PURPOSE

The purpose of developing this program is to train all employees in the recognition of NORM and avoid the possibilities of contact while they are performing job tasks at the Company facility as well as Customer sites.

1. GENERAL
2. NORM is an acronym for Naturally Occurring Radioactive Material. It is found in just about everything we come in contact with.
3. In our industry, we are concerned with the type of NORM found in the formation material brought to the surface in the production of oil and gas. Exposures may be encountered more often in equipment that has been used to pump materials from offshore sites. Residual materials in these pumps may contain NORM. NORM material may also be contained in any equipment that has been offshore and that may have been in contact with drilling mud or other recyclable items.
4. Examples of where Company employees could potentially come in contact with NORM while working on an offshore facility or land production location include the following:
* Separators
* Well-Bay Area
* Wellhead Equipment
* Produced Wastewater
* Inside valves (i.e., during assembly)
1. In addition, there may be different types of radionuclide that may be present in these items which is known as Technology Enhanced Naturally Occurring Radioactive Material, “TENORM”. Another acronym used for this substance is “TENR”. In the Oil Field, TENORM is most often found in “produced waters” and contamination of oil field equipment.
2. ORGANIZATIONAL STRUCTURE
3. The NORM Program Administrator is the Company HSE Manager and will have the responsibility of the implementation and training programs.

B. Operations Managers and Supervisors have control of the job site safety to ensure that the men are informed and trained to react in normal duties and emergency situations

1. TEST LEVELS
2. Company employees will not test for NORM levels at temporary job site locations. The Operating Company’s Safety Department Representative is responsible for the testing of NORM levels. The host facility is responsible for advising Company employees of the seriousness of the situation and the required precautions necessary to prevent exposure to NORM. Employees may not work on any equipment unless it has been tagged as decontaminated and free from harmful levels of NORM. The Supervisor is responsible for verifying with the customer that all equipment has been tested and is free of harmful levels of contamination.
3. The Company shall not accept equipment which produces a NORM or TENORM meter reading of 5 millirem in one hour or more.
4. All used equipment must be tested by Company employees prior to acceptance. Upon receiving used equipment, the following steps must be taken:
* Perform source function test on meter (UNSCEAR)
* Leaving the meter on, approach the equipment to be tested;
* Test equipment;
* Perform a post inspection function test;
* Document all findings.
1. PROTECTION METHODS

Protection from NORM radiation includes:

* Time;
* Distance;
* Shielding;
* Personal Hygiene; and
* Personal Protective Equipment
1. EMPLOYEE TRAINING

A. All employees subject to NORM exposure shall receive training in:

* Origin;
* NORM Hazards;
* Hazard Identification;
* Protective Measures;
* Safe Work Practices;
* PPE (HEPA Filters)
* Properties & Characteristics;
* Decontamination;
* Consequences of Exposure; and
* First Aid

B. All employees subject to exposure to NORM from inhalation or contact shall also be trained in respiratory protection and be medically evaluated to be able to use respirators.

C. The training should be conducted annually and before exposures occur in either normal or emergency situations.

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| **Reviewed and Approved** |
| Quality Manager or President |   |   |
|   | Date |