

Date: Thursday, 10 March 2016

SCOPE OF WORK (VACUUM CLEANING SERVICES FOR SMELTER AND REFINERY)

1. Service to be rendered:

- Vacuum cleaning of different materials and dump them at a dumping area provided by the end-user (onsite).

2. Areas of Service:

- Reverb furnace
- Coal mill house
- Waste heat boilers
- Refinery boiler room
- Refinery coal hoppers
- Reverb and convertors, main structural beams and platforms

3. Hours to be worked:

- As and when required, end-user to create an order number before work commences. Supplier to have standby personnel and equipment.
- Contractor to bill the actual vacuuming hours, NB!! The erecting of equipment on site is not included in as part of the vacuuming.

4. Legal/SHEQ requirements:

- All tools and equipment must be cleared by contract management.
- All personnel to be medically fit and to have all training requirements as per Palabora Copper Standards.
- While on site, follow the policies and procedure of PMC for safe execution

5. Equipment required:

- Mobile 75 to 90 KW Vacuum units (electrical 550V or diesel) of 3000-4000m³/hour flow and suction of -70 to -80kpa pressure.
- Mobile 5 to 10 tones tanker.
- Flexible hoses and coupling.
- Portable vacuuming machines to access areas where there is space limitations

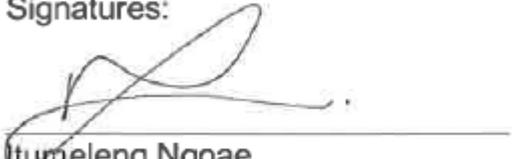
6. Required number of laborers:

- Five (5) equipment operators and one supervisor.

7. Technical info of material to be vacuumed:

- Temperature : Ambient to 260°C.
- Size : 1mm to 20mm.
- Moisture : Wet and dry
- Highest Suction Point : 40m.
- Lowest Suction Point : -3m i.e. hoppers, bins etc.
- Shortest suction distance : 5m
- Longest floor distance : 10m
- Material to be vacuumed : Coal, hot ash, silica flux, concentrate and dust.

Signatures:



Itumeleng Ngoae
Smelter and Refinery Maintenance Manager