well as irritation of the eyes, nose, throat, and skin.

Taken from the PUMA HANDBOOK OF ENVIRONMENTAL STANDARDS 07-2009 Page 33 of 109

Isocyanates are used in manufacturing of a wide range of polyurethane products, e.g.:

- Printing and laminating products (Lacquers, primers, specialized inks, laminating materials used in packaging and in the soccer ball industry)
- Manufacture of footwear; (soles as well as uppers)
- Solvent based and hot melt adhesives (two components)

When working with a two-component system the isocyanate containing curing agent is stable as supplied and reacts with the adhesive after mixing and during drying. It is usually not possible to detect free isocyanate in breathing zones in working areas.

However, spraying of two-part adhesives might expose operators to the risk of inhaling aerosol mist containing isocyanate, necessitating the use of appropriate respiratory protection equipment.

Isocyanates cause more cases of occupational asthma than any other group of chemicals. High exposure can occur during heating and spraying. Therefore, respiratory equipment must be used when working with isocyanates.

Taken from the PUMA HANDBOOK OF ENVIRONMENTAL STANDARDS 07-2009

3.3.9 Organic solvents

The following solvents are widely used:

Acetone, Toluene, Ethyl acetate, 1,1,1-Trichlorethane, Ethanol, MEK/ cyclohexanone White spirit, Petroleum Spirits

Table 20: Common solvents used in shoe and accessories production

In general, it is often easier to reduce solvent usage in operations such as finishing than in adhesives bonding. Water-based finishes are now available for most purposes in finishing. Although water-based lacquers are becoming available, finishing of soles and heels continue to require solvent-based lacquers.

PUMA AG does not permit a typical solvent smell for any product, especially for any leather product.

The concentration of organic solvents is too high when a typical solvent-smell can be noticed either in the finished product or the production hall. PUMA AG will not accept such products with a high concentration of organic solvents.

One of the most common reasons of high solvent concentration in the air of the production area is uncovered glue or solvent boxes. High solvent concentration in the air can result in watering of the eyes of the workers, coughing of the workers or a high percentage of headaches reported (See also chapter 4 Health & Safety).

The following list contains chemicals that are possibly used or present in different shoemaking and/or soccer-ball making operations

Operation Chemicals/solvents present

1. Natural rubber latex adhesives ammonia (soccer-ball industry)

Up to 50% of the soccer-balls are made from Polyurethane. The ammonia content of latex is very low (typically 0,5%) presenting negligible health risk unless it is spray applied without any exhaust ventilation.

2. Solvent based adhesives acetone, MEK cyclohexanone, ethyl acetate, toluene, light petroleum spirit (aliphatic hydrocarbon mixture including heptane and hexane, 1,1,1-trichloroethane, trichloroethylene)

3. Stitch making inks light petroleum spirit, 1,1,1-trichloroethane, trichloro-ethylene, methylene chloride

4. Toe puff/Stiffener attachment acetone, MEK cyclohexanone, ethylacetate, toluene, butyl acetate, methylene, chloride

5. Upper preparation (synthetics) acetone, MEK, cyclo-hexanone, tetrahydrofuran, ethyl acetate

6. Bottom filling acetone, MEK, cyclo-hexanone

7. Sole material cleaning/priming MEK, cyclohexanone, acetone, ethylacetate, toluene, light petroleum spirit, isocyanate, hardeners (in two part adhesives)

8. Heel dipping/covering acetone, MEK, cyclohexanone, ethylacetate, toluene, light petroleum spirit

9. Heel/sole lacquering or painting acetone, MEK, cyclohexanone, ethyl

acetate, butyl acetate, cello solve and other glycol ether, methyl isobutyl ketone

10. Upper cleaning light petroleum spirit, ethanol, isopropanol, cyclohexanone
11. Upper spraying acetone, MEK, ethyl acetate, butylacetate, cellosolve and other glycol ethers, cyclohexanone, methyl isobutyl ketone
12. PU sole molding methylene chloride

Table 21: Usage of chemicals in footwear industry

Methyl Ethyl Ketone

Brief (3-5 minute) exposures to methyl ethyl ketone (MEK) vapours produced slight nose and throat irritation at 100 ppm and definite nose and throat irritation at 350ppm. 143 volunteers exposed to 200 ppm for 4 hours reported throat irritation, unpleasant odour, nausea, and headache (in order of frequency reported). Higher exposures are expected to cause central nervous system depression with symptoms such as headache, nausea, dizziness, drowsiness, and confusion. Extremely high concentrations may cause loss of consciousness and possibly death.

Methylene Chloride (4)

Inhaling high levels of methylene chloride vapour can cause dizziness, headache, drowsiness, poor coordination, loss of consciousness and death. Methylene chloride is a highly volatile solvent and is widely used in paint stripping, adhesives, cold tank metal degreasing, urethane foam manufacturing, print developing, aerosol products and as a process solvent in the chemical and pharmaceutical industries. Exposure to methylene chloride is mainly from breathing in its vapours, but the chemical can also enter the body through skin contact and by swallowing. Contact with methylene chloride to the skin and eyes can cause irritation. Methylene chloride causes lung and liver cancers in mice. However, these effects are not seen in rats or hamsters and data in humans are inconclusive.

Toluene

Toluene can cause the following health effects:

Tremor, ataxia (difficulty walking) and memory impairment are the most commonly encountered. In workers with long term occupational exposure there is an increase in neuropsychiatric symptoms.

Toluene can also cause a decrease sense of smell, eye deterioration and peripheral neuropathy (difficulty feeling the fingers and toes).

Health effects of Organic Solvents including those listed above

Solvents have various effects on human health, whether the exposure is by vapour, mist, or liquid form. They can enter the body by inhalation (breathing in), by swallowing, and through the skin. The way that solvents may enter the body depends on the volatility and fat-solubility of the solvent, and the resulting ill health effects are specific to each solvent. These can include:

A narcotic effect, causing fatigue and dizziness

High doses may lead to unconsciousness and death. Exposure to large doses of solvents may slow reaction time and affect rational judgement. This may increase the risk of accidents both at work and outside, such as in the traffic on the way back home.

Irritation of the eyes and the respiratory tract

Dermatitis and other skin disorders

Solvents clean and de-fat, not only the product in the process, but also the skin.

Damage to the liver, kidneys, heart, blood vessels, bone marrow and the nervous system (e.g. Chronic Toxic Encephalopathy)

Solvents can penetrate the skin and enter the blood circulation.

Direct effects after a single exposure generally require a high level of exposure, while prolonged or repeated low levels of exposure may lead to effects after a long period. Effects also depend on the health state of the individual (existing diseases, vulnerability).

The health risk of exposure to solvents depends on the specific solvent and on the level of exposure to the solvent. Solvents differ in their potency to harm health. For example Ethanol ($\text{CH}_3\text{CH}_2\text{OH}$), often consumed in beverages, is an example of an organic solvent that is only moderately toxic, and hence, can be drunk in relatively large portions (when diluted) without acute intoxication. In addition, swallowing is by far the only relevant exposure route as the air concentration must be uncommonly high to cause any observable effects in human.

Methanol (CH_3OH) has a rather similar chemical structure as ethanol, but the intake rate, potency to cause adverse health effects and the type of health effects differ significantly. These differences have to be taken into account when setting occupational exposure limits (OELs). The OEL (8-hour exposure) for Ethanol can be over seven times that of Methanol.

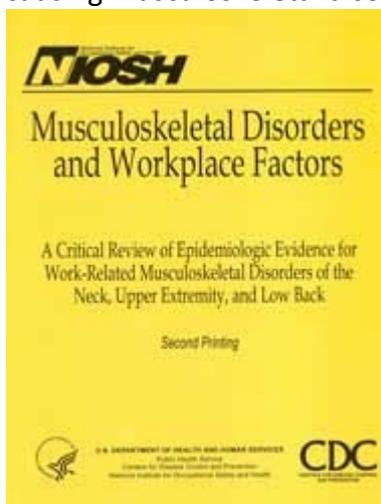
Solvents also can pose a safety risk. Most of the solvents are volatile and flammable and they should always be handled with care. Some solvents produce vapours, which are heavier than air. These vapours may flow to floor, or in worst cases to spaces where ignition by a spark from welding or static electricity may light them. The vapours may also flash from smoking. Vapours of solvents can also accumulate in confined places and stay there for a long time, presenting risks for health and property.

12.2 Ergonomics

- Ergonomics is concerned with the 'fit' between people and their technological tools and environments. It takes account of the user's capabilities and limitations in seeking to ensure that tasks, equipment, information and the environment suit each user
- To assess the fit between a person and the used technology, ergonomists consider the job (activity) being done and the demands on the user; the equipment used (its size, shape, and how appropriate it is for the task), and the information used (how it is presented, accessed, and changed)

- Many workers suffer from injuries and diseases that result from manual work and the increased mechanization of work
- Ergonomics can be used to improve poor working conditions. It can also be used to prevent bad design from being built into a job if applied when a job, tools or workstations are being set up.
- Without the application of ergonomic principles, workers are often forced to adapt themselves to poor working conditions

The CDC has written a review of the literature associated with musculoskeletal disorders and Workplace Factors. This provides epidemiological evidence of work related factors causing musculoskeletal disorders.



12.3 Heat

“Heat stress” includes a number of related conditions, including heat stroke and heat exhaustion

In all of these, the body is under stress through overheating.

Heat stress can be a life threatening condition.

12.3.1 Heat Stroke

Heat Stroke occurs when the body's system of temperature regulation fails and body temperature rises to critical levels. This condition is caused by a combination of highly variable factors, and its occurrence is difficult to predict. Heat stroke is a medical emergency. The primary signs and symptoms of heat stroke are confusion, irrational behaviour, loss of consciousness, convulsions, a lack of sweating (usually), hot, dry skin, and an abnormally high body temperature, e.g., a temperature of 41°C (105.8°F) or more . If the body temperature is too high, it can lead to death. The elevated temperatures caused by a combination of work load and environmental heat load, both of which contribute to heat stroke, are also highly variable and difficult to predict.

If a worker shows signs of possible heat stroke, professional medical treatment should be obtained immediately. The worker should be placed in a shady area and the outer clothing should be removed. The worker's skin should be wetted and air movement around the worker should be increased to improve evaporative cooling until professional methods of cooling are initiated and the seriousness of the condition can be assessed. Fluids should be replaced as soon as possible. The medical outcome of an episode of heat stroke depends on the victim's physical fitness and the timing and effectiveness of first aid treatment.

Regardless of the worker's protests, no employee suspected of being ill from heat stroke should be sent home or left unattended.

12.3.2 Heat Exhaustion

The signs and symptoms of heat exhaustion are headache, nausea, dizziness, weakness and thirst. Fortunately, this condition responds readily to prompt treatment. Heat exhaustion can be very serious. Fainting associated with heat exhaustion can be dangerous because the victim may be operating machinery or controlling an operation that should not be left unattended. The victim may be injured when he or she faints. The signs and symptoms seen in heat exhaustion are similar to those of heat stroke, a medical emergency.

Workers suffering from heat exhaustion should be removed from the hot environment and given fluid replacement. They should also be encouraged to get adequate rest.

12.3.3 Heat Cramps

Heat Cramps are usually caused by performing hard physical labour in a hot environment. These cramps have been attributed to an electrolyte imbalance caused by sweating. It is important to understand that cramps can be caused by both too much and too little salt. Cramps appear to be caused by the lack of water replenishment. Thirst cannot be relied on as a guide to the need for water. Water must be taken every 15 to 20 minutes in hot environments.

Under extreme conditions, such as working for 6 to 8 hours in heavy protective gear, a loss of sodium may occur. The salt that a person loses in this situation can be replaced by commercially available drinks.

12.3.4 Heat Collapse (fainting)

In heat collapse, the brain does not receive enough oxygen because blood pools in the hands and feet. As a result, the person may lose consciousness. This reaction is similar to that of heat exhaustion and does not affect the body's heat balance. However, the onset of heat collapse is rapid and unpredictable.

12.3.5 Heat Rashes

Heat rashes are the most common problem in hot work environments. 'Prickly heat' is manifested as red small lumps and usually appears in areas where the clothing is restrictive. As sweating increases, these small lumps give rise to a prickling sensation. Prickly heat occurs in skin that is persistently wetted by unevaporated sweat, and lumps on the skin may become infected if they are not treated. In most cases, heat rashes will disappear when the affected individual returns to a cool environment.

12.3.6 Heat Fatigue

The signs and symptoms of heat fatigue include impaired mental or motor performance. There is no treatment for heat fatigue except to remove the heat stress before a more serious heat-related condition develops.

12.3.7 Recommended Exposure Limits to Prevent Heat Stress

Work-rest regime	Light work	Moderate work	Heavy work	Very heavy work
Continuous work	30	28	25-26*	23-25*
	29	26	22-23*	18-20*
75% work 25% rest	30	29	26-27*	25-26*
	29	27	23-24*	20-21*
50% work 50% rest	32	30	29-30*	27-28*
	31	28	26-27*	22-23*

ACGIH

These numbers are in ⁰ Centigrade

*Allow higher level if air movement can be felt

(Top figure in each square = maximum for acclimatised workers Lower figure in each square = maximum for unacclimatised workers)

12.3.8 Assessment of work load

The degrees of work, as defined in the ISO standard are:

Light work – up to 200 Kcal/ hour Moderate work – 200-300 Kcal/ hour Heavy work – more than 300-400 Kcal/hour Very heavy work – more than 400 Kcal/hour

There are a number of ways of assessing the work-rate, but the simplest and most convenient method is to estimate it from the range of jobs shown below.

Some Selected Types of Work Classes According to Work Load Level

Work Load Energy Expenditure Range

Level 1, resting less than 117 watts (100kcal/hr)

Level 2, light 117-232 watts (100-199kcal/hr) Sitting at ease: light handwork (writing, typing, drafting, sewing, bookkeeping); hand and arm work (small bench tools, inspecting, assembly or sorting of light materials); arm and leg work (driving car under average conditions, operating foot switch pedal). Standing: drip press (small parts); milling machining (small parts); coil taping; small armature winding; machining with light power tools; casual walking (up to 0.9 m/sec, i.e., 2mph). Lifting: 4.5kg (10lb) < 8 lifts/min; 11kg (25 lb) <6 lifts/min.

Level 3, moderate 233-348 watts (200-299 kcal/hr) hand and arm work (nailing, filing); arm and leg work (off-road operation of trucks, tractors, or construction equipment); arm and trunk work (air hammer operation, tractor assembly, plastering, intermittent handling of moderately heavy materials, weeding, hoeing, picking fruits or vegetables); pushing or pulling lightweight carts or wheelbarrows; walking 0.9-1.3 m/sec (2-3). Lifting: 4.5kg (10lb), 10 lifts/min.

Level 4, heavy 349-465 watts (300-400 kcal/hr) Heavy arm and trunk work; transferring heavy materials, shovelling; sledge hammer work; sawing, planting, or chiselling hardwood; hand mowing, digging, walking 1.8m/sec (4mph), pushing or pulling loaded hand carts or wheelbarrows; chipping castings; concrete block laying. Lifting: 4.5kg (10lb), 14 lifts/min, 11kg, 10 lifts/min.

Level 5, very heavy above 465 watts (400 kcal/hr) Heavy activity at fast to maximum pace; axe work; heavy shovelling or digging; climbing stairs, ramps, or ladders; jogging, running, or walking faster than 1.8 m/sec (4 mph). Lifting: 4.5 kg (10lb) 18 lifts/min; 11 kg (25 lb) > 13 lifts/min.

12.4 Noise

The Prakas in Cambodian states the maximum exposure for a worker to noise is 85dBA for 8 hours a day 5 days a week.

The A scale is designed to approximate the sensitivity of the human ear giving less weight to the lower frequencies of the hearing range.

International standards agree with this.

If a worker works longer hours or more days than in the Prakas the maximum exposure must be reduced or they must wear hearing protection.

Health effects of noise include:

Noise induced hearing loss

Psychological effects of noise- including annoyance, irritability and performance decrement.

Possible cardiovascular effects including high blood pressure

13. Explanation of Risk Assessment

A hazard is anything (including work practices or procedures) that has the potential to harm the health or safety of a person.

A hazard is any source of potential damage, harm or adverse health effects on something or someone under certain conditions at work.

A hazard can cause harm or adverse effects (to individuals as health effects or to organizations as property or equipment losses).

A common way to classify hazards is by category:

Biological	bacteria, viruses, insects, plants, birds, animals, and humans
Chemical	depends on the physical, chemical and toxic properties of the chemical
Ergonomic	repetitive movements, improper set up of workstation, lifting procedures
Physical	UV radiation, heat, noise
Psychosocial	stress, violence, long work hours, lack of education
Mechanical	slipping/tripping hazards, inappropriate or inadequate machine guarding, equipment malfunctions or breakdowns, tools
Electrical	wiring frayed and not correctly placed, overloaded socket outlets

13.1 What is risk?

Risk is the possibility or probability that a person will be harmed or will experience an adverse health effect if exposed to a hazard (it may also apply to situations with property or equipment loss) together with an indication of how serious the harm could be.

Risk equals severity of the injury or illness multiplied by the likelihood of this occurring.

13.2 What is an adverse health effect?

A general definition of adverse health effect is “any change in body function or the structures of cells that can lead to disease or health problems”.

Adverse health effects include:

- bodily injury
- disease
- change in the way the body functions, grows, or develops
- effects on a developing foetus (teratogenic effects, foetotoxic effects)
- effects on children, grandchildren (inheritable genetic effects)
- decrease in life span
- change in mental condition resulting from stress, traumatic experiences, exposure to solvents

13.3 What is a risk assessment?

Risk assessment is the process whereby one:

- identifies the hazards
- analyses or evaluates the risk associated with that hazard and
- determines appropriate ways to eliminate or control the hazard

Table 2.1.1. Risk Ranking Table to Classify Worker Scenarios Based on Likelihood and Consequences

Likelihood	Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
A. Almost certain	L	M	E	E	E
B. Likely	L	M	H	E	E
C. Moderate	L	M	H	E	E
D. Unlikely	L	L	M	H	E
E. Rare	L	L	M	H	H

Legend
E: extreme risk; immediate action required
H: high risk; senior management attention needed
M: moderate risk; management responsibility should be specified
L: low risk; manage by routine procedures

See Appendix IFC Occupational Health and Safety Guidelines

14. Specific Occupational Health and Safety Issues with Recommendations and Risk Rating

14.1 Occupational Health and Safety Management System (OHSMS) - Extreme Risk

Problems identified:

No Occupational Health and Safety Management System is in place.

Recommendations:

Set up an OHSMS using the principles of:

- Policy
- Planning
- Implementation
- Measurement
- Review

This will require effective and ongoing consultation with an ongoing cycle of improvement and review.

Hazard	Likelihood	Consequence	Risk Rating
Lack of systems in place overall in the factory to ensure ongoing management of the safety and health issues	Likely	Major	Extreme

14.2 Occupational Health and Safety Policy - High Risk

Problems identified:

No Occupational Health and Safety Policy is in place.

Recommendations:

Clear and concise OHS policy should be written in consultation with the employee representatives, put to all the workers for comment, endorsed by top management or the owner and then clearly stated and publicized to all the workers.

This should make clear the management's commitment to a safe and healthy working environment.

Hazard	Likelihood	Consequence	Risk Rating
Lack of OHS policy outlining factory	Likely	Moderate	High

management's commitment to Occupational Health and Safety in the workplace			
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14.3 Consultation with the workers - High Risk

Problems identified:

An HIV AIDS committee exists. They have not held any meetings or conducted any activities since its inception. There is a Prakas requiring this to be formally set up and guidelines complied with.

According to the management Human Resources and the employees should meet every month. This has not occurred since July 2010.

The union representatives report workers issues in an ad hoc manner.

Hazard	Likelihood	Consequence	Risk Rating
Lack of consultation with workers	Likely	Moderate	High

Recommendations:

Set up a small formal OHS committee in consultation with the unions ensuring appropriate agendas of the meetings and documentation of all issues. The HIV AIDS committee could be set up within this small committee and would comply with regulations.

Ensure that representation of the workers is from all over the factory not just the administration section.

Education to the workers concerning HIV AIDS should be given.

14.4 Overtime – Extreme Risk

Problems identified:

Excessive amounts of overtime have been well documented.

Workers will become easily fatigued with this amount of overtime.

This will lead to an increased likelihood of accidents and injuries.

Recommendations:

Compliance with the Cambodian labor laws, PUMA and FLA codes of conduct should be adhered to.

Hazard	Likelihood	Consequence	Risk Rating
Excessive amount of overtime	Almost certain	Major	Extreme

14.5 Fire Safety – Extreme Risk

Control measures in place:

A fire alarm is present.

This was not tested during the visits.

Fire exits, fire extinguishers, fire hoses, and 3 possible escape routes are identified within the main complex.

Floor plan is on the wall on every floor.

Fire extinguishers have been checked.

Problems identified:

Dangerous goods are incorrectly stored.

No fire drill or training has been undertaken since 2009.

No specific fire safety plan is in place. No available documentation.

Recommendations:

Routine fire safety training is required.

Appropriate storage of dangerous goods required.

A fire safety plan should be in place. This should be well documented and all workers trained with appropriate fire wardens on each floor.

All workers names should be recorded when entering and exiting.

The designated areas for meeting in an emergency should be clearly sign posted.

Hazard	Likelihood	Consequence	Risk Rating
Fire	Likely	Catastrophic	Extreme

14.6 Electricity - Extreme Risk

Problems identified:

Difficult to assess if all electricians were suitably qualified.

Some workers had suffered electric shocks.

Loose wires were identified.

Recommendations:

A complete review of the factory's electrical system should be undertaken by a suitably qualified and competent electrician.

Qualifications of the electrician should be verified and recent refresher training should have been completed.

The electrical system should comply with international standards.

There are multiple guidelines available to check that compliance has taken place.

Hazard	Likelihood	Consequence	Risk Rating
Electricity	Likely	Catastrophic	Extreme

14.7 Chemical Exposure – Extreme Risk

Problems identified:

Multiple hazardous chemicals are in use throughout the factory including **organic solvents** and isocyanates. (see chapter 12)

Toluene an organic solvent has been identified throughout the 2nd floor.

The toluene is 4% of the total amount of solvent.

The testing showed less than 50ppm but was present.

Testing was difficult as the investigators could not get close to the workers due to the excessive fumes in some areas.

Testing is done taking a grab sample in the worker breathing zone.

Areas with poor ventilation were the most difficult.

The workers are wearing inappropriate personal protective equipment.

Poor or incorrect labelling of chemicals was found throughout the factory.

Workers were unaware of the hazards of the chemicals.

When the fans were off the chemical fumes were very strong and caused eye burning and watering, coughing, respiratory irritation, severe nausea and headache for the investigators.

Recommendations:

Remove all Toluene from the workplace.

Test all organic solvent levels and provide appropriate control measures to protect the workers.

Ensure ventilation is always working even when using generators.

Hazard	Likelihood	Consequence	Risk Rating
Organic Solvent exposure	Likely	Major	Extreme

14.8 Lighting - Extreme Risk

Problems identified:

Inadequate lighting was measured throughout the factory.

Lux levels were below those required by the Cambodian Prakas on Lighting 484 December 2003.

Lux levels in some areas were as low as 30 Lux.

Flicker was identified with the sun through the moving fan.

The sun produced a degree of glare on the workers which would have made the work more difficult.

Inadequate lighting leads to a greater potential for poor quality, accidents and eye strain of the workers.

Recommendations:

Adequate and appropriate lighting should be installed throughout the factory.

Attention should be paid to flicker and glare.

The Prakas has very high levels of lighting required. In some instances this would not be necessary. The lighting should be sufficient to easily perform the specific tasks.

Hazard	Likelihood	Consequence	Risk Rating
Poor Lighting	Likely	Major	Extreme

14.9 Ambient Temperature Management - Extreme Risk

Problems identified:

The ambient temperature was measured throughout the factory using an indoor/outdoor thermometer. A Wet Bulb Globe Temperature (WBGT) measuring device was not used. This would have accounted for humidity and wind speed.

The 1st, 2nd and 5th floors had a large number of fans. There were also direct fans on some workers to dilute the chemical concentration in the air.

The temperature measured varied from 30^o C to 37^o C. In some areas closer to the machines workers were exposed to temperatures up to 40^o C.

The chemical storage areas registered 37^o C to 43^o C.

The city electricity supply stopped during the investigation. The generators came on and powered the machines to work but not the fans. The heat levels and fumes rose very quickly.

Recommendations:

A cooling system may need to be installed to ensure the workers are not working in excessive heat which will add to fatigue and heat stress.

Rest should be provided to prevent heat fatigue and fainting from the heat.

Adequate potable water with individual drinking utensils should be available in multiple areas throughout the factory.

Fans to dilute the chemicals may not be adequate protection for the workers. This should be formally tested and appropriate PPE provided or appropriate vacuum extraction installed.

Backup generators for cooling should be installed.

Chemicals should be appropriately stored in cool areas.

Hazard	Likelihood	Consequence	Risk Rating
Heat	Likely	Major	Extreme

14.10 Machine Guarding - Extreme Risk

Problems identified:

Some machines were adequately guarded but there were some machines which could injure workers severely.

Injuries have been reported.

Some needle guards were not in place.

Recommendations:

Ensure adequate guarding is installed.

Ensure workers are trained appropriately.
The factory should comply with the Prakas on machine guarding.

Hazard	Likelihood	Consequence	Risk Rating
Lack of machine guarding	Likely	Major	Extreme

14.11 Ergonomics – Extreme Risk

Control measures in place:

Boxes of shoes are stored on pallets.
Materials delivered on pallets.
Most materials are stored on pallets.
Mechanical lifters are in use.
Forklift trucks are being used.

Problems identified:

Multiple ergonomic issues were identified throughout the factory.
Workers were sitting on the floor.
Workers were sitting on square wooden stools with no back rest.
Workers were sitting very close to each other.
There were multiple slip and trip hazards.
There were multiple vibration hazards.
Boxes were stacked poorly and could fall easily.
This does not comply with the Prakas.
Workers were lifting the lasts which mostly weighed more than one kg multiple times a minute with a twisting motion to place them on the conveyer belt.

Recommendations:

Workstations should be appropriate for the worker; multiple web sites will give guidelines for this including the OSHA web site.
No workers should be sitting on the floor.
Workers should have appropriate space around them as per the Prakas.

Hazard	Likelihood	Consequence	Risk Rating
Multiple ergonomic hazards	Likely	Major	Extreme

14.12 Noise - Extreme Risk

Problems identified:

Multiple areas identified as over 85dBA.
Workers were haphazardly given hearing protection but this was only used intermittently or as investigator approached.

Workers were working longer than 8 hours a day and 5 days a week and thus exposed to excessive noise above permissible levels.

Noise from the emergency generators was measured at 94-95 dBA. Workers are walking past this area freely. There is no signage for any worker entering this area to wear hearing protection.

Recommendations:

A full noise management program will need to be introduced into this factory. This will require a fully competent person to assess the noise throughout the workplace. This should comply with International accepted standards and guidelines for example the IFC Guidelines or OSHA guidelines and the Cambodian Prakas on noise.

Hazard	Likelihood	Consequence	Risk Rating
Noise	Likely	Major	Extreme

14.13 Housekeeping - Extreme Risk

Control measures:

Most areas and walkways were clear. The first day there was nothing in the walkways when we were accompanied by the managers but on subsequent visits there were materials in the walkways.

Problems identified:

Some walkways and potential exits were blocked with materials. Rubbish and goods were thrown on the ground around the area of the dangerous goods. Boxes are stored at height in some places and can fall.

Recommendations:

Attention to housekeeping and keeping walkways clear. Store boxes so that they cannot fall on a person passing by.

Hazard	Likelihood	Consequence	Risk Rating
Poor Housekeeping	Likely	Major	Extreme

14.14 Hood and ‘vacuum’ extraction to remove fumes - Extreme Risk

Problems identified:

The ‘hood’ and potential vacuum extraction around the chemicals did not appear to be ‘sucking’ any air out. There was no place where this could safely be collected.

Recommendations:

The chemical concentrations should be formally tested and the most appropriate control measures put in place.

Hazard	Likelihood	Consequence	Risk Rating
Organic Solvent fumes	Likely	Major	Extreme

14.15 Engineering – Maintenance and Repair – Extreme Risk

Problems identified:

One Chinese worker appears to be trained although no formal qualifications were cited. Management explained that the ‘engineer’ did the electrical and engineering work. The remainder of the workers had been trained by this one person.

Recommendations:

As there have been a few workers who have suffered electric shocks the qualifications of the maintenance staff who also do the electrical work should be assessed. All maintenance should be carried out by competent and qualified personnel. Refresher training should be given periodically.

Hazard	Likelihood	Consequence	Risk Rating
Lack of proper maintenance and repair	Likely	Major	Extreme

14.16 Barriers around very hazardous machinery - Extreme Risk

Control measures in place

The larger generators are isolated in separate rooms with restricted access.

Problems identified:

All workers can easily pass by the smaller generators.

Recommendations:

There should be restricted access to all dangerous machinery. These generators are extremely noisy and people in the area should also be wearing hearing protection.

Hazard	Likelihood	Consequence	Risk Rating
Lack of restricted areas	Likely	Major	Extreme

14.17 Personal Protective Equipment - Extreme Risk

Problems identified:

Inappropriate PPE or no protection is seen throughout the factory.
 Appropriate testing to identify and assess the levels of dust, fumes and particulate matter is not carried out. This type of testing is not available in Cambodia.

Recommendations:

Assess the levels of dust and other chemicals or particulate matter that is in the factory. This is not available in Cambodia but an Occupational Hygienist could be engaged as a short term consultant to do this assessment.

Provide appropriate PPE to the workers with education on how and why its use is essential. Ongoing training will need to be provided if PPE is in use.

Appropriate signage should be in place if PPE is required in certain areas.

A full program for use of PPE should be in place.

There are multiple guidelines for the appropriate use of PPE. These can be found at NIOSH for the appropriate respirator. <http://www.cdc.gov/niosh/docs/2005-100/>

Information on appropriate choice and use of gloves and other PPE can be found at various web sites including 3M.

Hazard	Likelihood	Consequence	Risk Rating
Lack of appropriate PPE	Likely	Major	Extreme

14.18 Welfare - High Risk

14.18.1 Toilets - High Risk

Problems identified:

These toilets are not in a satisfactory hygienic condition.

There was no soap provided.

Lighting was only turned on when the manager noticed the investigator was taking pictures.

There are insufficient numbers of toilets according to the Prakas.

High numbers of diarrheal cases are reporting to the clinic.

Recommendations:

Clean and hygienic toilets should be provided.

The cubicles should be appropriately tiled and painted.

Soap and appropriate wash areas should be provided.

Bins with lids for waste disposal should be provided.

Lighting in the toilets should be appropriate.

Sufficient number of toilets should be installed. There are 24 toilets and there should be around 49.

Hazard	Likelihood	Consequence	Risk Rating
Poor hygiene	Moderate	Moderate	High

14.18.2 Rest Area - Medium Risk

Problems identified:

There was no appropriate rest area provided.

Recommendations:

An appropriate rest area where workers can eat their meal should be provided; this should have chairs and tables and should not be with the cars and bikes. There should be adequate shade for all workers.

This will add to the fatigue issue of the workers.

Hazard	Likelihood	Consequence	Risk Rating
Lack of rest area	Moderate	Moderate	High

14.18.3 Clinic /First Aid Facilities – Extreme Risk

Problems identified:

There is no doctor with appropriate formal qualifications as required by the Prakas. There is one Medical Assistant and one nurse.

The Medical Assistant leaves work at 1600 and the nurse at 1800.

A medical emergency occurred during the investigation. Only oxygen was provided and it took more than 20 minutes for this to be brought to the worker.

The nurse must write a report to access further medicine.

The administration staff review this and buy it if approved.

This can take up to 90 minutes.

Only the administration staff can call an ambulance.

The clinic is very small and does not comply with the Prakas requirements

There are only 4 beds to lay patients down. The area has no ventilation.

The nurse reports that the medicines frequently run out.

The medicine is only given a week at a time by the administration.

The medicine is stored on the floor in heat in the administration area.

There are only a total of 9 first aid boxes.

Recommendations:

A fully qualified doctor should be employed.

According to the Prakas 3 nurses should be employed.

According to the Prakas there should be 20 beds.

Medicine should be stored appropriately.

The clinic should comply with all Prakas.

The medical staff should have the authority to call an ambulance.

Most factories would require 1 box per 100 workers under the codes of conduct.

All workers should be appropriately trained in first aid.

The first aid boxes should be checked regularly and equipment replaced when expired.

Hazard	Likelihood	Consequence	Risk Rating
Lack of adequate clinic and first aid facilities Lack of authority to respond to an emergency	Likely	Major	Extreme

14.18.4 Drinking Water and Clean Cups - Extreme Risk

Problems identified:

Drinking water is only provided in one area on each floor.
 The drinking water on the ground floor does not appear to be hygienic. This would need testing as it is dripping through a tube not a tap.
 No individual drinking utensils are provided.

Recommendations:

Provide adequate potable water easily accessibly throughout the factory.
 Provide appropriate drinking utensils for each worker.

Hazard	Likelihood	Consequence	Risk Rating
Lack of hygienic utensil for drinking	Likely	Major	Extreme

14.18.5 Provisions for Pregnant or Breastfeeding Women – Medium Risk

Problems identified:

No worker brings their baby to work to breastfeed.
 Workers are given 1 hour a day to breast feed but there is no facility to do this except the day care facility which is a 10-15 minute walk away and is usually locked.
 There is no facility to store breast milk.
 There is no suitable area to express breast milk.
 If the women wished to breastfeed they would be given one hour off a day to do this.
 There is no child care facility or any clean safe area to breast feed a child.
 There appears to be no provision to provide appropriate ergonomically sound workstations for pregnant women.
 Pregnant woman are doing excessive overtime and are exposed to teratogenic or fetogenic chemicals.

Recommendations:

There should be a facility to store breast milk.
 There should be a suitable area to express breast milk.
 Work and workstations should be appropriate for pregnant woman.

Hazard	Likelihood	Consequence	Risk Rating
Lack of suitable area for breastfeeding	Moderate	Moderate	High
Workstations inappropriate for pregnant woman	Moderate	Moderate	High
Exposure of fetus to toxic substances	Moderate	Major	Extreme

14.18.6 Lockers - Medium Risk

Problems identified:

No lockers are available.

Recommendations:

Lockers should be provided to store personal possessions.

Hazard	Likelihood	Consequence	Risk Rating
Lack of lockers	Moderate	Minor	Moderate

14.18.7 Nutrition – Extreme Risk

Control measures:

All workers are given an extra 500 riel per day worked.

Problems identified:

Workers are not provided with adequate meals or compensation when on overtime.
 Food bought by workers from the outside stalls does not appear to be adequate or hygienic.
 No canteen is available.

Recommendations:

Workers should be provided with at least one meal when working normal hours.
 If overtime is worked adequate and nutritious meals should be provided or appropriate monetary compensation. The request from the unions was for 3000 riel per hour for every hour overtime worked. (They were assuming only 2 hours overtime per day).
 Multiplying Basal Metabolic Rate by workload on average each worker requires 2500 calories to 3000 calories per day. Pregnant and breastfeeding woman will require more.
 Workers doing more strenuous work will require more calories.
 Males will require more calories.
 Workers who have been sick or have some other requirement may require more calories.
 Basic micronutrients should be included in the food supplied especially Iron.

Hazard	Likelihood	Consequence	Risk Rating
Poor nutrition	Likely	Major	Extreme

14.19 Auxiliary staff - High Risk

Problems identified:

Cleaners have designated areas that they are required to keep clean.
There is no formal documentation of their job description.
No PPE is provided.
The cleaners are cleaning and polishing with no signage and cords dragging on ground posing a trip hazard.

Recommendations:

Job descriptions should be clearly written and provided to the staff.
MSDS should be available for all chemicals used.
There should be appropriate storage of these chemicals.
Appropriate PPE should be provided.
When polishing floor appropriate signage should alert other workers that there is a possibility they may trip.
The cord should not drag and be a trip hazard.
This work could be done when there are no workers on the floor.

Hazard	Likelihood	Consequence	Risk Rating
Lack of job descriptions, MSDS, PPE	Likely	Moderate	High

14.20 Contracted staff - High Risk

Problems identified:

The guards are working up to 13 hour shifts 7 days a week. Some of the guards also would have worked the 24 hours shifts previously discussed.
They are on duty when the workers are working.
The guards are paid by the factory but employed by the private company.
Fatigue is very dangerous and can lead to accidents, mistakes and poor judgement.

Recommendations:

Workers should not work longer than is mandated in the Cambodian Labour law and agreements.

Hazard	Likelihood	Consequence	Risk Rating
Working hours	Likely	Moderate	High

14.21 Evacuation Plans - Extreme Risk

Problems identified:

No evacuation plan was documented.

The manager said that the drills were conducted by a private company but this had not taken place since 2009 as they were too busy.
 It is unclear now how long it takes to get all the workers out of the building but in 2009 it was 200 seconds.
 No emergency shutdown procedure is in place.

Recommendations:

Standard Operating Procedures (SOPs) should be developed for project or process shut-down, including an evacuation plan.
 Drills to practise the procedures and plans should also be undertaken bi annually.
 These should be well documented and be part of the induction for all workers.

Hazard	Likelihood	Consequence	Risk Rating
Lack of evacuation plan and emergency preparedness	Likely	Major	Extreme

14.22 Loading and Unloading Operations - High Risk

Problems identified:

Unloading and loading took place at the back of the bigger 5 storey building.
 There was no signage to protect workers from being hit by trucks and forklift trucks.
 Injuries have been reported in this area.

Recommendations:

Standard operating procedures should be in place for this area.
 Forklift truck operators should be appropriately trained.
 Forklifts should be fitted with warning lights and sounds particularly a reversing noise.
 Restricted entry to this area should be clearly delineated.

Hazard	Likelihood	Consequence	Risk Rating
Loading and unloading operation	Likely	Major	Extreme

14.23 Storage - Extreme Risk

Problems identified:

Storage of chemicals does not comply with internationally recognized safe standards.
 No ventilation in storage area.
 Temperature has been recorded at 37 degrees.
 No fire fighting equipment within room, no alarms, no warning systems.
 Tins of chemicals damaged and could be potentially leaking.
 Acids and Solvents stored together.

Second floor of storage of raw materials is unstable and worker can easily fall through.

Recommendations:

Appropriately store all chemicals with climate control and warning systems.
Ensure all floors are stable and safe.

Hazard	Likelihood	Consequence	Risk Rating
Storage	Likely	Major	Extreme

14.24 Transportation to work and back to home - Extreme Risk

Problems identified:

Workers travel long distances standing in the back of an open truck.
Workers are unaware of safety issues.
Major accidents have occurred killing workers on way to work.

Recommendations:

Provide safe transport for workers or alternatively accommodation close to work.
Travelling to and from work is part of the NSSF.

Hazard	Likelihood	Consequence	Risk Rating
Transportation	Likely	Major	Extreme

15. Summary

There were multiple breaches of the Cambodian Labor Law found in this investigation. For example hours of work, number of consecutive days of work, multiple occupational health and safety issues including chemical storage and use, machine safety, clinic facilities, lighting, heat and welfare facilities .

The Huey Chuen factory does not comply with the PUMA and FLA codes of conduct. There were multiple breaches noted including payment, treatment of workers, hours of work and multiple occupational health and safety issues.

Huey Chuen does not comply with internationally recognized standards of practice. For example hours of work, treatment of workers and multiple occupational health and safety issues including chemical safety, fire safety, electrical safety, heat, light and sanitation.

It has been noted that the workers have been fainting for many months. According to the interviewees approximately 4-5 workers lose consciousness every month. According to the clinic statistics up to 12 workers are in a 'coma' every month.

On the 9th April workers did indeed lose consciousness and were taken to hospital. It would appear from all interviews and government reports that 4 workers were unconscious. The remaining workers appeared very upset and distressed and then fell to the ground. A total of 104 workers were taken to 5 different hospitals and all were discharged within 2 hours. On the 10th April at 0650 2 workers fainted. At approximately 0800 121 workers were reported to have fallen to the ground. They did not appear to have lost consciousness.

There is a strong possibility that the fainting and illnesses reported are due to the chemicals used in the factory. There are a large number of fans attempting to dilute the organic solvents but this does not appear to be sufficient in some areas. Associated with this is the high ambient temperature which would add to the vapours due to evaporation. This should be formally tested.

The workers are exposed to the chemicals through inhalation, absorption and ingestion. The PPE is inappropriate. Toluene which is banned by PUMA is being used.

It is well documented and substantiated that the workers were working excessive amounts of overtime.

Workers report they are travelling to work up to 1-1/2 hours each way. They are usually standing in the back of the truck.

Workers who worked the night work were given a 30 minute break at midnight. They were given food.

Workers who worked the 4 hours overtime were given a food allowance and a packet of noodles.

Workers buy their lunch from the outside stalls. The workers spend between 1500 to 2000 riel on a meal on average (US\$1=4200 riel)

The storage and handling of chemicals does not comply with international standards. Chemicals are incorrectly stored. Chemicals are poorly labelled. Not all Material Safety Data Sheets are available or adequately describe the chemicals used. Not all Material Safety Data Sheets are in Khmer or English. Workers have not been trained in the use of the chemicals. They are not using appropriate PPE and are unaware of the hazards.

There were multiple breaches of the PUMA and FLA Codes of Conduct. For example hours of work, abuse of workers, payment issues, occupational health and safety issues.

There were multiple non compliance issues with the Cambodian Labor laws including hours of work, occupational health and safety issues.

There are multiple recommendations to be found throughout this report. The priorities for this factory would include:

- Fire safety training
- Chemical management including storage, labelling, MSDS, training of workers and PPE
- Hours of work comply with all laws and Codes of Conduct
- Training on how to effectively supervise
- Installing cooling system
- Ensuring electrical systems are safe and comply with international standards
- Ensure that all heavy machinery has warning systems
- Personnel are restricted from walking near heavy machinery or vehicles
- Effective consultation between workers and employers
- Discussion with PUMA on pressures imposed on the factory to produce shoes

16. Appendices

16.1 PUMA Code of Conduct

http://images.puma.com/BLOG_CONTENT/puma_safe/PumaConduct.pdf accessed 4th May 2011

16.2 FLA Code of Conduct

<http://www.fairlabor.org/fla/go.asp?u=/pub/mp&Page=FLAcodeConduct> accessed 2nd May 2011

16.3 FLA Compliance Benchmarks

http://www.fairlabor.org/fla/pub/SyncImg/compliance_benchmarks.pdf accessed 2nd May 2011

16.4 IFC Occupational Health and Safety Guidelines

[http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS_2/\\$FILE/2+Occupational+Health+and+Safety.pdf](http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS_2/$FILE/2+Occupational+Health+and+Safety.pdf) accessed 2nd May 2011

16.5 IFC Environmental and Health General Guidelines

[http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS/\\$FILE/Final+-+General+EHS+Guidelines.pdf](http://www.ifc.org/ifcext/sustainability.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_GeneralEHS/$FILE/Final+-+General+EHS+Guidelines.pdf) accessed 2nd May 2011

16.6 Cambodian Labour Law and Prakas

Hours of work

The Cambodian Labour law stipulates that working hours should not be more than eight hours a day or 48 hours a week, and that employees should receive at least one full day off work a week. Overtime work can be assigned only under "exceptional and urgent" circumstances, must be voluntary for employees and cannot exceed two hours a day.

Guide to the Cambodian Labour Law from the ILO

This publication will assist the employer to understand the Cambodian Labour Law and the relevant Prakas.

<http://www.betterfactories.org/content/documents/1/Guide%20to%20the%20Cambodian%20Labour%20Law%20%28en%29.pdf>

<http://www.scribd.com/doc/7997364/Cambodian-Labour-Law-1997>

16.7 Standards Australia New Zealand

<http://www.standards.org.au/>

Standards Australia is recognised by the Government as Australia's peak Standards body. It coordinates standardisation activities, develops internationally aligned Australian Standards® that deliver Net Benefit to Australia, and facilitates the accreditation of other Standards Development Organisations.

16.8 Heat Standards ACGIH

<http://www.acgih.org/home.htm>

16.9 Heat Stress OSHA

<http://www.osha.gov/SLTC/heatstress/>

16.10 Toluene based chemicals

http://www.greco.com.tw/english/03_product/03_detail.php?xid=1026

17. Specific Non Compliance with Cambodian Labor Law and Prakas

There are many breaches of the Cambodian Labor Law and Prakas found in this factory. There are some areas where the law is unclear and there are recommendations.

The major issues have been highlighted in the report and the reader is requested to read the documentation from the ILO.

<http://www.betterfactories.org/content/documents/1/Guide%20to%20the%20Cambodian%20Labour%20Law%20%28en%29.pdf>

18. Specific Non Compliance with FLA Code of Conduct

COMPLIANCE BENCHMARKS

I. FORCED LABOR (F)

F.3 Employment Terms/Voluntary Agreement

Employment terms shall be those to which the worker has voluntarily agreed, in as far as those terms do not fall below provisions of local laws, freely negotiated and valid collective bargaining agreements, or the FLA Code. (P)

The workers do not understand their contracts fully

F.14 Forced Overtime (New Benchmark)

The imposition of mandatory overtime beyond the limits set by the law, a freely negotiated collective bargaining agreement, and/or the FLA Code, in an environment where a worker is unable to leave the work premises, constitutes forced labor. (S)

The workers especially on the 2nd floor appear to be intimidated to work the overtime. The overtime is well above the allowable amount in the Cambodian Labor law.

III. HARASSMENT OR ABUSE (H&A)

WORKPLACE CODE PROVISION: Every employee will be treated with respect and dignity. No employee will be subject to any physical, sexual, psychological or verbal harassment or abuse.

The workers state that they have been harassed and verbally abused.

The investigator witnessed a line manager yelling at the workers.

This was also reported by the unions. They believed the issue was addressed.

Benchmarks

H&A.1 General Compliance Harassment and Abuse (New Benchmark)

Employers shall comply with all local laws, regulations and procedures concerning discipline, violence, harassment and abuse. (S)

H&A.2 Discipline/Progressive Discipline

Employers shall have a written system of progressive discipline (e.g., a system of maintaining discipline through the application of escalating disciplinary action moving, for instance, from verbal warnings to written warnings to suspension and finally to termination). Any exceptions to this system (e.g., immediate termination for gross misconduct, such as theft or assault) shall also be in writing and clearly communicated to workers. (P)

There does not appear to be a progressive system of discipline.

H&A.7 Discipline/Training of Management

Employers shall ensure managers and supervisors are fully familiar with the factory disciplinary system and trained in applying appropriate disciplinary practices. (P)

No training identified.

H&A.8 Discipline/Monetary Fines and Penalties

Employers shall not use monetary fines and penalties as a means to maintain labor discipline, including for poor performance or for violating company rules, regulations, and policies. (S)

Employees are fined for multiple reasons.

If a piece of leather is missing, if the leather is accidentally damaged, if they don't meet the targets, if they don't wear the scarf and if they don't put their hair up.

These fines are between 500 to 1000 riel.

The money is given to the 'good workers'. If there are no good workers then it goes to a fund for parties.

No verification of this fund was possible.

H&A.11 Discipline/Verbal Abuse

Employers shall not use any form of verbal violence, including screaming, yelling, or the use of threatening, demeaning, or insulting language, as a means to maintain labor discipline. (S)

This behaviour appears to take place.

H&A.13 Violence/Harassment/Abuse (New Benchmark)

Employers shall ensure that the workplace is free from any type of violence, harassment or abuse, be it physical, psychological, sexual, verbal, or otherwise. Employers shall refrain from any action – and shall take all appropriate action to ensure that all workers refrain from any action – that would result in an intimidating, hostile or offensive work environment for workers. (S)

The workers appear intimidated.

D.9 Protection and Accommodation of Pregnant Workers and New Mothers

Employers shall abide by all protective provisions in local laws and regulations benefiting pregnant workers and new mothers, including provisions concerning maternity leave and benefits, prohibitions regarding night work, temporary reassignments away from work stations and work environments that may pose a risk to the health of pregnant women and their unborn children or new mothers and their new born children, temporary adjustment of working hours during and after pregnancy, and the provision of breast-feeding breaks and facilities. Where such legal protective provisions are lacking, employers shall take reasonable measures to ensure the safety and health of pregnant women and their unborn children. Such measures shall be taken in a manner that shall not unreasonably affect the employment status, including wages and benefits, of pregnant women. (P)

Pregnant women interviewed stated she would like to not work with the chemicals but this was not possible.

No additional accommodation for pregnant woman for example a seat was provided.

Pregnant woman are required to do the overtime.

D.12 Confidentiality of Health Status (New Benchmark)

Employers shall respect the confidentiality of workers' health status and not undertake any action that could lead to breach of said confidentiality, including screening of any kind, whether by direct testing, indirect testing (for instance, by making an assessment of risk behavior) or asking questions about tests already taken or about medication. (P)

Confidential medical records are not in a separate locked area but open with the medication.

The investigator was able to freely pick up the records.

D.13 Reasonable Accommodation for Health Reasons (New Benchmark)

Employers shall take measures to reasonably accommodate workers with (chronic) illnesses, including HIV/AIDS-related illnesses, which could include rearrangement of working time, the provision of special equipment, opportunities for rest breaks, time-off for medical appointments, flexible sick leave, part-time work and return-to-work arrangements. (P)

Workers have reported feeling unable to leave work when feeling unwell.

V. HEALTH AND SAFETY (H&S)

WORKPLACE CODE PROVISION: Employers will provide a safe and healthy working environment to prevent accidents and injury to health arising out of, linked with, or occurring in the course of work or as a result of the operation of employer facilities.

There is a general non compliance with many Occupational Health and Safety issues. The factory is in breach of all the Benchmarks listed below.

Benchmarks

H&S.1 General Compliance Health and Safety (New Benchmark)

Employers shall comply with all local laws, regulations and procedures concerning health and safety. (S)

H&S.2 Document Maintenance/Worker Accessibility and Awareness

All documents required to be available to workers and management by applicable laws (such as health and safety policies, MSDS, etc.) shall be made available in the prescribed manner and in the local language or language(s) spoken by the workers if different from the local language. (P)

H&S.3 Written Health and Safety Policy (New Benchmark)

Employers are required to develop, maintain and regularly review a written health and safety policy. The policy must, at the very least, be aimed at complying with legal minimum safety and health standards, regulations and procedures. (P)

H&S.4 Worker Consultation

The health and safety policy shall be developed and implemented in consultation with workers or their representatives. (P)

H&S.5 Health and Safety Management System (New Benchmark)

The health and safety policy shall contain the framework for a comprehensive health and safety management system within which employers' responsibilities and workers' rights and duties, various responsibilities of designated personnel, procedures that enable workers to raise health and safety concerns and procedures for reporting death, injury, illness and other health and safety issues (for instance, near-miss accidents) are clear and regularly tested and reviewed. (P)

H&S.6 Communication to Workers

The health and safety policy shall be communicated to all workers in the local language or language(s) spoken by workers if different from the local language. (P)

H&S.7 Notification and Record Maintenance

Employers shall notify the relevant authorities of all illnesses and accidents as required by applicable laws. All illness, safety and accident reports shall be maintained on site for at least one year, or longer if required by law. (P)

H&S.8 Permits and Certificates

The employer shall at all times be in possession of all legally required and valid permits and certificates related to health and safety issues, such as those related to the purchase and storage of chemicals, fire safety inspections, inspection of machinery, and (chemical) waste disposal. (P)

H&S.9 Evacuation Requirements and Procedure

All applicable legally required or recommended elements of safe evacuation (such as posting of evacuation plans, the installation and maintenance of an employee alarm and emergency lighting systems, ensuring aisles/exits are not blocked and that workers are not blocked within their workstations, employee education, evacuation procedures, etc.) shall be complied with. Workers shall be trained in evacuation procedures. Alarm systems shall be regularly tested and evacuation drills shall be undertaken at least annually. (S)

H&S.10 Safety Equipment and First Aid Training

All safety and medical equipment (such as fire fighting equipment, first aid kits, etc.) shall be available in sufficient numbers throughout the factory, maintained and stocked as prescribed and easily accessible to workers. A sufficient number of workers shall be trained in first aid and fire fighting techniques. (S)

H&S.11 Personal Protective Equipment

Workers shall be provided with effective and all necessary personal protective equipment (such as gloves, eye protection, hearing protection, respiratory protection, etc.) to prevent unsafe exposure (such as inhalation or contact with solvent vapors, noise, dust, etc.) to health and safety hazards, including medical waste. (S)

H&S.12 Use of Personal Protective Equipment

Workers shall not incur any costs related to the normal and regular provision and maintenance of personal protective equipment. (P)

H&S.13 Chemical Management and Training

All chemicals and hazardous substances shall be properly labeled and stored in accordance with applicable laws. Labels shall be placed in the local language and the language(s) spoken by workers, if different from the local language. Workers shall receive training, appropriate to their job responsibilities, concerning the hazards, risks and the safe use of chemicals and other hazardous substances. (S)

H&S.14 Material Safety Data Sheets/Worker Access and Awareness

Material Safety Data Sheets (MSDS) for all chemicals used in the factory must be available at the usage and storage sites of the chemicals, in the local language and the language(s) spoken by workers, if different from the local language. Workers shall have free access to MSDS. (P)

H&S.15 Chemical Management for Pregnant Women and Young Workers

To prevent unsafe exposure to hazardous chemicals, specific appropriate accommodations shall be made for pregnant women and workers under the age of 18 as required by applicable laws or the provisions of the FLA Code in a manner that does not unreasonably disadvantage workers. (S)

H&S.16 Protection Reproductive Health

Employers shall ensure that women are not engaged in work that constitutes a substantial risk to their reproductive health. (S)

H&S.17 Ventilation/Electrical/Facility Installation and Maintenance

All necessary ventilation, plumbing, electrical, noise and lighting services shall be installed and maintained to conform to applicable laws and in such a manner as to prevent or minimize hazardous conditions to workers in the facility. (S)

H&S.18 Machinery Maintenance and Worker Training

All production machinery, equipment and tools shall be regularly maintained and properly guarded. Workers shall receive training in the proper use and safe operation of machinery, equipment and tools they use. Employers shall ensure safety instructions are either displayed/posted near all machinery or are readily accessible to the workers. (S)

H&S.19 Proper Use of Machinery

Employers shall only use positive incentives (risk awareness training, demonstration of proper use, awards, bonuses, etc.) to ensure workers use machinery, equipment and tools properly and safely. Workers shall not suffer any negative consequences for refusing to work with machinery, equipment or tools that are not properly guarded or reasonably considered unsafe. (P)

H&S.20 Bodily Strain (New Benchmark)

Workstations, including seating and standing arrangements and reach required to obtain tools, shall be designed and set-up in such a manner as to minimize bodily strains. Employers shall train workers in proper lifting techniques and items such as belts shall be provided. (S)

H&S.21 Medical Facilities

Medical facilities shall be established and maintained in factories as required by applicable laws. Medical staff shall be fully licensed and recognized under applicable local rules and regulations. An appropriate number of medical staff shall be on duty during all working hours, including any type of overtime, as required under local law. An appropriate stock of medical supplies shall be maintained at all times. Medicines of which the expiration date has passed must be replaced immediately and disposed of in a safe manner. (P)

H&S.22 Sanitation in Factory Facilities

All facilities including factory buildings, toilets, canteens, kitchens, and clinics, shall be kept clean and safe and be in compliance with all applicable laws, including relevant sanitation, medical and safety and health regulations. (S)

H&S.23 Toilets

Employers shall establish the number of toilets required under applicable laws within reasonable distance of the workplace. (S)

H&S.26 Drinking Water

Safe and clean drinking water shall be freely available at all times, within reasonable distance of the workplace. Drinking water shall be of a reasonable temperature and the means to drink water (cups, etc.) must be safe and sanitary and available in an appropriate number. (S)

The factory is non complaint with all of the above issues.

VI. FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING (FOA) WORKPLACE CODE PROVISION: Employers will recognize and respect the right of employees to freedom of association and collective bargaining.

Workers have the right to freely associate but they are unaware they are paying into a union or what the union is for.

FOA.4 Deduction of Union Dues and Other Fees (New Benchmark)

Employers cannot deduct union membership fees or any other union fees from workers' wages without the express and written consent of individual workers, unless specified otherwise in freely negotiated and valid collective bargaining agreements. (S)

FOA.20 Right to Collective Bargaining/Exclusive Bargaining and Other Recognized Unions

Employers shall bargain with any union that has been recognized by law or by agreement between the employer and that union, provided such agreement does not contravene local law, as a – or the exclusive – bargaining agent for some or all of its workers. (S)

The agreement concerning the overtime contravened the Cambodian Labor Law and the letter which was sent on April 21st 2011 from the Ministry of Labor and Vocational Training.

FOA.22 Right to Collective Bargaining/Compliance with Collective Bargaining Agreement

Employers, unions and workers shall honor in good faith, for the term of the agreement, the terms of any collective bargaining agreement they have agreed to and signed. Worker representatives and workers shall be able to raise issues regarding compliance with a collective bargaining agreement by the employer without retaliation or any negative effect on their employment status. (S)

The collective bargaining agreement concerning sick leave and special leave has not been adhered to.

VII. HOURS OF WORK (HOW)

WORKPLACE CODE PROVISIONS: Except in extraordinary business circumstances, employees will (i) not be required to work more than the lesser of (a) 48 hours per week and 12 hours overtime or (b) the limits on regular and overtime hours allowed by the law of the country of manufacture or, where the laws of such country will not limit the hours of work, the regular work week in such country plus 12 hours overtime; and (ii) be entitled to at least one day off in every seven day period.

The factory is non complaint with this issue.

Benchmarks

HOW.1 General Compliance Hours of Work (New Benchmark)

Employers shall comply with all local laws, regulations and procedures concerning hours of work, public holidays and leave.

HOW.2 Rest Day (New Benchmark)

Workers shall be entitled to at least one day off in every seven-day period. If workers must work on a rest day, an alternative day off must be provided within that same seven-day period or immediately following the seven-day period. (P)

HOW.3 Meal and Rest Breaks

Employers shall provide reasonable meal and rest breaks, which, at a minimum, must comply with local laws. (S)

HOW.4 Protected Workers (Women and Young Workers)

The factory shall comply with all applicable laws governing work hours regulating or limiting the nature, frequency and volume of work performed by women or workers under the age of 18. (S)

HOW.5 Protected Workers (Women and Young Workers)/Record Keeping

Employers shall maintain necessary records identifying all women workers and all workers under the age of 18 entitled to legal protection concerning work hours. (P)

HOW.6 Time Recording System

Time worked by all workers, regardless of compensation system, shall be fully documented by time cards or other accurate and reliable recording systems such as electronic swipe cards. Employers are prohibited from maintaining multiple time-keeping systems and/or false records for any fraudulent reason, such as to falsely demonstrate working hours. Time records maintained shall be authentic and accurate. (P)

HOW.7 Maintenance of Reasonable Levels of Staff

Employer personnel practices shall demonstrate an effort to maintain a level of staffing that is reasonable in view of predictable or continuing fluctuations in business demand. (P)

HOW.8 Overtime/Reduced Mandated Overtime

The employer shall demonstrate a commitment to reduce overtime and to enact a voluntary overtime system, including for overtime mandated to meet extraordinary business circumstances. (P)

HOW.9 Overtime/Positive Incentives

Employers shall use positive incentive schemes to induce overtime and shall ensure such incentive schemes are known by workers. (P)

HOW.10 Overtime/Calculation over Period Longer than One Week (New Benchmark)

Employers are allowed to calculate normal hours of work as an average over a period of longer than one week where local laws, regulations and procedures provide for such a possibility but only when all formal and procedural requirements attached to such calculation (for instance, obtaining official permission from the relevant authorities or limits to the period during which such calculations can be made) are met. The basis for such calculation shall, however, remain at all times the lesser of 48 hours per week or legal limits on hours of work in the country of manufacture or, where such legal limits do not exist, the regular work week in such country. (S)

HOW.11 Extraordinary Business Circumstance/Forced Overtime

In case of extraordinary business circumstances, employers shall make reasonable efforts to secure voluntary overtime work prior to mandating involuntary overtime. Employers must get workers voluntary consent periodically for all overtime that is above the 12 hours as provided for in the Code and that is not due to extraordinary business circumstances. (P)

This does not appear to be voluntary.

HOW.12 Extraordinary Business Circumstance/Overtime Explanation

Employers shall be able to provide explanation for all periods when the extraordinary business circumstances exception has been used. Employers shall take reasonable steps to inform workers about the nature and expected duration of the circumstances sufficiently in advance to allow workers to make alternative plans. (P)

The manager has stated that the busy time started in August 2010 and is expected to continue until end July 2011.

HOW.14 Annual Leave (New Benchmark)

Employers shall provide workers with paid annual leave as required under local laws, regulations and procedures. (S)

Workers state they are not able to easily take the annual leave.

HOW.15 Annual Leave/Determination (New Benchmark)

Employers shall not impose any undue restrictions on workers' use of annual leave. The time at which annual leave is taken is determined by the employer in consultation with the worker, taking into account work requirements and the opportunities for rest and relaxation available to the worker. (S)

HOW.16 Annual Leave/Restrictions (New Benchmark)

Any factory restrictions or procedures applicable to taking annual leave, such as requiring a minimum period of service before being allowed to use annual leave, written requests to be submitted a certain time before the annual leave would be taken, etc., must be in line with local laws, regulations and procedures and must be communicated in full to all workers. (S)

HOW.17 Leave/Retaliation (New Benchmark)

Employers shall not impose any sanction on workers for requesting or taking any type of leave, such as annual, sick, maternity or other leave, in line with all applicable rules and procedures. (S)

Workers who require sick leave or ANC will have this deducted from their annual leave.

HOW.18 Annual Leave/Wage Payments (New Benchmark)

Employers shall provide workers taking annual leave their normal or average wages for the full period of annual leave in advance, unless specified differently under local laws, regulations and procedures. (S)

HOW.19 Sick Leave (New Benchmark)

Employers shall provide workers with sick leave as required under local laws, regulations and procedures. (S)

Non compliant with internal regulations.

HOW.20 Sick Leave/Restrictions (New Benchmark)

Employers shall not impose any undue restrictions on sick leave. Any factory restrictions or procedures regarding sick leave, such as informing the employer as soon as possible, the provision of medical certificates, the use of designated doctors or hospitals, etc., must be in line with local laws, regulations and procedures and must be communicated in full to all workers. (S)

HOW.21 Calculation of Absences (New Benchmark)

Absences from work for reasons beyond the control of workers, such as sick leave or periods during which factory operations are suspended, shall not be counted as annual leave nor shall they be deducted from calculations concerning length of service, unless specified differently under local laws, regulations and procedures. (S)

VIII. WAGES, BENEFITS AND OVERTIME COMPENSATION (WBOT)

WORKPLACE CODE PROVISIONS:

WAGES AND BENEFITS: Employers recognize that wages are essential to meeting employees' basic needs. Employers will pay employees, as a base, at least the minimum wage required by local law or the prevailing industry wage, whichever is higher, and will provide legally mandated benefits.

Definition of Wages, Compensation, etc.

The terms wages, compensation, etc. include the basic minimum or prevailing industry wage and any additional payments to be made directly or indirectly, whether in cash or in-kind, by the employer to the worker and arising out of the workers' employment. Such additional payments include wage differentials or increments based on seniority or marital status, cost of living allowances, housing or residential allowances, family allowances, benefits in-kind such as the allotment and cleaning of work clothes or safety equipment, and social security benefits.

If the worker's mask tears or is dirty it will be replaced by the factory.
If it is lost 1000 riel will be deducted from their salary. The workers are buying the masks outside of the factory as they are cheaper.

Benchmarks

WBOT.1 General Compliance Wages, Benefits and Overtime Compensation (New Benchmark)

Employers shall comply with all local laws, regulations and procedures concerning the payment of wages and benefits, including overtime compensation. In any case where laws and the FLA Code are contradictory, the standard that provides the greatest protection for workers shall apply. Where provisions are lacking, employers shall take measures to reasonably accommodate matters concerning the payments of wages and benefits, including overtime compensation.

WBOT.6 Production and Incentive Schemes

Employers shall not set production targets, piece rates or any other incentive or production system at such a level that workers need to work beyond normal working hours as set under the FLA Code, excluding overtime, in order to make the legal minimum wage or the prevailing industry wage, whichever is higher. (S)

Many workers are unable to receive higher than their basic salary as they can not reach the piece rate target.

WBOT.8 Calculation Basis for Overtime Payments

Employers shall compensate workers for all hours worked. For workers on a piece rate payment scheme or any other incentive scheme, payments for overtime hours worked shall be calculated by applying the premium rate required by law or this Code on the same payment scheme as is used for calculating wages for normal working hours, unless the payment scheme used leads to higher wages for workers. (S)

WBOT.12 Overtime Compensation for Piece Rates and Other Incentive Schemes

Employers shall not set production targets, piece rates, or any other incentive or production system at such a level that the payment for overtime work performed is less than the premium pay required by law. (S)

Many workers are unable to receive higher than their basic salary as they can not reach the piece rate target.

WBOT.22 Worker Wage Awareness

Employers shall make every reasonable effort to ensure workers understand the wages, including the calculation of wages, incentives systems, benefits and bonuses they are entitled to in a factory and under applicable laws. To this end, employers shall communicate orally and in writing to all workers all relevant information in the local language or language(s) spoken by the workers, if different from the local language. (P)

Workers are not aware of how their salary is calculated.

19. Specific Non Compliance with PUMA's Code of Conduct

PUMA AG

PUMA-Way 1, D-91074 Herzogenaurach, Germany

CODE OF CONDUCT

We at PUMA AG declare our strict adherence to the respect of Human Rights. As such, we share with our partners a commitment to high ethical standards and guarantee the following Code of Conduct:

- **A workplace that promotes the health and safety of the workers as well as the protection and preservation of the environment.**

Non compliant – see body of report

- **A normal work week according to local labor law, up to a maximum of 48 hours, with a limit of 12 extra/overtime hours, including one day off for every seven-day period, as well as overtime compensation policies that are in accordance with local law.**

Non compliant – see body of report

- **Respect and equality, regardless of race, creed, age, sex, social origin, political views, sexual orientation, or position.**

Non compliant – see body of report

- **A workplace where there is dignity and respect, free from any form of forced labor, harassment, abuse or corporal punishment.**

Non compliant – see body of report

- **Puma has stated they do not use Toluene in their products**

Non compliant – see body of report

20. Huey Chuen Internal Regulations (translated from Khmer)

The internal regulations were made on the 28th April 2006 and approved by the Head of Labor Inspection Department on the 18th May 2006. There are 3 main categories which include 12 articles.

1st Category Working Rules

Article 1 conditions and procedures for hiring workers

Hire workers whose ages are 18 and over

Each worker needs to provide an ID card or age-proof document (if no ID)

Probationary period is from 1-3 months

Article 2 working arrangements

Workers have to be punctual and come to work on time, wear appropriate clothes, wear company ID card

Article 3 medical and health check

All workers are required to have medical and health check up before joining the factory. They do not mention who should pay for the medical check up fee.

Article 4 working hours and holiday

Normal working hours: 7am – 11:30am and 12:30 – 16:00

Sunday is weekly holiday.

Paid leave: public holidays, annual leave, special leave, maternity leave (all explanations comply or follow the legal requirements.)

Sick leave (they only state about long-term sick leave but not the short-term leave) if a worker takes sick leave with doctor's certificate, she/he will get 100% full pay for the first month, 60% for the second and third month, and no pay for the fourth to sixth month but the factory will retain her/his position. If a worker takes more than 6 months, the factory can consider firing her/him from work.

Work-related accident leave: follow the ministry Prakas.

Article 5 wages, bonuses, and other incentives

Minimum wage must comply with the law.

Overtime rate = 150% for normal working hours, 200% for overtime at night, Sunday work and public holiday work.

If workers damage or destroy company's property, they need to pay the cost and if they do not have enough money to pay back, the company will deduct from their wages by instalments.

Article 6 leave with permission and leave without permission

Workers must submit their leave form a day prior the leave.

If they are sick, they can ask a worker representative to request the leave for them or they can just call in for leave (they do not mention whether it is a paid or unpaid sick leave.)

If they take leave without permission: absence less than 2 days/month is a minor misconduct, absence from 2 days – less than 6 days per month is a major misconduct, and absence from 6 days up per month or absence for 6 consecutive days, it means that the worker has abandoned their job.

It is different from what they state in the employment contract.

Article 7 using company's materials or equipments

Workers can use the company's materials or equipments only for the company's benefit but not for their own benefit.

Workers can not take the company's materials outside without permission.

Article 8 using company building

Article 9 enter and exit the factory compound

2nd category: Disciplinary Practices and Workers' Rights

Article 10 disciplinary Practices

Minor misconduct: 1st time verbal warning, 2nd time written warning and 3rd time dismissal

Major misconduct: 1st time written warning, 2nd time work suspension (less than 7 days), 3rd time dismissal

Serious misconduct: follow Article 83 of the Labor Law

Workers' mistake or misconduct will not be accumulated after one year.

Article 11 workers' own protected rights

Before receiving a conviction, workers have their own rights to protest or appeal to the Ministry of Labor or provincial court. During this process, workers can seek for help from worker representatives.

3rd category: Hygiene and Working security

Article 12 hygiene and working security

Workers need to maintain their own hygiene as well as hygiene in the workplace.

Workers need to follow and listen to their supervisors' instructions for their own safety.

If workers see something unusual, they need to inform their supervisors immediately.

All workers need to respect the company health and safety rules. Training will be provided on this.

21. References

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4. Agency for Toxic Substances and Disease Registry U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Public Health Service Toxicological Profile of Methylene Chloride <http://www.atsdr.cdc.gov/toxprofiles/tp14.pdf>
5. MSDS for cyclohexanone http://www.hichem.com.au/hicheminfo/WEB_MSDS/CYCLOHEXANONE.PDF
6. MSDS for N,N-DIMETHYLFORMAMIDE <http://www.itbaker.com/msds/englishhtml/d6408.htm>

22. Acronyms

ACGIH	American College Industrial Hygienists
ATSDR	Agency for Toxic Substances and Disease Registry U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES Public Health Service
FLA	Fair Labor Association
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immunodeficiency Disease Syndrome
IFC	International Finance Corporation
ILO BFC	International Labour Organization Better Factories Cambodia
MSDS	Material Safety Data Sheets
NIOSH	National Institute of Occupational Safety and Health
NSSF	National Social Security Fund
OSHA	Occupational Safety and Health Association
PPE	Personal Protection Equipment
SOP	Standard Operating Procedures
TLV	Threshold Limit Value