

## Profile SFR-73

### Fracture Mechanics Laboratory

USA

#### GENERAL INFORMATION

NAME OF THE FACILITY Fracture Mechanics Laboratory  
ACRONYM n.a.  
COOLANT(S) OF THE FACILITY n.a.  
LOCATION (address): Oak Ridge National Laboratory (ORNL)  
OPERATOR Fusion Materials and Nuclear Structures Group, Materials Science and Technology Division  
CONTACT PERSON Mikhail Sokolov, One Bethel Valley Rd, Oak Ridge, TN37831-6151  
(name, address, institute, function, telephone, email): ORNL, 865-574-4842, sokolovm@ornl.gov

STATUS OF THE FACILITY Available

Start of operation (date): n.a.

MAIN RESEARCH FIELD(S)

- Zero power facility for V&V and licensing purposes
- Design Basis Accidents (DBA) and Design Extended Conditions (DEC)
- Thermal-hydraulics
- Coolant chemistry
- Materials
- Systems and components
- Instrumentation & ISI&R

#### TECHNICAL DESCRIPTION

##### Description of the facility

The Fracture Mechanics Laboratory belongs to the Fusion Materials and Nuclear Structures Group, Materials Science and Technology Division, which perform various mechanical property evaluations such as tensile, fracture toughness, Charpy impact testing, creep-rupture testing, and so on, of the samples related to nuclear related structural materials. All the test procedure follows ORNL quality assurance equivalent to NQA-1 standards.

##### Acceptance of radioactive material

no

### **Scheme/diagram**

n.a.

### **3D drawing/photo**

Tensile/fracture-toughness testing frame



Charpy impact test frame



*FIG. 1. Views of the Tensile/fracture-toughness testing frame (left) and Charpy impact test frame (right)*

## **COMPLETED EXPERIMENTAL CAMPAIGNS: MAIN RESULTS AND ACHIEVEMENTS**

### **PLANNED EXPERIMENTS (including time schedule)**

### **TRAINING ACTIVITIES**

n.a. (operated by trained technical staff at ORNL)

### **REFERENCES (specification of availability and language)**

n.a.