UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

JUL 28 1989

Report Nos.: 50-325/89-17 and 50-324/89-17

Licensee: Carolina Power and Light Company
P. O. Box 1551
Raleigh, NC 27602

Docket Nos.: 50-325 and 50-324 License Nos.: DPR-71 and DPR-62

Facility Name: Brunswick 1 and 2

Inspection Conducted: July 10-14, 1989

Inspectors: Charles A. Hughey 7/27/89
C. A. Hughey Date Signed

R. R. Marston 7/27/89
R. R. Marston Date Signed

Approved by: Douglas M. Collins 7-27-89
Douglas M. Collins, Acting Chief Date Signed
Radiological Effluents and Chemistry Section
Emergency Preparedness and Radiological Protection Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, unannounced inspection was conducted in the areas of radiological effluents, plant chemistry, and environmental monitoring.

Results:

In the areas inspected, violations or deviations were not identified.

Although Brunswick liquid and gaseous effluents were well within Technical Specifications, 10 CFR 20 and 10 CFR 50 effluent limitations, gaseous radioactive iodine and particulate discharges were the highest for any Region II plant during 1988 (Paragraph 4).

The chemistry counting room quality control program was adequate in assuring the accuracy of plant radiochemical measurements (Paragraph 3).

Plant chemistry had been maintained generally within the guidelines recommended by the BWR Owner's Group.

Since the last inspection, hydrogen water chemistry control had been implemented in Unit 2. Although restricted from optimum hydrogen water chemistry control by the main steam line radiation monitor setpoints, there were obvious improvements in dissolved oxygen and conductivity in the RCS (Paragraph 7).

The environmental monitoring program was effective in assessing the impact of radiological releases to the environment (Paragraph 11).

Two follow-up items concerning reactor and turbine buildings flowrate measurements devices were closed (Paragraph 2).

One follow-up item concerning chemistry counting room procedures was closed (Paragraph 2).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

H. Caylor, Foreman, Environmental and Radiation Control (E&RC)
S. Fitzpatrick, Specialist, E&RC
*J. Harness, General Manager
D. Hunt, Senior Engineer, BOP Auxiliaries
W. Mangis, Senior Engineer, E&RC
W. Nurnberger, Foreman, Environmental and Chemistry (E&C)
G. Raker, QA Specialist
*C. Robertson, Supervisor, (E&C)
T. Roeder, Foreman, E&C
*R. Starkey, Manager, Brunswick Nuclear Project
B. White, Senior Engineer, E&RC

Other licensee employees contacted during this inspection included engineers, technicians, and administrative personnel.

NRC Resident Inspector

*W. Levis

*Attended exit interview

2. Licensee Action on Previously Identified Inspector Follow-up Items (92701)

a. (Closed) Inspector Follow-up Items (IFIs) 50-324/87-32-01 and 50-325/87-33-01: Licensee committed to have reactor buildings and turbine buildings ventilation flowrate measurement devices operational and returned to service by January 13, 1989.

As discussed in Inspection Report Nos. 50-324/88-28 and 50-325/88-28 dated September 23, 1988, inoperability of the Units 1 and 2 reactor and turbine buildings ventilation flowrate measurement devices had placed the licensee in continuous ACTION statements of the Technical Specification (3.3.5.9) for up to three years.

During a previous inspection (87-32/87-33, September 14-18, 1987), the licensee committed to have these flow measurement devices operable by January 13, 1989. In a letter to the NRC dated June 22, 1988, the licensee postponed this commitment one year to January 13, 1990.

In Inspection Report No. 88-28, dated September 23, 1988, the NRC expressed concerns regarding the basis for continued operation under

ACTION statements of the Technical Specifications and requested the licensee to provide a basis for such.

In a letter to the NRC dated November 23, 1988, the licensee committed to expediting the work required to place these instruments back in service. Modifications were to be completed by January 13, 1989, on the Unit 2 reactor and turbine building flowrate measurement devices, and by March 1989, on the Unit 1 reactor building device. Modifications had been previously completed on the Unit 1 turbine building device.

During a later inspection (88-44, December 5-9, 1988), the licensee indicated to the inspector that the Unit 1 turbine building flow measurement device was operable, the Unit 2 turbine and reactor building devices were to be worked on during the week of December 11, 1988, and that the Unit 2 reactor building would indeed be operable by March 1989, as indicated by letter.

During this inspection, the licensee indicated that the Unit 2 turbine building, Unit 2 reactor building and Unit 1 reactor building flowrate measurement devices for gaseous effluents were indeed placed back in service during March 1989, and that all Limiting Conditions of Operations (LCOs) pertaining to these inoperable flowrate measurement devices were cancelled. This item is considered closed.

b. (Open) IFIs 50-324/85-12-01 and 50-325/85-12-01: Inoperable condition of hydrogen gas monitoring instruments in the Augmented Offgas System to be corrected and instruments returned to service.

As discussed in Inspection Report NO. 88-28, dated September 23, 1988, operation of the new in-line hydrogen monitoring equipment in the Augmented Offgas Systems that was associated with the Hydrogen Injection Systems, was tied with the implementation of hydrogen water chemistry (HWC) in both units.

Since the last inspection in this area (Report No. 88-44, December 5-9, 1988), the licensee had begun HWC control in Unit 2. Although hydrogen was being injected into the Unit 2 feedwater, the complete Hydrogen Injection System, of which the hydrogen gas monitoring system was part, was still in the testing phase. Because of this, the complete system had not been accepted by the plant staff from the construction group as an operable system. Automatic calibration problems with the hydrogen analyzers along with other hydrogen injection system problems was preventing turnover/acceptance as an operable system. Because the hydrogen analyzers were part of the total system, they could not be declared operable and therefore the licensee continued to remain in an Action Statement of the Technical Specifications. The licensee planned to have these system problems resolved and turnover accomplished by early fall 1989, although a firm date could not be established. Some system installation progress had been made toward the implementation of

Unit 1 HWC control. The licensee hoped to have Unit 1 HWC implemented by the end of 1989. This item remains open.

c. (Open) IFI 324/88-28-01: Inoperable condition of the radwaste liquid effluent flow measurement device.

Since the last inspection in this area there had been no significant progress toward the repair/replacement of the flow integrator in the Radwaste liquid effluent piping. The licensee continued to remain in an ACTION statement of the Technical Specification (3.5.8). Repair of this flow integrator was not considered a priority item by the licensee. This item remains open.

d. (Closed) IFI 50-324/88-44-01: Revision of Chemistry Countroom Procedures

During a previous inspection in this area (88-44, December 5-9, 1988), the licensee agreed to conduct a review of the chemistry countroom procedures because of procedural inconsistencies observed the inspector.

During this inspection, the inspector reviewed the recently revised procedures and considered them to be complete, accurate and well organized. Section 3.b.6 of this report discusses this review in more detail. This item is considered closed.

3. Counting Room (84750)

a. The inspector toured the radiochemistry counting laboratory. Instrumentation in the laboratory included the following:

(1) Nuclear Data 6600 computer based gamma spectroscopy counting system with two operational Intrinsic Germanium detectors. During the inspection, the licensee was testing a new gamma spectroscopy counting system and planned to have it operational by Fall 1989.

(2) Tennelec LB5100 Proportional Counter used for gross alpha determinations.

(3) Packard 4530 Liquid Scintillation Counting system used for tritium (H-3) determination.

b. The licensee's quality assurance program for the above equipment was reviewed to ensure compliance with selected and applicable portions of Regulatory Guide 4.15, Quality Assurance for Radiochemical Monitoring Programs (normal operations) - Effluent Streams and the Environment, Rev. 1, February 1978. The following observations were made:

(1) Daily energy calibrations, full-width half max. determinations, reliability checks and system resolution checks were performed on the gamma spectroscopy system (2 detectors) using a mixed gamma ray source. The values obtained were recorded and trended on control charts with specified predetermined limits in order to confirm detector stabilities and system operability. These control charts, with new limits, were constructed on a quarterly basis. A review of these control charts for the quarter beginning July 1 showed all values to be within the established limits, indicating stable detector performance.

A background determination was completed daily, although procedurally required weekly. A review of recent data showed all background counts within prescribed limits.

(2) Daily background and reliability (efficiency) checks for gross alpha analyses were performed on the LB5100 proportional counter. The inspector verified that the data for July 1987, was recorded and trended and that all valves were within the established control chart limits. Also verified were the most recent quarterly chi-square determination and yearly self-absorption curve. No discrepancies were noted.

(3) The daily background and reliability (efficiency) checks performed during July 1989, for the Packard 4530 liquid scintillation counter, were verified by the inspector to be within predetermined control limits, indicating stable instrument performance. The most recent quarterly chi-square determination was also reviewed with no discrepancies noted.

(4) Quarterly, the licensee participated in an extensive split gamma spectroscopic, tritium and gross alpha analyses program with an outside vendor. The inspector reviewed the results of this cross-check program for all four quarters of 1988 and the first and second quarters of 1989. The licensee and the vendor were in agreement for all isotopes except for a minor disagreement for the first quarter of 1989 gross alpha split sample. The criteria used for determining agreement was the same used by the NRC in their radiological confirmatory measurements program.

(5) All comparative results of a recent confirmatory measurements program between the licensee and the NRC of selected nuclides (Tritium, Strontium-89, Strontium-90, and Iron-55) were in agreement. (See supplement to Inspection Report No. 50-324, 325/88-44, May 1, 1989).

(6) Because of inconsistencies previously identified by the inspector during December 1989 between counting room procedures in the areas of instrument quality control and references, the licensee agreed to conduct a thorough review of the chemistry counting room procedures, focusing on quality control,

references, compatability with other procedures, and use of standard industry practices. This was identified as IFI 50-324/88-44-01.

The inspector reviewed the applicable counting room procedures. All had been reviewed and revi..d since the last inspection in this area. There had been sign..icant procedural improvements incorporated into the current revisions and inconsistencies were eliminated. The inspector considered these updated procedures to be much m... complete, accurate, and well organized. The following procedures were reviewed:

a) E&RC-2205, Operation and Calibration of the Packard 4530 Scintillation Counter, Rev. 7, May 23, 1989.

b) E&RC-1700, Verification of Analytical Performance, Rev. 8, April 24, 1989.

c) E&RC-2201, Calibration/Operation of ND6600 Multichannel Analyzer, Rev. 14, May 23, 1989.

d) E&RC-2207, Calibration and Operation of the Tennelec LB5100, Rev. 6, April 24, 1989.

IFI 50-324/88-44-01, opened during inspection 88-44, is considered closed.

4. Semiannual Effluent Reports (84750)

The inspector reviewed the semiannual radioactive effluent release reports for 1988. This review included an examination of the liquid and gaseous effluent for 1988 as compared to 1987 and 1986 data. This data is summarized in the attachment to this report.

No abnormal releases were reported during 1988. This was a significant improvement over 1987 during which there three abnormal releases.

On a per unit basis, Brunswick was well below the Region II average for liquid fission and activation products and tritium discharges. A comparison of liquid tritium and gross alpha discharges for 1988 to 1987 and 1986 data showed no significant trends. Liquid fission and activation products, however, did show slight increases during 1986, 1987, and 1988.

Gaseous fission and activation product releases showed a decreasing trend during the three year period, however, gaseous iodine releases showed no significant trends. Gaseous particulate releases were up slightly over the period whereas gaseous tritium releases were trending downward. On a per unit basis, however, Brunswick discharged more gaseous radioactive iodine and particulate activity than any other plant in Region II during 1988. This was attributable to fuel leaks during previous fuel cycles.

During a review of a schematic of the gaseous radwaste treatment system, the inspector noted that both the Unit 1 and Unit 2 turbine gland seals and mechanical vacuum pumps exhausts are discharged directly to the main stack untreated with only a 1.8 minute delay line to allow for the decay of very short lived isotopes prior to release. The licensee indicated that while no measurements had been made, a large portion of the total gaseous iodine and particulate activity discharged out the main stack could be via this pathway, and that further investigations would be required.

For 1988, Brunswick liquid and gaseous effluents were well within Technical Specifications, 10 CFR 20, and 10 CFR 50 effluent limitations.

5. Effluent Radiation Monitor Calibrations (84750)

Tables 4.3.5.9-1 of the Unit 1 and Unit 2 Technical Specifications required that channel calibrations of the gaseous effluent radiation monitors be completed at least once per 18 months. The completed channel calibration packages for the following gaseous effluent radiation monitors were reviewed:

| Monitor | Completion Date |
|---|---|
| a. General Atomic stack radiation monitor | March 2, 1989 |
| b. Reactor Building roof vent radiation monitor (Unit 1) | May 3, 1989 |
| c. Reactor Building roof vent radiation monitor (Unit 2) | December 15, 1988 |
| d. General Atomic Turbine Building Radiation Monitor (Unit 1) | June 12, 1989 |
| e. General Atomic Turbine Building Radiation Monitor (Unit 2) | May 10, 1989 |

Tables 4.3.5-8-1 of the Unit 1 and Unit 2 Technical Specifications required that channel calibrations of certain liquid effluent radiation monitors also be calibration at least once per 18 months. The completed channel calibration packages for the following liquid effluent radiation monitors were reviewed:

| Monitor | Completion Date |
|---|---|
| a. GE Service Water Effluent Radiation Monitor (Unit 1) | June 5, 1988 |
| b. GE Service Water Effluent Radiation Monitor (Unit 2) | January 12, 1989 |

c. Liquid Radwaste Radioactivity Effluent Monitor (Unit 2) January 1, 1988

All packages for the liquid and gaseous effluent monitors were properly completed and reviewed. No discrepancies were noted by the inspector.

6. Audits and Appraisals (84750)

Sections 6.5.5.1 and 6.5.5.2 of the Technical Specifications require the licensee's Performance Evaluation Unit (PEU) of the Corporate Quality Assurance Department to perform periodic audits including: the Environmental Monitoring Program and results (once per 12 months); the Offsite Dose Calculation Manual (once per 24 months); the Process Control Program (once per 24 months); and the Quality Assurance Program to meet the provisions of Regulatory Guide 1.21, Revision 1, 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months. The inspector reviewed audit QAA/0021-89-02, conducted April 3-7, 1989. This audit appeared to satisfy the TS requirements and licensee identified findings had been resolved or were being tracked to final resolution.

The inspector also reviewed Quality Assurance/Quality Control (QA/QC) Field Report No. SFR-89-04 conducted May 25, 1989. During a plant tour, a QA/QC inspector discovered that the noble gas flow integrator for the Unit 1 Reactor Building Effluent Radiation monitor was not operating. The condition was promptly and properly reported to cognizant plant personnel and appropriate corrective action was taken.

7. Plant Chemistry (84750)

The inspector reviewed water chemistry data logs and data plots for July 1989, for both units and discussed various plant chemistry items with licensee personnel. The results of these conversation and data review are discussed below.

At the time of this inspection, Unit 1 was operating at 100 percent power, three months into a new cycle. Unit 2 was at a maximum power of 96 percent coasting down to a planned refueling outage beginning in September 1989.

Chloride concentrations in both Units 1 and 2 reactor water had been maintained below five parts per billions (ppb) for the period. This was well below the 20 ppb achievable value recommended by the BWR Owner's Group (BWR[illegible]) during power operations. Reactor water sulfates, a diagnostic parameter, had been maintained well below 10 ppb in both units. Both chlorides and sulfates accelerate intergranular stress corrosion cracking (IGSCC) of austenitic stainless steels.

Reactor water conductivity in Unit 1 varied between 0.17 and 0.25 micromho/centimeter (cm) for the period. Although periodically exceeding the achievable value of 0.20 micromho/cm, conductivity had been maintained consistently below the BWROG's action level 1 recommended value of 0.[illegible] micromho/cm. Unit 2 for the same period varied between 0.10 and 0.13 micromho/cm. This significant difference between the two units was attributable to the use of HWC control in Unit 2. Conductivity is a direct indication of ionic impurity concentrations in the water.

Dissolved oxygen (DO) in the Unit 2 reactor water was maintained at about 150 ppb, which is a normal value for BWR's. Unit 2 reactor water DO had been reduced to about 5-10 ppb for the period. This significant difference between units was also directly attributable to the use of HWC control in Unit 2. Gaseous hydrogen added to the feedwater during power operations suppressed the radiolytic decomposition of water in the core, therefore reducing oxygen production. Dissolved oxygen, along with chlorides and sulfates, is a major contributor to IGSCC.

Feedwater DO in both units had been maintained between 20-30 ppb (by oxygen injection) for the period. Residual oxygen levels are needed in the feedwater system to help maintain the passive oxide coating on the pipe walls thereby helping to reduce general corrosion rates.

Each unit had full flow condensate polishing systems that kept the feedwater conductivities of both units at or below the BWROG's recommended achievable level of 0.06 micromho/cm. The licensee attributed the polishers' effectiveness to their design which was four parallel filter demineralizers in series prior to six parallel deep bed demineralizers in each unit. The filter demineralizers accomplished heavy iron removal from the condensate prior to entering the deep bed demineralizers thereby greatly reducing iron fouling. This resulted in improved effectiveness and extended life of the deep bed demineralizers.

Chloride levels in both feedwater systems had been maintained below 5 ppb for the period.

Units 1 and 2 both had replaced copper alloy condenser tubes and tube sheets in 1983 and 1984 respectively with titanium tubes and double walled aluminum-bronze tube sheets. Below-water-line seawater in-leakage into the hotwell had been minimal since then and was a significant factor in maintaining feedwater conductivities, extending the useful life of the deep bed condensate demineralizers and reducing copper levels in the reactor coolant system.

During July 1989, Unit 1 reactor coolant gross activity ranged between 0.2 and 0.3 microcuries/gram (mCi/gm). Dose Equivalent Iodine-131 (DE I-131) at steady state, 100 percent power was about 3.4 E-3 uCi/gm. Unit 2 reactor coolant gross activity averaged between 0.10 and 0.13 uCi/gm and DE I-131 was about 6.7 E-4 uCi/gm at 96 percent power. The inspector expressed concern that the Unit 1 DE I-131 was a factor of 10 higher than Unit 2 DE I-131 since Unit 2 was nearing the end of its current fuel cycle in September 1989 and Unit 1 had just begun a new fuel cycle in April 1989.

The licensee attributed the higher activities in Unit 1 to fuel leakers during the previous fuel cycle. Suspect fuel bundles in Unit 1 had been sipped during the previous refueling outage and known leakers had been removed. Fission products and tramp uranium from the leakers, however, had deposited about the core during the previous cycle and continued to contribute to the DE I-131 and gross activity values.

General Electric informed the licensee that several more fuel cycles would be required to remove and burn out this excess activity.

Since the last inspection (88-44) the licensee had implemented HWC control on Unit 2 to help reduce or stop crack growth caused by IGSCC in RCS piping and welds. About 12.5 standard cubic feet per minute (SCFM) of gaseous hydrogen was being injected into the suction of the condensate booster pumps. This reduced the electrochemical potential (ECP) of the RCS from about 160 millivolts (mV) (with no injection) down to about 60 mV. An optimum ECP of -230 mV was recommended to completely retard crack in welds. Decreasing the ECP further would require an increase in hydrogen injection rates, which would result in a further increase in nitrogen-16 carryover into the main steam lines (MSL) there by further increasing MSL radiation levels. The licensee was restricted from further increases in hydrogen injection rates by the Unit 2 Technical Specifications, Table 3.3.2-2, which required that the trip setpoints of the MSL radiation monitors be set at less than or equal to three times full power background. An increase in hydrogen injection rates would cause MSL radiation levels to exceed the monitor trip setpoints, causing primary containment isolation. During this inspection, the licensee was preparing a request to the NRC for a Technical Specification change to modify the MSL monitor setpoints to accommodate increased hydrogen injection rates. It should be noted, however, that although the optimum ECP had not been achieved, there had been a significant reduction in RCS dissolved oxygen and conductivity since HWC control was implemented. Pre-cracked and artificially stressed 304SS and Inconel 182 specimens showed significant decreases in crack growth rates when hydrogen was being injected.

8. Annual Environmental Surveillance Report

The inspector reviewed the Annual Environmental Surveillance Report for January 1 through December 31, 1988. The inspector determined that the program was conducted and reports submitted in accordance with Technical Specification requirements.

According to the report, the data indicated that Brunswick Nuclear Plant operations had minimal radiological impact on the environment. The annual land-use census was performed during late June 1988. No significant changes were required to be made to the monitoring program as a result of this census. The report also included a listing of missed samples and analyses and the reasons these samples were missed.

No violations or deviations were identified.

9. Air Cleaning (84750)

The inspector discussed in-place testing of the Standby Gas Treatment System HEPA filters and charcoal adsorbers and lab testing of charcoal samples with a licensee representative, and reviewed documentation of the testing.

The inspector determined that both trains of both units were tested in accordance with Technical Specifications at the required frequency.

No violations or deviations were identified.

10. Meteorological Measurements System (84750)

The inspector examined the meteorological instrument tower and other meteorological parameter detection instruments in the vicinity of the tower, the recording instrumentation in the met instrument shack, and the system log books.

A licensee representative stated that the daily inspection was conducted by plant personnel, and the rest of the surveillances and data evaluation were done by corporate personnel.

The detection instrumentation appeared to be properly placed, and there appeared to be no obstructions to affect gathering of data. Wind data was recorded on paper charts, and the rest of the data was recorded on magnetic tape.

The logbook indicated that calibration of system components had been done during February 1989.

No violations or deviations were identified.

11. Environmental Monitoring Program (84750)

The inspector discussed the program and toured selected environmental monitoring sites with a cognizant licensee representative. The licensee representative stated that samples were taken by plant personnel and sent to Shearon Harris Energy and Environmental Center (SHEEC) for analysis. The SHEEC then summarized the results in monthly reports to the plant. The inspector examined twelve TLD sampling stations, five air sampling stations, one water sampling stations, and three vegetable gardens. The licensee maintained four vegetable gardens around the perimeter of the plant and one control garden. The stations appeared to be placed in accordance with Technical Specifications and the air sampler integrated flow meters were in current calibration. The licensee representative stated that milk samples were not taken because no milk animals were maintained within five miles of the plant. The inspector reviewed the monthly environmental reports for January through May 1989. The reports showed that the samples analyzed had insignificant levels of activity and had been collected and processed in accordance with Technical Specifications.

The inspector also reviewed calibration records for the integrated flow meters for the air samplers and the calibration certificate for the rotameter which was currently used to calibrate the flow meters.

No violations or deviations were identified.

12. Exit Interview

The inspection scope and results were summarized on July 14, 1989, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed above. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

Although Brunswick liquid and gaseous effluents were well within Technical Specifications, 10 CFR 20 and 10 CFR 50 effluent limitations, gaseous radioactive iodine and particulate discharges were the highest for any Region II plant during 1988 (Paragraph 4).

The chemistry counting room quality control program was adequate in assuring the accuracy of plant radiochemical measurements (Paragraph 3).

Plant chemistry had been maintained generally within the guidelines recommended by the BWR Owner's Group.

Since the last inspection, hydrogen water chemistry control had been implemented in Unit 2. Although restricted from optimum hydrogen water chemistry control by Technical Specifications associated with the main steam line radiation monitors, there were obvious improvements in DO and conductivity in the RCS (Paragraph 7).

The environmental monitoring program was effective in assessing the impact of radiological releases to the environment (Paragraph 11).

Two IFIs concerning reactor and turbine buildings flowrate measurements devices were closed (Paragraph 2).

One IFI concerning chemistry counting room procedures was closed (Paragraph 2).

# ATTACHMENT

## RADIOACTIVE EFFLUENT RELEASE SUMMARY

BRUNSWICK, UNITS 1 AND 2

| | 1988 | 1987 | 1986 |
|---|---|---|---|
| Abnormal Releases | 0 | 3 | 1 |
| Activity Released (curies) | | | |
| a. Liquid | | | |
| 1. Fission and Activation Products | 8.32E-01 | 7.15E-01 | 1.26E-01 |
| 2. Tritium | 3.10E+01 | 1.93E+01 | 5.78E+01 |
| 3. Gross Alpha | $<$ LLD | 1.06E-03 | 2.70E-03 |
| b. Gaseous | | | |
| 1. Fission and Activation Gases | 1.58E+03 | 2.64E+04 | 4.51E+04 |
| 2. Iodines | 2.27E-02 | 5.01E-02 | 1.46E-02 |
| 3. Particulates | 1.54E-01 | 1.32E-01 | 3.23E-02 |
| 4. Tritium | 5.55E+00 | 6.06E+00 | 7.07E+00 |