



# 1PH1 PART II - NEUTRON ACTIVATION ANALYSIS OF TOE NAIL SAMPLES FOR MIT NSE DEPT



Authorized Experimenters: Licensed Operators

Part I/II Ref: 25-25-2230

Authorized Sample Acceptance: M. Ames

Campus Authorization: NRL-C-14 (exp. 11/30/21)

Authorized: *[Signature]* 11/2/20

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. 48 hours of decay time are required. Please record time in and out of the reactor to the second. **No AFLP/AFHP necessary.**

Sample Materials:	138 mg (total) Toe Nail samples , 10 mg FlyAsh, 9 mg Montana Soil in poly bags						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:	2.4 mCi	2.3 mCi	224.3 uCi	167.1 uCi	65.7 uCi	65.5 uCi	5,277.7 uCi	271.7 mR/hr
Decayed Activity:	0.0 uCi	0.0 uCi	0.0 uCi	18.2 uCi	4.5 uCi	2.2 uCi	24.9 uCi	3.6 mR/hr

Rabbit ID: 25-25-2230

Irradiation Time at $\geq 5.5$ MWt	Date In	Time In	Thermal Power In	Date Out	Time Out	Thermal Power Out	Total Irradiation Time
12 hours	11/3/2020	07:00:00	5.69 MWt	11/3/2020	1900	5.70 MWt	12 hours

Radiation Monitor Interlock Operational: *[Signature]* System Verified Operational (Name, Date, Time): A. Kingsberry 05 Nov 2020 0221

Decay Time Required	Alarm Set:	Time of Transfer
48.0 hours	15	1423

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