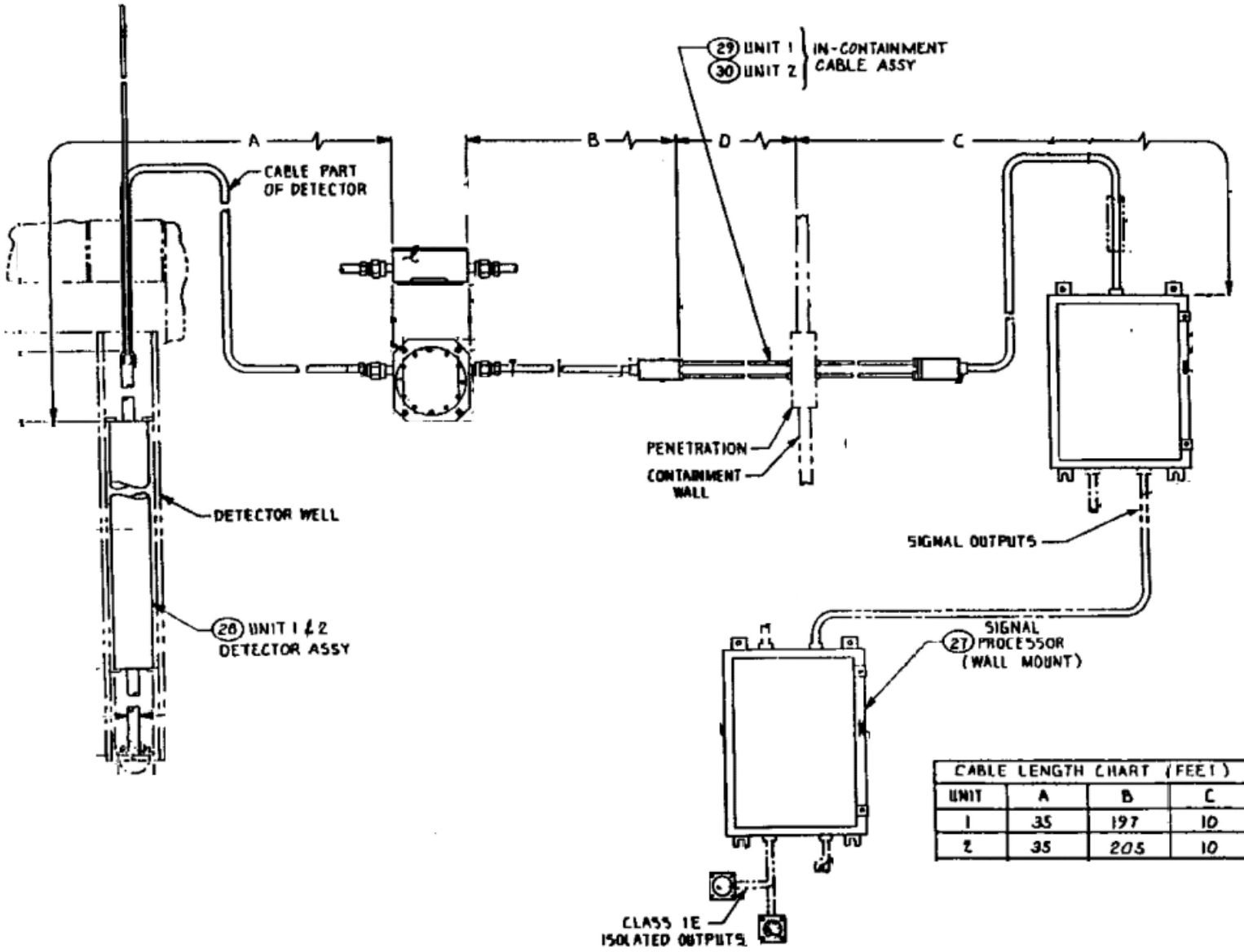
Amendment Request to Remove Neutron Flux from TS Table 3.3.3-1, Post Accident Monitoring Instrumentation

November 7, 2022

Background

- At Cook Plant Unit 2, one required channel of neutron flux instrumentation is unable to meet Environmental Qualification requirements, but otherwise fully functional
- Vendor is winding down support for Gamma-Metrics instruments by end of 2024 and was not available for emergent support for repair/replacement during most recent U2 refueling outage
- Industry precedent exists for neutron flux variable to be considered as Category 3 instrumentation

Background



CABLE LENGTH CHART (FEET)

UNIT	A	B	C	D
1	35	197	10	38
2	35	205	10	45

Proposed Change

- Remove Neutron Flux function from TS Table 3.3.3-1, Post Accident Monitoring Instrumentation
- Reclassify the Neutron Flux Post Accident Monitoring function to be RG 1.97 Category 3
  - This would eliminate need for Environmental Qualification of Wide Range Neutron Flux instrumentation

Justification

- Function: Confirm initial Reactor Shutdown
- With normal containment environment, WR NIs EQ requirements are not applicable
- With harsh containment environment:
  - adverse effects of steam or radiation are not immediate
  - WR NIs operable for initial determination of reactor trip

Justification

- Function: Critical Safety Function Status Monitoring
- With normal containment environment, WR NIs EQ requirements are not applicable
- With harsh containment environment
  - Other means of indication available to determine if imminent threat to critical safety function exists
  - e.g., Fully Environmentally Qualified Core Exit Thermocouples, RCS Hot Leg and Cold Leg instruments address this function provided by Wide Range NIs

Industry Review

- At least five plants do not include Neutron Flux in their PAM TS
  - Ginna,
  - Byron/Braidwood,
  - Comanche Peak and
  - Farley