

1PH1 PART II - NEUTRON ACTIVATION ANALYSIS FOR MIT NSE



Authorized Experimenters: M. Ames, Licensed Operators

Part I/II Ref: 25-25-2217

Authorized Sample Acceptance: M. Ames, T Bork

Campus Authorization: NRL-C-13 (exp. 11/30/19)

Authorized: *[Signature]* 9/24/19

RRPO: N/A

Sample(s) will be shipped via FedEx: No

Comments: Contamination is expected on the rabbit. This operation will be 1PH1→NW13 manual transfer. All required operational tests must be completed prior to the transfer. Alarm set will be 10 mR/h above background. Greater than 72 hours of decay time is required. **Please record time in and out of the reactor to the second.**

| | | | | | | | | |
|---------------------|---|---------|-----------|-----------|----------|----------------|---|--|
| Sample Materials: | 10 mg Fly Ash, 207 mg of toenail in poly vial | | | | | | Maximum Activity Allowed: 20 mCi per Rabbit | |
| Principal Nuclides: | Al-28 | Si-31 | Mn-56 | Na-24 | K-42 | V-52 and Trace | TOTAL Activity: | Expected Unshielded Gamma Dose at 10 cm: |
| Initial Activity: | 2.5 mCi | 2.5 mCi | 246.7 uCi | 180.6 uCi | 70.6 uCi | 72.8 uCi | 5,607.1 uCi | 285.7 mR/hr |
| Decayed Activity: | 0.0 uCi | 0.0 uCi | 0.0 uCi | 6.5 uCi | 1.3 uCi | 0.9 uCi | 8.6 uCi | 1.3 mR/hr |

Rabbit ID: 25-25-2217

| Irradiation Time at ≥ 5.5 MWt | Date In | Time In | Thermal Power In | Date Out | Time Out | Thermal Power Out | Total Irradiation Time |
|------------------------------------|----------|----------|------------------|----------|---------------------------------|-------------------|------------------------|
| 12 hours | 09/25/19 | 02:00:00 | 6.668 MW | 9/25/19 | 13:59:33 13:58:33 | 5.664 MW | 11h, 59 min, 33 sec |

Radiation Monitor Interlock Operational: ☒ System Verified Operational (Name, Date, Time): A. Kingsbury, 10/2/19, 14:09

| Decay Time Required | Alarm Set: | Time of Transfer |
|---------------------|------------|------------------|
| 72.0 hours | 15 | 14:10 |

| Charges to: | Facility Fee: | Handling Fee: | Shipping Fee: | Special Equipment: | Rad Waste Disp. Fee: | NAA Labor Fee: | TOTAL Charges: |
|-------------|---------------|---------------|---------------|--------------------|----------------------|----------------|----------------|
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