



**GOLD FIELDS**

# **Sodium Cyanide Spill N3 Highway – Heidelberg**

**Debriefing Session**

**Lesedi Local Municipality**

# WHAT HAPPENED



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- On the morning of 26<sup>th</sup> October 2007 at 03H00 a truck carrying a load of Sodium Cyanide Briquettes lost control and drove down an embankment on the N3 Highway
- The driver of the truck passed away - cause of death not yet established
- Ambulance personnel treated scene as a one motor vehicle accident until....
- Informed relevant personnel who reacts to scene in different ways

**Through training we save lives**

# SUPPLIER



- **Marlyn Chemicals imports Sodium Cyanide Briquettes which purity is higher than Aero brand or Sodium Cyanide Solution for 17 years from CSBP Chemicals from Australia**
- **Shipment is send to a depot in Durban and from there it goes on our national roads to Gauteng and Mozambique**
- **The sodium cyanide briquettes are packed in 1 ton wooden crates inside plastic bags**



# CARGO SERVICES



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- The Sodium cyanide was transported on a flat bed truck, without side rails
- The crates was not properly secure
- The truck had no indications or signs on of what it was transporting – (Road Traffic Act requires at least 5 visible signs and markings of what chemical is transported)
- Normal A 4 paper with what contents was inside the crate was stuck on the side no passing by vehicle could read that sign..
- No emergency contact numbers was displayed any were on the truck
- The orange diamond was later found stuck behind a load of crates not nearly as where it was suppose to be



# FIRST ON SCENE



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- **Call came in at about 04h00 about a truck that was involved in an accident**
- **The caller on scene could not give the relevant information of how many people or vehicles involved**
- **The first responders on scene was the ambulance crew**
- **They started treating the patient**
- **The Crew assume it was rock pebbles- until one of them took a closer look and found a sticker attached to the crate informing him that he is looking at sodium cyanide and not garden rock pebbles**
- **He immediately stopped people from entering the scene and withdrawing his crew with the patient out of the **HOT ZONE****
- **By now there was already a few people contaminated – Hazmat teams were called out**
- **They informed the hospital and later the mortuary of the situation**

# WHO IS TAKING COMMAND



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- Lesedi Fire department's Chief took charge of the scene – but not without a few headaches
- No command center was put up – The Fire Chief had to run all over the place
- No decontamination bay put up for the spill team- Fire Chief later put up one
- Worst of all it looked like it was going to rain and worsen the situation
- SAPS was first on scene they were asked to assist with evacuation, they refused to take responsibility
- Traffic and EMS personnel took charge of evacuation and crowd control
- The media was somehow informed and phones was going mad
- Spill response team was called out



# SPILL RESPONSE TEAM



- Spill response team arrived on scene immediately got dressed put up a windsock rush in starts moving around the cyanide
- No decontamination bay was put up by them to decontaminate their people- they were the only ones allowed to enter and exit the scene
- They did not have proper moving equipment- they drag the product from one side of the scene to the other side making it worse
- They did not had a proper buddy system in place one crew was send in to clean up – after a while they got tired and refuse to work further, took off there PPE stashed it in plastic bags and waited for the other crew to arrived
- On arrival the second team did not had PPE and they took the stashed PPE in the plastic bags and put it on..



# EVACUATION



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- Realizing that it could rain at any moment and HCN gas might be generated evacuation procedures was put in place
- Traffic and EMS started to evacuate residents – without out much success
- People refuses to leave there houses ,schools and businesses
- The help of the radio stations was called in and with continuous broadcasting some people started moving out
- In the end about 500 people were evacuated for about 1.3km radius – but still not enough if there was a massive HCN cloud release

# REHABILITATION



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- **The Cyanide was covered up by cloth and ground on Friday to prevent it from getting wet- after the rain cleared up clean up started**
- **Ferrous sulphate was use as a indictor on how big the spill area was**
- **All relevant environmental departments was informed and tests was done**

# WHAT WENT WRONG



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- 1.** The driver might have been too tired to concentrate or did not know the area
- 2.** No warning signs posted on truck to warn anyone of the cargo being carried
- 3.** No procedures in place to check trucks before they leave the depots
- 4.** Relevant personnel could not be contacted
- 5.** No decontamination or barricading areas in place –only later
- 6.** Removing of cyanide not handled properly situation made worse
- 7.** Proper PPE or not enough PPE
- 8.** No proper moving equipment available
- 9.** Hot zones not in place
- 10.** Access to spillage area not barricaded and controlled properly
- 11.** Protocols must be revised so that when dangerous goods go through way bridges on highways local Emergency response teams to be informed
- 12.** Communication with relevant stakeholders
- 13.** Use of media in positive way- and not creating mass hysteria