

# NORM / LSA

## Naturally Occurring Radioactive Material / Low Specific Activity (1/2)

### IMPORTANT INFORMATION

**The Radiation Protection Supervisor will discuss the risks involved before you start work. Make sure you know the hazards and understand them! If anything is not clear, ask!**

- 1. Cordon off the area if necessary or desirable.**
- 2. Avoid sludge spillage – use leak trays.**
- 3. Avoid dispersing radioactive dust particles – do not grind or brush surfaces likely to be contaminated.**
- 4. Where possible, keep surfaces you are not working on wet to prevent dust gathering.**
- 5. Secure NORM/LSA-contaminated items and dispose of them in accordance with the regulations of your company.**

### QUESTIONS? MORE INFORMATION? UNSAFE WORKING CONDITIONS?

Your HSE Manager is there to help answer any questions and ensure a safe working environment for all.

### WHAT IS IT?

Naturally Occurring Radioactive Material or NORM and LSA (Low Specific Activity) are the collective terms for natural radioactive substances that may be released during the production of oil and natural gas, during digging and/or other underground activities.

During these activities, radioactive substances can rise to the surface, sometimes in a gaseous state, sometimes as salt compounds dissolved in water or in a solid form.

**In gas form:** Radon

**In liquid form:** (watery) sludges

**In solid form:** scales

### HAZARDS

- invisible and odourless
- potentially harmful to health
- potentially harmful to the environment

### PREVENTION

A Radiation Protection Supervisor will discuss the risks associated with the work beforehand. They will be present at the workplace and will be responsible for conducting contamination measurements.

- ensure you know and understand all associated risks of NORM
- take all necessary precautionary measures
- when in doubt, consult your HSE Manager or the Radiation Protection Supervisor
- if desired or necessary, cordon off the work area
- avoid spillage
- avoid the dispersion of radioactive particles; do not grind or brush
- keep surfaces awaiting processing wet, wherever possible
- secure components that are contaminated by NORM/LSA and remove them in accordance with the prevailing regulations; ask your company for more specific details about this

---

## **NORM / LSA** Naturally Occurring Radioactive Material / Low Specific Activity (2/2)

---

### **PERSONAL HYGIENE**

- do not eat, drink or smoke at the workplace
  - wash your hands thoroughly before eating, drinking, smoking and before and after using the toilet
  - beware of Personal Protection Equipment (PPE) contamination; take off and dispose of PPE only in designated areas; avoid spreading NORM/ LSA materials when taking off or disposing of PPE
- 

### **PROTECTION**

- use the correct standard PPE and, if necessary, PPE instructed by the Radiation Protection Supervisor
  - ensure your PPE is in good condition
  - the Radiation Protection Supervisor will inspect used PPE for NORM/LSA contamination
- 

### **IN CASE OF...**

#### **External contact**

- thoroughly wash the contaminated body parts; in most cases this will remove any contamination

#### **Internal contact**

- some substances will be discharged by the body, others will not
- act in accordance with the relevant work instruction; ask your company for more specific information in relation to this

**In all cases: always inform the Radiation Protection Supervisor.**

---