



## Addressing Occupational diseases in South Africa

Impala Platinum Refineries

2012 - UE070,3



PT 99.99 %

154.131 t.oz



2012 - UE070,3

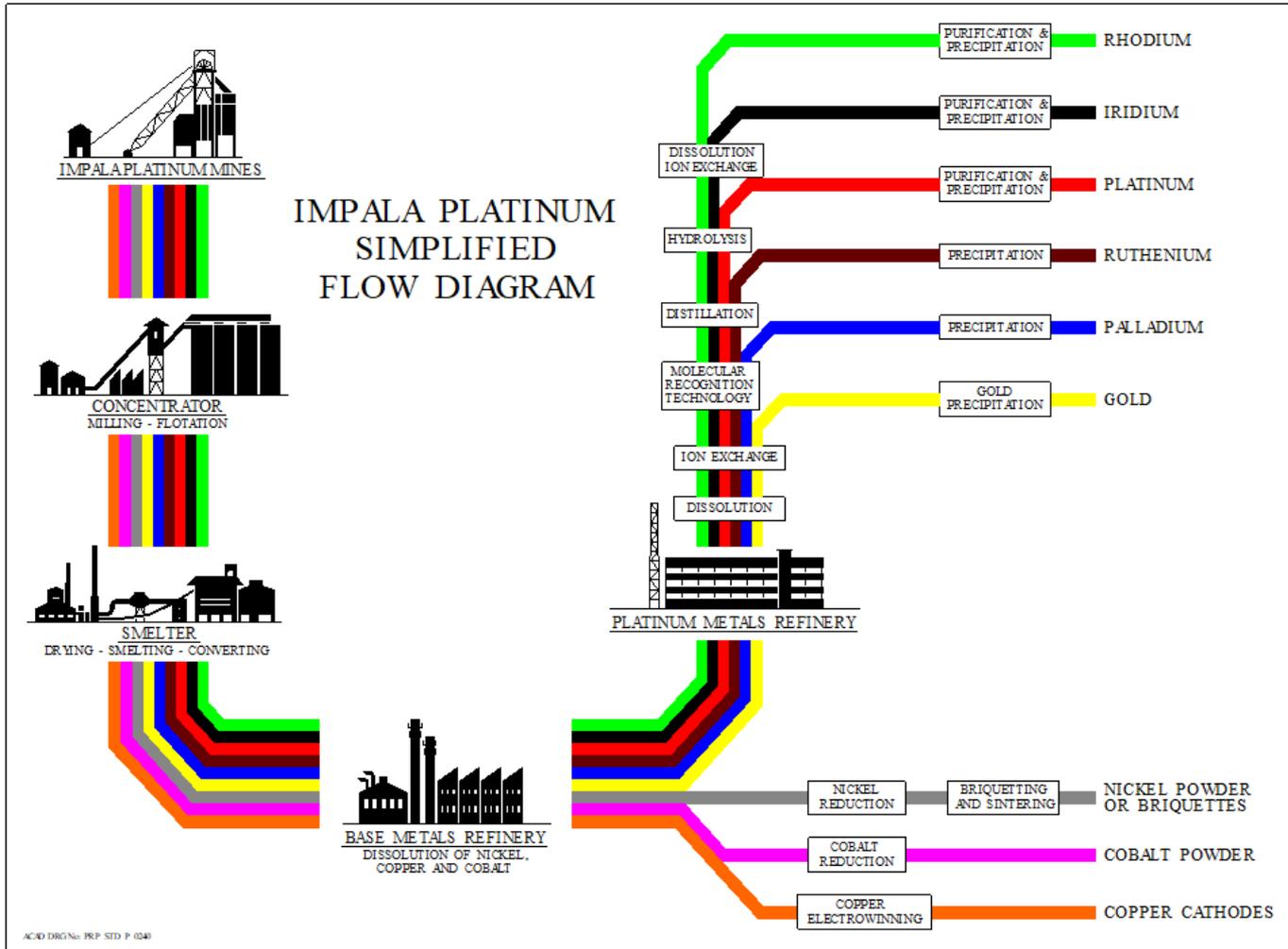


PT 99.99 %

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**Addressing occupational health in your workplace can be done successfully – an Implats (Refineries) perspective**









- Occupational Health System requirements
- Lead (Pb) study – Biomonitoring
- Platinum (Pt) study – ACSOP & Dermatitis



# In what shape is your workforce?



## ➤ **Baseline Medicals**

- (Personal en Family history, Physical examinations, X Rays, Lung Function testing, Audiograms, Vision, Allergy, Skin prick testing, PAA, PHC)

## ➤ **Routine Medicals**

## ➤ **Exit Medicals**

## ➤ **Case studies**

## ➤ **Hygiene Surveys**

## ➤ **Communication systems**

## ➤ **Control strategy**

## ➤ **Research**



**(Employee must be better off than when he started!)**

## Washing Copper cathodes

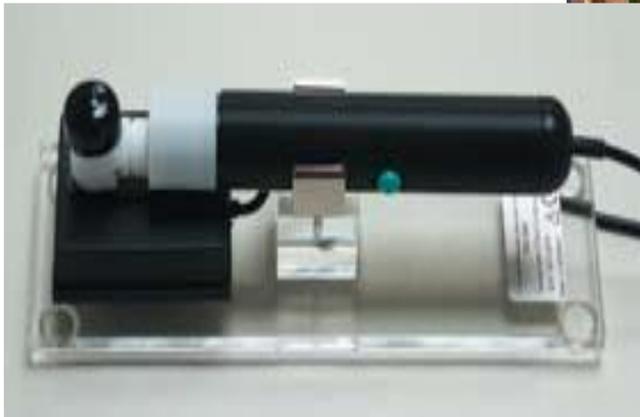
- Detected by routine biomonitoring on contractors
- Blood Pb 40 ug/100ml
- Exposure investigated
- Swab tests by hygienist – confirmation
- PPE contaminated
- Build PPE storage
- Training renewed for all on changes
- Washing facilities at Cathode washing
- Blood lead: < 10 ug/100ml



- **ACSOP –Allergy to Complex Salts of Platinum**
- **Dermatitis**
- **Asthma**
- **Chlorine exposure**
- **Smokers**
- **Family history**
- **Atopic status**
- **Medical done for all workers – risk**
- **Improved facilities**
- **Unique interventions**



- **No associated health symptoms amongst majority of workers**
- **Presentation of a worker with skin problems**
- **Health data indicates poor skin conditions**
- **Treatment & solutions available**



- **Baseline in place from pre- employment medical (Scale 1 to 5)**
- **Smoking history known – (5-8x increase ) risk**
- **Periodical medicals in place vs baseline**
- **Exposure incidents on record**
- **Hygiene exposure records available**
- **Clinical examination and incident discussion by health team**
  - **Integrated Hygiene and Health**
- **Daily lung function before & after shifts**
- **Diagnosis & referrals**
- **IPA best practice guidelines used**



# Chlorine Facility – Housing 1 ton Cl<sub>2</sub> cylinders



- **Smoking leads to an (5-8x) increase in risk to develop ACSOP**
- **Family history of asthma**
- **Atopic status evaluated**
- **Allergies checked (Pollen, dust etc. and ammonium hexa-chloroplatinate)**
- **Removal from exposure –under OEL**



# Improved facilities – Plant areas



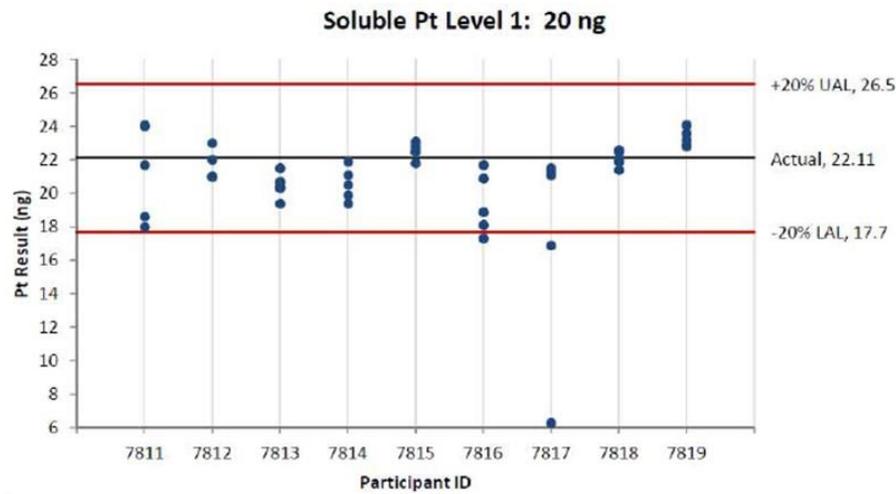
# Process interventions





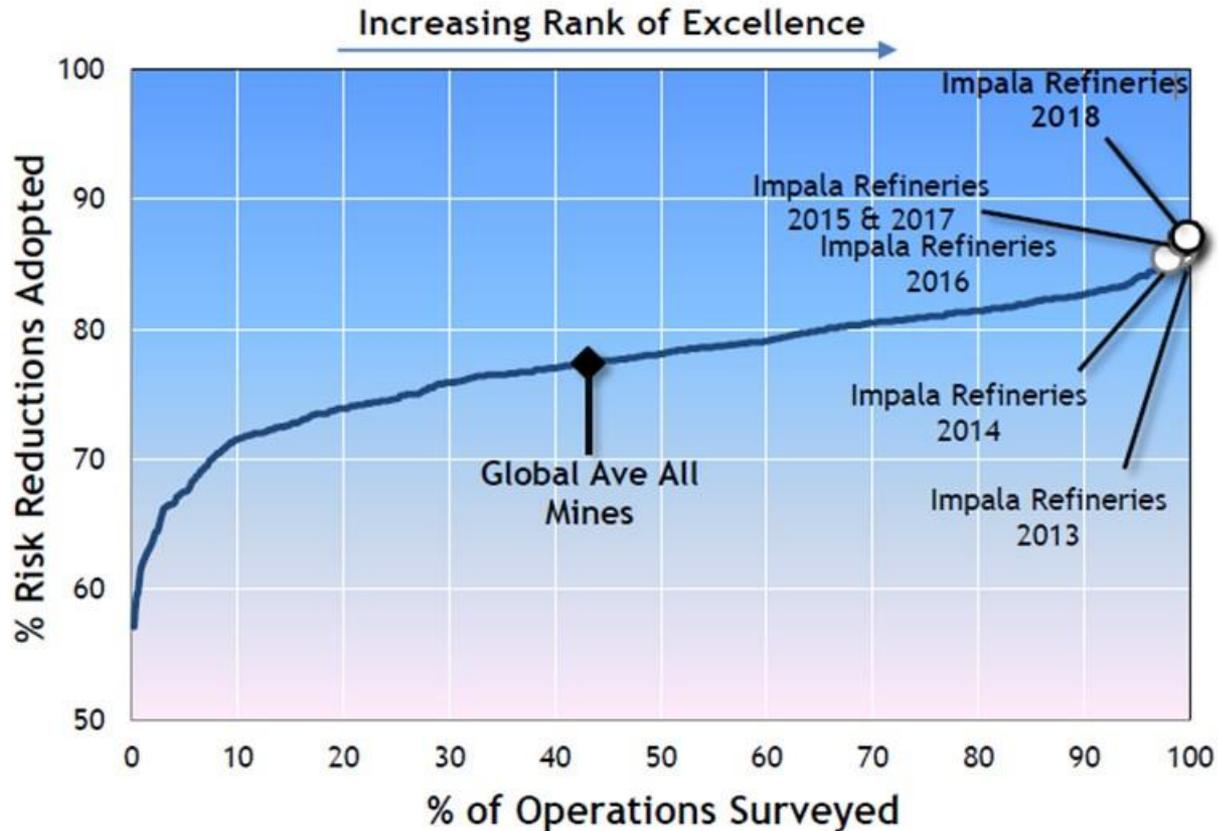


- IPA: Soluble Pt OEL 2000 ng/m<sup>3</sup> to 100 ng/m<sup>3</sup>
- Real time monitoring test work via IPA
- Analytical proficiency testing



- **IPA Booklet (Guidelines)**
- **Standardising best practise internationally**
- **Voluntary membership**

# Does it work for us?



IMIU Risk Exposure  
(REN)  
Section 7

Measure of commercial attractiveness of the risk to insurers.  
19.6 - which is much lower (better) than the Global Average of 44.2.  
Refineries, therefore, has much better than average commercial  
attractiveness to insurers and is firmly placed in the Low Risk category.

Thank you

