

Reed Research Reactor

Update on Operability

Jerry Newhouse

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September 2026

REED
COLLEGE



REED COLLEGE

Founded in 1908

Approx 1,300 undergraduate students

Mathematics and natural sciences is
the largest division with about 40% of
students

Has operated a 250kW TRIGA Mk I
since 1968

Two full time staff, ~40 student staff



Background

On March 31, 2025, we operated in support of an operator licensing exam.

On April 1, 2025, a project to renovate the facility air handling system to add climate control capability began.

On April 7, 2025, our Reactor Manager arrived to find water pouring in through the control room ceiling directly into the reactor console.

After having spent nearly 57 years being carefully kept very dry, the console took that personally.

Two of our three NI channels and two of our three control rod position indicators were destroyed.



19.6

Safe

Shim

00.1

Reg

	Normal	Low Alarm	High Alarm
Pool Level	7380-7420	7300 mm	7500 mm
Pool Temp	10-25	5°C	35°C

19.8
°C

Ω OMEGA

7394
mm

Ω OMEGA

MANUAL
SCRAM

LINEAR
POWER
SCRAM

SOURCE

PERCENT
POWER
SCRAM

Date





Did you fill a state stamp?

Before connecting the meter to record, check the meter to ensure accuracy in use in:

1. The meter is calibrated correctly in the meter to ensure accuracy in use in.
2. The meter is calibrated correctly in the meter to ensure accuracy in use in.
3. The meter is calibrated correctly in the meter to ensure accuracy in use in.
4. The meter is calibrated correctly in the meter to ensure accuracy in use in.

4.1.3. **Definition:**

- a. The meter is calibrated in the meter to ensure accuracy in use in.
- b. The meter is calibrated in the meter to ensure accuracy in use in.
- c. The meter is calibrated in the meter to ensure accuracy in use in.
- d. The meter is calibrated in the meter to ensure accuracy in use in.
- e. The meter is calibrated in the meter to ensure accuracy in use in.
- f. The meter is calibrated in the meter to ensure accuracy in use in.
- g. The meter is calibrated in the meter to ensure accuracy in use in.
- h. The meter is calibrated in the meter to ensure accuracy in use in.
- i. The meter is calibrated in the meter to ensure accuracy in use in.
- j. The meter is calibrated in the meter to ensure accuracy in use in.
- k. The meter is calibrated in the meter to ensure accuracy in use in.
- l. The meter is calibrated in the meter to ensure accuracy in use in.
- m. The meter is calibrated in the meter to ensure accuracy in use in.
- n. The meter is calibrated in the meter to ensure accuracy in use in.
- o. The meter is calibrated in the meter to ensure accuracy in use in.
- p. The meter is calibrated in the meter to ensure accuracy in use in.
- q. The meter is calibrated in the meter to ensure accuracy in use in.
- r. The meter is calibrated in the meter to ensure accuracy in use in.
- s. The meter is calibrated in the meter to ensure accuracy in use in.
- t. The meter is calibrated in the meter to ensure accuracy in use in.
- u. The meter is calibrated in the meter to ensure accuracy in use in.
- v. The meter is calibrated in the meter to ensure accuracy in use in.
- w. The meter is calibrated in the meter to ensure accuracy in use in.
- x. The meter is calibrated in the meter to ensure accuracy in use in.
- y. The meter is calibrated in the meter to ensure accuracy in use in.
- z. The meter is calibrated in the meter to ensure accuracy in use in.

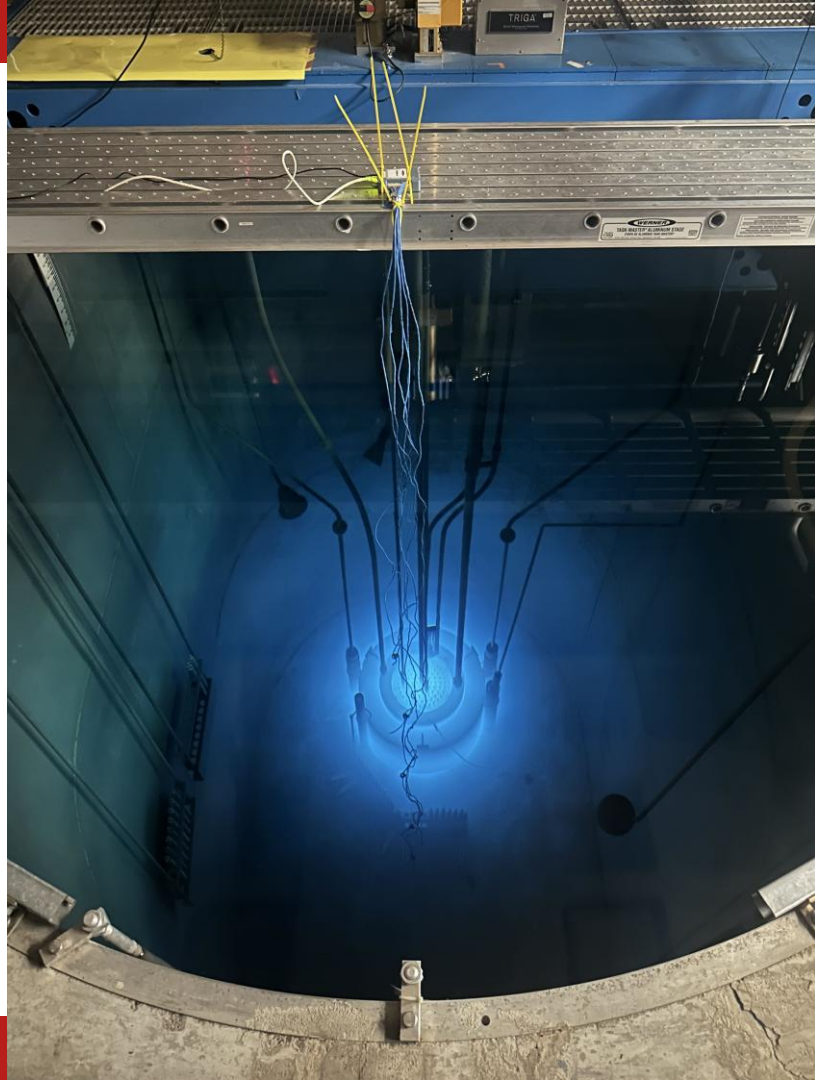


Very Short Version

As of August 20, 2026 we're operating again.

507 days passed between operations.

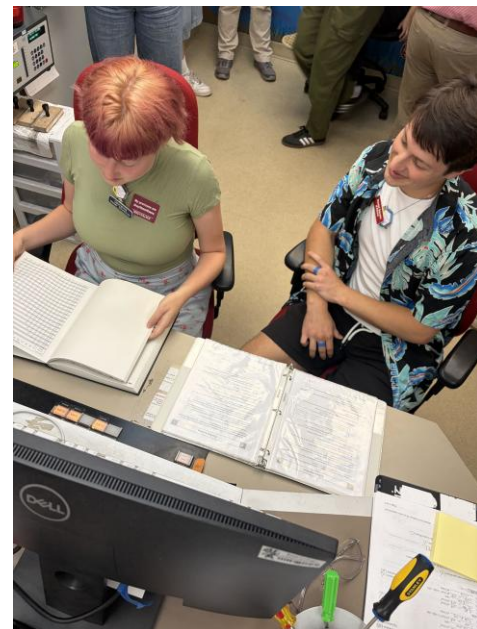
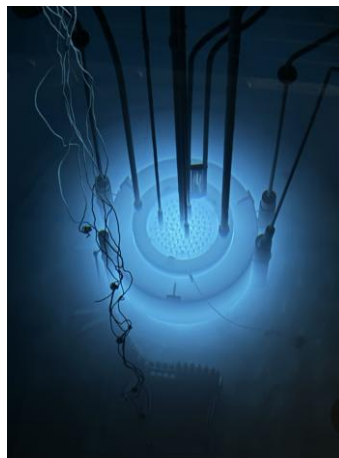
Not that we were counting.



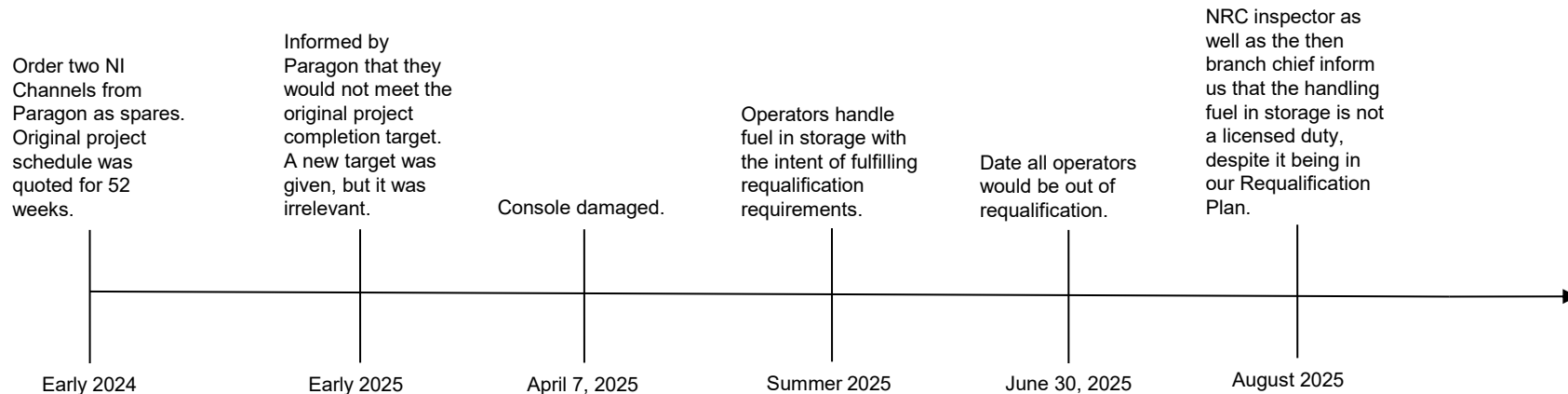
Long(er) Version

It was a long road from there to here.

Let's look at a timeline.

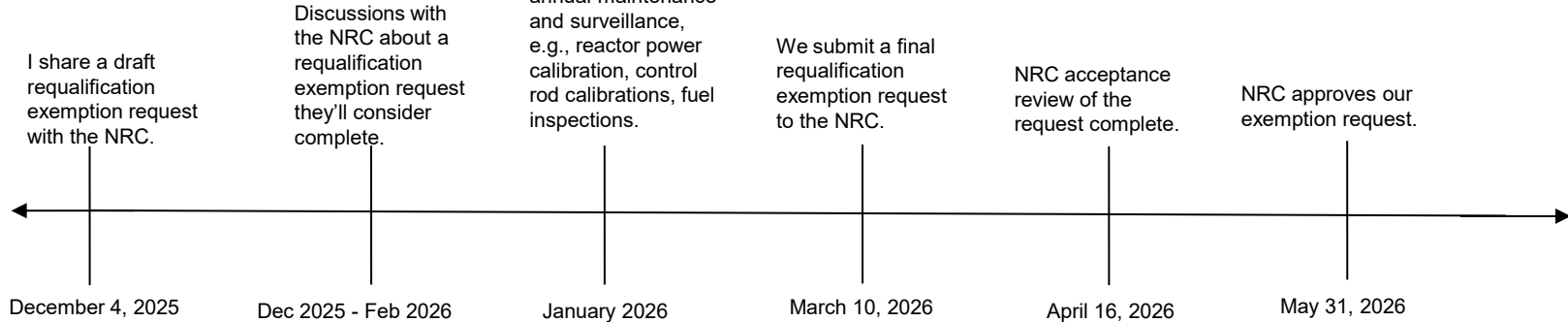


Timeline Part 1 of 4



Timeline Part 2 of 4

NI channels have not yet arrived. On a phone call with Paragon's design team they assured me they would arrive by the end of March. We defer annual maintenance and surveillance, e.g., reactor power calibration, control rod calibrations, fuel inspections.



Timeline Part 3 of 4

First new NI channel arrives from Paragon

June 4, 2026



Jerry Newhouse and Elio DiMauro complete additional training requirements at OSTR.

June 15-16, 2026

We continue deferring annual maintenance and surveillance.

June - August, 2026

Second new NI channel arrives from Paragon

August 14, 2026



Now that we can turn them all on, we install and work out as much operational troubleshooting as possible with the NI channels and control rod position indicators.

August 14 - 20, 2026



Timeline – Part 4 of 4

August 20, 2026



REED COLLEGE

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1201 SE Woodlark Boulevard, Portland, Oregon 97202-4199
phone: 503.775.2222, email: reactor@reed.edu

August 20, 2026

Dr. Audrey Bilger
President, Reed College

Dear Audrey,

On August 20th, 2026 at 1128, we operated the Reed Research Reactor for the first time since March 31st, 2025. I am very pleased to share with you that the reactor ready to support our students in the coming year and beyond.

Present at criticality were:

Operating Staff

Jerry Newhouse, Reactor Director, Senior Reactor Operator of Record

Elio DiMauro, Reactor Operations Supervisor, Physics Senior, Reactor Operator of Record

Vee Bartko, Former Projects Supervisor, 2026 Physics graduate, Reactor Operator Under Direction

Gegana Childers, Reactor Operations Manager, Second Person on Duty

Observers

Dr. Kathryn C. Oleson, Dean of the Faculty

April Sams, Radiation Safety Officer

Arzu Hritonen, Training Supervisor, Physics Senior

Ella Lane, Training Supervisor, Chemistry Junior

Jaden Bauer, Requal Supervisor, Biology Junior

Harrison Giger, Projects Supervisor, Physics Junior

Peter Gilbert, Reactor Operator, Chemistry Senior

Kellyn Cowiger, Technician, CS Sophomore

Zoe Lawson, Technician, Physics Sophomore

Kaelin Noon, Technician, BMB Sophomore

Chase Williams, Technician, Physics Sophomore

Elizabeth Oakley, Intern, Chem Eng Senior BYU

Thank you very much for your support through this long process.

Sincerely,

Jerry Newhouse
Director, Reed Research Reactor

Current Status

We completed all deferred maintenance.

Fuel inspections, a routine NRC inspection, and Freshmen Orientation Week were all coincidentally during the same week. We were busy.

We're working to catch up on deferred training for fifteen RO license candidates, seven SRO upgrade candidates, and one instant SRO candidate.

We began training for sixty-six students registered in our reactor seminar, fifteen of whom will complete operator training.

We're ready to support ~45 independent student projects over the academic year.

We're ready to continue work to return our neutron beam to service.

We're supporting at least two, but potentially three, senior theses.

Lessons Learned or Reinforced

As mentioned on the intro slide, our professional staff is quite small. Two people. I trusted that Reed's project management staff and contractors would protect the console the way I told them it needed to be (at least tarped, if not encapsulated). As the most knowledgeable individual, I should have been more proactive about ensuring that was actually done.

Supplier's delays we have no control over can have significant impact. It's worth considering what the impacts could be and planning for delays in critical components.

At least for requalification exemption requests, my experience was that it's easier for the NRC to approve a request that follows the format of a request they've previously approved. The first draft of the request I sent to them in December 2025 was what I thought was reasonable for our context and our facility. It became clear that it would have significant challenges getting approved. What we ultimately submitted as our request in March 2026 was basically a copy of publicly available documents from two other facilities' requests.