

HAZARDOUS SCRAP

IN ALL METAL PROCESSING INDUSTRIES



SEALED RADIOACTIVE SOURCES

Avoid exposure to unshielded sources at all cost

Follow radiation detection measures.

- Man made sources are extremely dangerous.
- Man made sources are extremely difficult to detect
- Man made sources cause severe contamination when accidentally processed.
- Sources are widely in use in various applications and many are missing.

HOW DO SEALED RADIOACTIVE SOURCES GET INTO THE RECYCLING STREAM?

- Theft
- Loss
- Negligence
- Intentional disposal
- Accidental disposal

THOROUGHLY SCAN ALL SCRAP WITH DETECTION EQUIPMENT AS RADIOACTIVE CONTAMINATED MATERIAL PRESENTS ITSELF IN A VAST ARRAY OF PRODUCTS.



N.O.R.M, TE-N.O.R.M. MAN-MADE AND RADIOACTIVE CONTAMINATED MATERIAL

N.O.R.M : (Naturally Occurring Radioactive Material) is radioactive material that comes from the earth. There are 3 primary types of radioactive elements found on earth; 40K, 238U and 232Th.

TE-N.O.R.M : (Technologically Enhanced N.O.R.M.) is radioactive material that has come from the earth and manipulated or altered by man.

Is N.O.R.M. and TE-N.O.R.M dangerous?

Its not dangerous when handled properly by trained personnel.

- Low external radiation exposure levels.
- Potential problems if ingested.
- Non-life threatening.

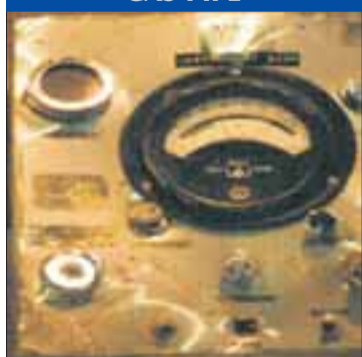
Man-made and Contaminated Radioactive Material (Excluding TE-N.O.R.M. and Sealed Radioactive Sources). Material that has been made radioactive by man or material that has been contaminated during an industrial process such as military applications, radioactive source manufacturers, nuclear power industry etc. These must be handled by trained personnel such as RPO's, RPS's or the local SAPS.

Are man-made and contaminated radioactive materials dangerous?

- Can be very dangerous but the majority are not.
- Medium to low external radiation exposure levels.
- The vast majority are non-life threatening.
- Without a radiation detector there is no way of telling whether the material is radioactive or whether the emitted radiation levels are dangerous.



GAS PIPE



RA METER



DROSS



PUMP PROPELLER

MUNITIONS



Contact authorities, e.g Bomb Squad / local SAPS, on the removal of any munitions.

Visually scan scrap for munitions, in particular loads imported from neighboring countries known to have insufficient control over munitions entering the scrap stream.

CLOSED CONTAINERS AND OTHER SIMILAR OBJECTS

- In the BOF steelmaking process, scrap is charged into a converter and thereafter liquid iron is charged into this converter, covering the scrap. The content of the cylinder then expands rapidly, causing explosion and possible injury and damage.
- In the electric arc furnace no sealed containers should be charged due to the possibility of explosions. There is added risk if the closed container is filled with a volatile gas or liquid.

Cylinders with small openings or punctures

- When the opening or puncture in the wall of the vessel is not large enough to allow rapid release of the content of the vessel an explosion will occur.
- Added risk that such a cylinder or container can now contain moisture due to the exposure to weather conditions.



Safe processing of closed cylinders or cylinders with small openings

- Verify content of cylinder – If substance is toxic or harmful to persons or environment, contact relevant authorities for safe processing procedures.
- Ensure cylinder is empty by venting to atmosphere and holding upside down to drain any liquid.
- Remove venting valve by unscrewing.
- Cut cylinder to acceptable size, using prescribed personal protective equipment.
- Ensure that cut cylinder will not be able to trap material i.e. water, oil, etc.

