U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-387/84-39
50-388/84-49

Docket No. 50-387
50-388

License No. NPF-14
NPF-22 Priority - Category C
C

Licensee: Pennsylvania Power and Light Company

2 North Ninth Street

Allentown, Pennsylvania 18101

Facility Name: Susquehanna Steam Electric Station, Units 1 and 2

Inspection At: Berwick, Pennsylvania

Inspection Conducted: December 10 - 14, 1984

Inspectors: R. L. Nimitz, Senior Radiation Specialist — 1/28/85 date

R. L. Nimitz for — J. J. Kottan, Laboratory Specialist — 1/28/85 date

R. L. Nimitz for — B. H. Carson, Radiation Specialist — 1/28/85 date

R. L. Nimitz for — R. K. Struckmeyer, Radiation Specialist — 1/28/85 date

Approved by: W. J. Pasciak, Chief, BWR Radiation Safety Section — 1/29/85 date

Inspection Summary: Inspection on December 10 - 14, 1984 Combined Inspection Report No. 50-387/84-39; 50-388/84-49

Areas Inspected: Routine, unannounced inspection of the licensee's radiological controls and chemical and radiochemical measurements programs, the radioactive waste program, and the effluent controls program. The NRC Region I Mobile Radiological Measurements Laboratory was used and laboratory assistance was provided by the DOE's Radiological and Environmental Sciences Laboratory. Areas reviewed included: licensee action on previous findings;

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preparation and planning for Unit 1 Refueling; sealed source control; radiation protection instrument calibration; radioactive waste management; radiological controls implementation; laboratory QC, audits, confirmatory measurements; and effluent controls. The inspection involved 140 inspection hours on site by four region-based inspectors.

Results: No violation or deviation were identified.

Details

1.0 Individuals Contacted

1.1 Principal Licensee Employees

*G. Burns, Senior Project Engineer, NQA
*A. Derkacs, Senior Project Engineer, QE, NPE
*J. Fritzen, Group Supervisor, Resident Engineering
*D. Sutton, Material Supervisor
*R. Prego, QA Supervisor, OPS
*M. Buring, H. P. Supervisor
*H. Reily, H.P.
*D. Miller, Chemistry Foreman
*J. Todd, Compliance
*R. Doebler, Chemistry Supervisor
*S. Denson, Assistant Manager, NQA
*J. Edwards, P and A Supervisor
*H. Keiper, Station Superintendent
*D. Thompson, Assistant Station Superintendent
L. Vnuk, Senior Chemist
J. Felock, Senior Project Engineer, Radwaste

1.2 Other Licensee Employees

G. Apple, Private Consultant

1.3 NRC

*L. Plisco, Resident Inspector

*Denotes those present at the exit interview.

The inspector also interviewed other licensee employees including members of the chemistry and health physics staff.

2.0 Purpose of Inspection

The purpose of the inspection was to examine the following program elements:

Unit 1 and Unit 2

- Licensee Action on Previous Findings
- Radiological/Chemical Confirmatory measurements
- Solid Radioactive Waste Management.
- Radioactive Waste Quality Assurance

- Radioactive Source Control
- Radiation Protection Instrumentation Calibration.

Unit 1

- Preparation and Planning for the First Refueling outage
- Implementation of Radiological Controls for on-going work.

3.0 Licensee Action on Previous Inspection Finding

3.1 (Closed) Follow-up Item (50-387/83-17-05)
Licensee to establish a methodology to estimate intake of airborne radioactive material based on whole body count data. The licensee established procedure HP-TP-223, "Internal Dose Calculations." The procedure describes conservative methodology for estimating intake based on whole body count data.

3.2 (Closed) Follow-up Item (50-387/84-25-01)
Licensee to evaluate the capability of the vendor to analyze breathing air quality. The licensee's performed an audit of the vendor who analyzes breathing air quality. The vendor was found to be capable of properly analyzing air quality of licensee breathing air samples.

3.3 (Closed) Follow-up Item (50-387/84-25-02)
Licensee to upgrade the neutron survey meter source checking procedures. The licensee revised applicable procedure to provide applicable source check acceptance criteria and to establish fixed geometrys for source checking all neutron survey meters that the licensee has on hand and would likely use for neutron surveys.

3.4 (Closed) Follow-up Item (50-388/84-32-01)
NRC to review results of licensee surveys performed in the Unit 2 Drywell at 40% power and review licensee performance of surveys at FSAR Test Condition 6. The licensee performed surveys at the 40% power level. The licensee has yet to review the data and correct (as necessary) the neutron exposure of personnel who entered Unit 1 Drywell at power. This matter will be reviewed during a subsequent inspection. Inspection Item 50-387/84-25-03 remains open for this item. The licensee completed performance of plant surveys at FSAR Test Condition 6 per Procedure ST 2.1. The results have yet to be approved by the licensee. Also, two test exceptions are open. The test exceptions (142,143) deal with radiation levels above design.

The licensee's action on the test exceptions will be reviewed during a subsequent inspection. Follow-up item number 50-388/84-49-01 is assigned to this matter.

3.5 (Closed) Follow-up Item (50-387/83-28-02)
Licensee to complete review associated with an unplanned spill of radioactive material. Two issues remained open: review of valve position indications and revision of procedure to clarify incorrect references. The licensee verified the position of applicable valves identified and clarified the procedure to remove incorrect references.

3.6 (Closed) Follow-up Item (50-387/83-38-01)
Licensee to review work location of a worker who was terminated without receiving a whole body count. The licensee reviewed the work locations of the subject individual. The licensee determined that the individual had not worked in areas requiring him to obtain a whole body count. Inspector discussions with licensee representatives and review of documentation did not identify the need for the individual to be whole body counted.

3.7 (Open) Follow-up Item (387/82-25-02): Power loss to airborne effluent radiation monitor control terminal. The planned modifications to the airborne effluent radiation monitors, including power loss to the monitor control terminal, have not been made. This area will be reviewed in a subsequent inspection.

3.8 (Open) Follow-up Item (387/82-28-01; 388/83-30-02): Review primary containment monitor sample line to determine if it can provide representative samples. The licensee stated that a report evaluating the effect of the change in the diameter of the sample lines on particulate sample representativeness had not yet been received and evaluated. This area will be reviewed during a subsequent inspection.

3.9 (Open) Follow-up Item (387/84-25-04; 388/84-32-02): Licensee to establish sampling procedures for radwaste process streams. The licensee has not completed and implemented a procedure for sampling the radwaste processing streams, including sample line purge time or volumes. This area will be reviewed during a subsequent inspection.

3.10 (Open) Follow-up Item (387/84-25-05; 388/84-32-03): Laboratory QA/QC program. The licensee has not yet formalized the frequency of the interlaboratory measurements QC program and included the frequency in the QA/QC procedures. The area will be reviewed during a subsequent inspection.

4.0 Preparation and Planning for Unit 1 First Refueling Outage

The licensee's preparation and planning in the area of Radiological Controls was reviewed. Areas discussed included:

- augmentation of organization

- training and qualification of personnel brought in to augment the organization
- facilities and equipment
- protective clothing
- planning and scheduling
- exposure management
- use of mock-ups for training personnel.

The evaluation of the licensee's performance in this area was based on:

- discussions with cognizant licensee personnel
- review of documentation
- review of facilities and equipment.

The inspector considered the planning and preparation to be extensive, comprehensive and timely. The inspector noted that the licensee has constructed a full-scale, working, under vessel mock-up to train personnel for control rod drive work.

The inspector also reviewed the licensee's preparation and planning for use of a linear accelerator to perform non-destructive pipe examination work. The licensee's preparation and planning for use of the device was considered acceptable.

The following recommendation for improvement was identified:

Upgrade the capability to perform on-going job exposure tracking and upgrade criteria for review and evaluation of accumulated exposure data. The review criteria should provide clear provisions for detecting, evaluating and correcting (as necessary) situations in which personnel exposures exceed initial exposure estimates inorder to effect increased exposure savings or gain an understanding of the causes of the exposure.

No violations were identified.

5.0 Radioactive Sealed Source Contamination Checks Control, and Inventory

The inspector reviewed the licensee radioactive source contamination checks, control and inventory with respect to criteria contained in Unit 1 and 2 Technical Specification 3/4.7.5, "Sealed Source Contamination"

The licensee's performance in the area was based on:

- discussions with cognizant licensee personnel

- observations by the inspector
- review of documentation
- review of smear counting instrument capabilities.

No violations were identified.

The licensee was effectively implementing the requirements of the Technical Specification. Source records (e.g. inventories) were well maintained.

6.0 Radiation Protection Instrumentation Calibration

The inspector reviewed the licensee's calibration of portable radiation and airborne radioactivity sampling equipment with respect to criteria contained in:

- ANSI N323, 1978, "Radiation Protection Instrumentation Test and Calibration"
- Regulatory Guide 8.25, August 1980, "Calibration and Error Limits of AM Sampling Instruments for Total Volume of Air Sampled."

The licensee's performance in this area was based on:

- discussions with cognizant personnel
- review of documentation
- observations by the inspector

The inspector did not identify any concerns regarding calibration of portable radiation survey instrumentation.

Regarding control of calibration procedures and calibrations of portable count rate instrumentation and airborne radioactivity samples, the following matters requiring licensee attention were identified:

- The licensee was using a contractor to provide instrument calibration services. No apparent method was in place to assure the contractor: had established procedures in place for the calibration, the proper revision of the procedures were used, and new procedures were reviewed by the licensee to ensure they were satisfactory to the licensee.
- No apparent specific procedures were being used by the licensee's contractor to perform calibrations on certain count rate instrumentation.

- Examination of airborne radioactivity sampler calibration data identified discrepancies between sampler flow rates as determined by calibration of the sampler performed using two different calibration devices. The licensee was unable to identify which calibration data was acceptable (Note: The sampler flow rates were different by as much as 30%)

- No specific acceptance criteria was established for evaluating the daily functional checks performed on portable count rate instrumentation.

The above matters are unresolved (50-387/84-39-01). The licensee's actions on these matters will be reviewed during a subsequent inspection.

Licensee representatives indicated a QA review of the calibration program had identified deficiencies in the calibration program and that: 1) the program was being reviewed and 2) additional staff positions have been authorized to provide for better oversight of the calibration program.

7.0 Solid Radioactive Waste Management

7.1 Solid Radioactive Waste

The inspector reviewed aspects of the licensee's Radioactive Waste Program with respect to criteria contained in the following:

- 10 CFR 20.203, "Caution signs, labels, signals and controls"
- 10 CFR 20.311, "Transfer for disposal and manifests"
- 10 CFR 61.56, "Waste Characteristics".

The evaluation of the licensee's performance in the area was based on:

- discussions with cognizant licensee personnel
- review of documentation
- observations by the inspector
- review of shipping records

No violations were identified. The licensee was adequately implementing the requirements of the above criteria.

Within the scope of this review, the following matter requiring licensee attention were identified:

- Establish procedure controls and/or perform evaluations to ensure compliance with the requirements of 10 CFR 61.56(a) (4), (a) (5), and (b) (3)
- Revise procedures to address lost shipment search/notification requirements of 10 CFR 20.311 (d) (8)
- Revise procedures to ensure compliance with the chelating agent requirements of 10 CFR 20.311 (b)

The licensee's actions on the above matters will be reviewed during a subsequent inspection (50-387/84-39-02)

7.2 Quality Assurance

The inspector examined licensee Quality Assurance of the Solid Radioactive Waste Program to determine if appropriate procedures were established for performing Solid Radioactive Waste Quality Assurance.

The evaluation of the licensee's performance was based on:

- discussions with cognizant personnel
- review of procedures
- review of audit check lists

No violations were identified. The inspector considered the procedures adequate to address 10 CFR 20.311, 10 CFR 61.55 and 10 CFR 61.56 compliance.

8.0 Radiological Controls Implementation Review

The inspection reviewed the implementation of radiological controls for various on-going tasks observed. The licensee's performance in the area was based on:

- discussion with cognizant personnel
- review of on-going work activities inside Unit 2 Drywell
- review of documentation including airborne radioactivity and radiation surveys
- performance of independent surveys by the inspector

No violations were identified

Within the scope of this review, the following matters requiring licensee attention were identified

- Instrumentation and Control Work Authorizations were not being routinely reviewed for purposes of establishment of an adequate radiation work permit.

- Radiation Protection personnel monitoring control points were not routinely or periodically verifying that the work to be performed by an individual had been reviewed and approved for work under a particular radiation work permit. The inspector found one individual working in the Drywell who's work authorization had not been approved for work under the RWP signed by the individual. The licensee immediately terminated the work and initiated action to correct the situation.

On December 31, 1984, the licensee's Health Physics Supervisor notified the inspector via telephone that:

- I&C work authorizations would be reviewed for purposes of generation of an adequate RWP

- A special control point instruction was generated to provide guidance for radiation protection personnel control of work and verification of an established RWP

The licensee's actions on this matter were timely and addressed the concern identified.

9.0 Laboratory QC Program

The inspector reviewed the various procedures which contained the licensee's laboratory QC program. The licensee's laboratory QC program includes interlaboratory and intralaboratory intercomparisons, control of reagents and standards and equipment checks such as efficiency, background, and where applicable, gain and resolution. Instrumentation covered includes: the gamma spectrometer, gas flow proportional counters, liquid scintillation counter, UV-visible spectrophotometer, AA spectrophotometer, PH meter, turbidimeters, balances and chromatographs. Also included is a procedure for verification of chemistry computer software.

The inspector reviewed the available QC data for 1984 to date and noted that the licensee was implementing the laboratory QC program. The data reviewed included control charts for both chemical and radiochemical analyses. Also the inspector reviewed the results of interlaboratory sample analyses. The inspector noted that the licensee had not formalized the interlaboratory intercomparison program by including the intercomparison frequency into a procedure as had been done with the intralaboratory program. The inspector discussed laboratory QC in general and Regulatory Guide 4.15, "Quality Assurance for Radiological

Monitoring Programs (Normal Operations) - Effluent Streams and the Environment," with the licensee and indicated item (387/84-25-05; 388/84-32-03) dealing with inter-laboratory intercomparison frequency would remain open.

The inspector had no further questions in this area.

No violations were identified.

10.0 QA Audits of Chemistry

The inspector reviewed audits conducted by the PPL corporate auditors during 1984 of the SSES Chemistry Program and other programs in which chemistry was involved. The following audits were reviewed:

Audit No.	Subject
0-84-02	Offsite Dose Calculation Manual
0-84-12	SSES Chemistry Program
0-84-16	Surveillance Program

Audit number 0-84-12 was an extensive audit of the chemistry program, including training and qualifications of personnel, preparation and control or reagents and standard solutions, sampling and sample control, control of standards and test equipment, the chemistry quality assurance program, and compliance with Technical Specifications. Eight items of non-compliance were identified, of which seven required responses from the SSES chemistry group.

The inspector noted that chemistry had responded as required to findings identified during these audits.

No violations were identified in this area.

11.0 Confirmatory Measurements

During the inspection, liquid, particulate filter, charcoal cartridge and gas samples were split between the licensee and NRC for the purpose of intercomparison. Joint analyses of actual effluent samples are used to verify the licensee's capability to measure radioactivity in effluent samples with respect to Technical Specification requirements and other regulatory requirements. Where possible, the split samples are actual effluent samples, or inplant samples which duplicate counting geometries used by the licensee for effluent sample analyses. The samples were analyzed by the licensee using normal methods and equipment, and by the NRC Region I Mobile Radiological Measurements Laboratory.

In addition, a liquid effluent was split with the licensee with part of the sample being sent to the NRC reference laboratory, Department of

Energy, Radiological and Environmental Sciences Laboratory (RESL), for analyses requiring wet chemistry. The analyses to be performed on the sample are Sr-89, Sr-90, Fe-55, gross alpha and tritium. The results will be compared with the licensee's results when received at a later date and will be documented in a subsequent inspection report. The licensee agreed to analyze his portion of the sample for the same nuclides.

Also an airborne particulate filter sample was analyzed by health physics personnel using the health physics gamma ray spectroscopy system.

The results of the sample measurements comparison indicated that all of the results were in agreement under the criteria (See Attachment I) used for comparing results. The results of the comparisons are listed in Table I. The Kr-88 result obtained by the licensee, although in agreement, was obtained by the licensee using a branching ratio of 34% versus 26% used by the NRC. The licensee reviewed his gamma ray spectrometer library, using current references, and updated the library as necessary. Also the first count of the off gas pre-treatment sample resulted in the licensee's gamma spectroscopy system not identifying the Xe-133. A second count at a later time after the short lived noble gases had decayed away resulted in the Xe-133 being identified. The inspector discussed the gamma spectroscopy system peak detection (LLD) parameters with the licensee. The inspector also noted that Zn-65 was not identified by the licensee in a liquid radwaste sample. The licensee stated the LLD parameter setting would be reviewed as well as the method of counting pre-treatment off gas samples. The inspector stated that this area would be reviewed during a subsequent inspection. (50-387/84-39-03; 50-388/84-49-02)

During this inspection a simulated charcoal cartridge was submitted to the licensee because radio-iodine could not be detected on the licensee's routine effluent charcoal cartridges samples. The radioactivity in the simulated charcoal cartridge was distributed in a manner which duplicated the loading of a cartridge during normal operation. The licensee's first analysis of the spiked charcoal cartridge resulted in values which were higher than the NRC values by approximately 40 percent and were in disagreement. Based on discussions with the licensee, the inspector determined that the licensee calibrated with a uniformly loaded charcoal cartridge, but in actual practice, counted the cartridge with only the inlet side facing the detector. When the licensee counted the cartridge on both sides and averaged the results; the results were in agreement. The inspector noted that only positive results of effluent charcoal cartridge analyses reported by the licensee would be high by approximately 40 percent. The inspector discussed the need for reporting accurate effluent sample results rather than conservative inaccurate results. The licensee stated that this area would be reviewed and appropriate changes implemented. The inspector stated that this area would be reviewed during a subsequent inspection. (50-387/84-39-04; 50-388/84-49-03)

The inspector had no further questions in this area. No violations were identified.

12.0 Radioactive Waste Management and Effluent Control

The inspector reviewed procedures and discussed operation of the liquid and gaseous radwaste system with licensee personnel with respect to Technical Specification requirements and ALARA considerations. The inspector reviewed the liquid radwaste performance data for 1984 to date, and noted that the licensee is monitoring the operational aspects of the liquid radwaste processing system. The licensee is also monitoring liquid radwaste influents and effluents, along with sources of plant makeup water, inorder to minimize liquid effluent releases. The licensee has established goals for further reductions of liquid radioactive releases during 1985. In addition, the licensee has reduced the inleakage into the offgas system and, therefore, increased the holdup time of the system.

The inspector reviewed the licensee's semi-annual Radioactive Effluent and Waste Disposal reports for the second half of 1983 and the first half of 1984. The reports met the requirements of the licensee's Technical Specifications. Selected gaseous effluent release data for the fourth quarter of 1984 was also reviewed.

No violations were identified in this area.

13.0 Exit Interview

The inspector met with the licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on December 14, 1984. The inspector summarized the purpose and scope of the inspection and the inspection findings.

The licensee agreed to perform the analyses listed in Paragraph 11 and report the results to the NRC.

TABLE 1 (Page 1 of 4)

SUSQUEHANNA 1 & 2 VERIFICATION TEST RESULTS

SAMPLE	ISOTOPE	NRC VALUE	LICENSEE VALUE	COMPARISON
		RESULTS IN MICROCURIES PER MILLILITER		
Containment Airborne Particulate Filter 12-8-84 0153 hrs	Na-24	(1.16±0.08)E-9	(1.12±0.02)E-9	Agreement
	Cr-51	(1.0±0.4)E-11	(1.00±0.05)E-11	Agreement
	Na-24	(1.16±0.08)E-9	*(1.0±0.8)E-9	Agreement
	Cr-51	(1.0±0.4)E-11	*(1.0±0.8)E-9	Agreement
Liquid Radwaste Filter "A" Effluent 12-11-84 1800 hrs	Cs-134	(2.0±0.4)E-6	(1.8±0.2)E-6	Agreement
	Cs-137	(4.4±0.3)E-6	(4.2±0.3)E-6	Agreement
	Na-24	(8.86±0.04)E-4	(8.07±0.04)E-4	Agreement
	Cr-51	(3.2±0.2)E-5	(2.4±02)E-5	Agreement
	Mn-54	(9.6±0.4)E-6	(7.8±0.4)E-6	Agreement
	Co-58	(1.50±0.04(E-5	(1.30±0.06)E-5	Agreement
	Co-60	(1.31±0.04)E-5	(1.11±0.05)E-5	Agreement
	Zn-65	(3.0±0.9)E-6	not identified	No comparison

*NOTE: Health Physics Analysis results

TABLE 1 (Page 2 of 4)

SUSQUEHANNA 1 & 2 VERIFICATION TEST RESULTS

SAMPLE	ISOTOPE	NRC VALUE	LICENSEE VALUE	COMPARISON
		RESULTS IN MICROCURIES PER MILLILITER		
Offgas Pretreatment 12-12-84 1626hrs 1st count	Kr-85m	(1.5±0.3)E-4	not identified	No comparison
	Kr-87	(5.1±0.7)E-4	(9.0±1.2)E-4	Agreement
	Xe-133	(4.4±0.6)E-4	not identified	No comparison
	Xe-135	(4.8±0.4)E-4	(3.5±0.5)E-4	Agreement
	Xe-138	(9.2±0.8)E-3	(8.0±0.4)E-3	Agreement
2nd count	Xe-133	(4.4±0.6)E-4	(4.39±0.09)E-4	Agreement
	Xe-135	(4.8±0.4)E-4	(3.90±0.11)E-4	Agreement

TABLE 1 (Page 3 of 4)

SUSQUEHANNA 1 & 2 VERIFICATION TEST RESULTS

SAMPLE	ISOTOPE	NRC VALUE	LICENSEE VALUE	COMPARISON
		RESULTS IN MICROCURIES PER MILLILITER		
Unit 1 Reactor				
Water	Co-58	(3.7±0.4)E-4	(4.0±0.2)E-4	Agreement
12-11-84	Co-60	(4.1±0.4)E-4	(3.7±0.3)E-4	Agreement
1244hrs	Cr-51	(2.31±0.04)E-2	(2.34±0.02)E-2	Agreement
	Na-24	(2.34±0.02)E-2	(2.260±0.010)E-2	Agreement
	Tc-99m	(3.512±0.011)E-2	(3.370±0.014)E-2	Agreement
	As-76	(3.4±0.5)E-4	(3.5±0.4)E-4	Agreement
Offgas	Kr-85m	(9.94±0.13)E-6	(1.12±0.13)E-5	Agreement
Post Treatment	Xe-133	(5.05±0.05)E-5	(5.57±0.05)E-5	Agreement
12-11-84	Kr-88	(7.6±0.2)E-6	(6.5±0.2)E-6	Agreement
1030hrs			*(8.5±0.3)E-6	Agreement

*Note: Result using NRC branching ratio

TABLE 1 (Page 4 of 4)

SUSQUEHANNA 1 & 2 VERIFICATION TEST RESULTS

SAMPLE	ISOTOPE	NRC VALUE	LICENSEE VALUE	COMPARISON
		RESULTS IN TOTAL MICROCURIES		
NRC Standard Charcoal Cartridge (inlet facing detector only)	Cd-109	(3.42±0.05)E-2	(5.6±0.2)E-2	Disagreement
	Co-57	(9.80±0.12)E-4	(1.45±0.08)E-3	Disagreement
	Co-60	(9.84±0.05)E-3	(1.38±0.03)E-2	Disagreement
	Cs-137	(9.74±0.05)E-3	(1.38±0.02)E-2	Disagreement
average of both sides facing detector	Cd-109	(3.42±0.05)E-2	(4.07)E-2*	Agreement
	Co-57	(9.80±0.12)E-4	(1.04)E-3*	Agreement
	Co-60	(9.84±0.05)E-3	(1.02)E-2*	Agreement
	Cs-137	(9.74±0.05)E-3	(1.00)E-2*	Agreement

*No error limits provided.

Attachment 1

Criteria for Comparing Analytical Measurements

This attachment provides criteria for comparing results of capability tests and verification measurements. The criteria are based on an empirical relationship which combines prior experience and the accuracy needs of this program.

In these criteria, the judgement limits are variable in relation to the comparison of the NRC Reference Laboratory's value to its associated uncertainty. As that ratio, referred to in this program as "Resolution", increases the acceptability of a licensee's measurement should be more selective. Conversely, poorer agreement must be considered acceptable as the resolution decreases.

$$\text{Resolution} = \frac{\text{NRC REFERENCE VALUE}}{\text{REFERENCE VALUE UNCERTAINTY}} \qquad \text{RATIO} = \frac{\text{LICENSEE VALUE}}{\text{NRC REFERENCE VALUE}}$$

Resolution	Agreement
<3	0.4 - 2.5
4 - 7	0.5 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51 - 200	0.80 - 1.25
>200	0.85 - 1.18