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Ltr on behalf of Niagara Mohawk Pwr Corp..... notarized 2-4-76...w/attch certificate of service ....trans the following:

ENCLOSURES:

Amdt to OL/Change to Tech Specs: Consistir of revisions to tech specs with regard to sections of theh specs dealing with leak testing & surveillance...(40 cys encl rec'd)

PLANT NAME: Nine Mile Point

SAFETY — FOR ACTION/INFORMATION — ENVIRO 2-5-76 ehf

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February 4, 1976

Mr. Ben C. Rusche
Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Niagara Mohawk Power Corporation
Nine Mile Point Nuclear Station Unit No. 1
Docket No. 50-220

Dear Mr. Rusche:

As counsel for Niagara Mohawk Power Corporation, submitted herewith please find three (3) signed originals and nineteen (19) copies of a document entitled "Application for Amendment to Operating License." This application transmits forty (40) copies of a proposed amendment to Paragraphs B(2), (3) and (4) of Facility Operating License No. DPR-63 as well as forty (40) copies of a proposed change to technical specifications. In addition, forty (40) copies each of a safety evaluation of the proposed change in technical specifications and of a technical supplement containing information in accordance with Regulatory Guide 1.70.3 are also enclosed.

A Certificate of Service showing service of these documents upon the persons listed therein is also enclosed.

Very truly yours,

LeBoeuf, Lamb, Leiby & MacRae

LeBoeuf, Lamb, Leiby & MacRae
Attorneys for Niagara Mohawk
Power Corporation

Enclosures

1079

BEFORE THE UNITED STATES

NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
NIAGARA MOHAWK POWER CORPORATION	)	Docket No. 50-220
(Nine Mile Point Nuclear Station	)	
Unit No. 1)	)	

APPLICATION FOR AMENDMENT

TO

OPERATING LICENSE

On December 16, 1974 Niagara Mohawk Power Corporation ("Niagara Mohawk"), holder of Facility Operating License No. DPR-63 received a letter from George Lear, Chief, Operating Reactors Branch #3, Division of Operating Reactors, concerning the possession and use of radioactive materials. More specifically, the letter requested that Niagara Mohawk (1) amend its operating license, (2) propose Technical Specification changes for leak testing and surveillance, and (3) submit information in accordance with Regulatory Guide 1.70.3, dated February 1974. Accordingly, pursuant to Section 50.90 of the regulations of the U.S. Nuclear Regulatory Commission, Niagara Mohawk hereby requests that Paragraphs 2 A and B of Facility Operating License No. DPR-63 be amended and that Sections 3.6.5 and 4.6.5 be added to the Technical Specifications as set forth in Appendix A to that license. This proposed change has been approved by the Site Operations Review Committee and Safety Review and Audit Board.

The proposed amendment to Facility Operating License No. DPR-63 is set forth in Attachment A to this application. The proposed change to the Technical Specifications is set forth in Attachment B to this application. A Technical Supplement to this application, captioned Attachment C, contains the information called for in Regulatory Guide 1.70.3. This information demonstrates the proposed change to the Technical Specifications does not involve a significant change in the types or significant increase in the amounts of effluents or any change in the authorized power level.

WHEREFORE, Applicant respectfully requests that Facility Operating License No. DPR-63 and Appendix A to that license be amended in the form attached hereto as Attachments A and B, respectively.

NIAGARA MOHAWK POWER CORPORATION

By Gerald K. Rhode

Gerald K. Rhode
Vice President-Engineering

Subscribed and sworn to before me
on this 30th day of January, 1976.

Patricia A. Connor (Patricia C. Nott)
Notary Public

PATRICIA A. CONNOR
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4608266
My Commission Expires March 30, 1977

ATTACHMENT A

Niagara Mohawk Power Corporation

License No. DPR-63

Docket No. 50-220

Proposed Changes To Facility Operating License

Attached are revisions to pages 2 and 3 of Facility Operating License DPR-63 dated December 26, 1974.

H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of the full-term Facility Operating License No. DPR-63 (subject to the conditions for protection of the environment set forth herein) is in accordance with Appendix D, 10 CFR Part 50 of the Commission's regulations and all applicable requirements have been satisfied; and

I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70 including Sections 30.33, 40.32, 70.23 and 70.31.

2. Facility Operating License No. DPR-63 is hereby issued to the Niagara Mohawk Power Corporation to read as follows:

A. This license applies to the Nine Mile Point Nuclear Station Unit No. 1, a single cycle, forced circulation, boiling light water reactor, and associated equipment (the facility), owned by the Niagara Mohawk Power Corporation. The facility is located on the Nine Mile Point site on the southeast shore of Lake Ontario in Oswego County, New York and is described in the "Final Safety Analysis Report" as supplemented and amended (Amendments 1 through 6) and the "Environmental Report" as supplemented (Supplements 1 through 3).

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the Niagara Mohawk Power Corporation:

(1) Pursuant to Section 104b (alternatively 103 or 104a or 104c) of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Oswego County, New York, in accordance with the procedures and limitations set forth in this license;

(2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended as of January 30, 1976.

(3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components.

(5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30; Section 40.41 of Part 40; Section 50.54 and 50.59 of Part 50; and Section 70.32 of Part 70. The license is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect and is also subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 1850 megawatts (thermal).

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B attached hereto are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications.

D. This license is subject to the following additional conditions for the protection of the environment:

(1) The licensee will complete construction of a new radwaste facility in conformance with the design defined and evaluated in the FES, to be operational no later than June 1976.

(2) Pursuant to Section 401(d) of the Federal Water Pollution Control Act Amendments of 1972, this permit is subject to the requirements set forth in a certification dated April 9, 1974, issued to the licensee by the State of New

ATTACHMENT B

Niagara Mohawk Power Corporation

License No. DPR-63

Docket No. 50-220

Proposed Change to Technical Specifications (Appendix A)

Attached specification 3.6.5 and 4.6.5 is being added to Appendix A of DPR-63.

LIMITING CONDITION FOR OPERATION

3.6.5 Radioactive Material Sources

Applicability:

Applies to the limit on source leakage for sealed or startup sources.

Objective:

To specify the requirements necessary to limit contamination from radioactive source materials.

Specification:

Radioactive sources shall be leak tested for contamination. The leakage test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, it shall immediately be withdrawn from use, decontaminated, and repaired, or be disposed of in accordance with Commission regulations. Those quantities of by-product material that exceed the quantities listed in 10 CFR 30.71 Schedule B are to be leak tested in accordance with the schedule shown in Section 4.6.5 Surveillance Requirements. All other sources (including alpha emitters) containing greater than 0.1 microcuries are also to be leak tested in accordance with Section 4.6.5 Surveillance Requirements.

SURVEILLANCE REQUIREMENT

4.6.5 Radioactive Materials Sources

Applicability:

Applies to the periodic testing requirements for source leakage.

Objective:

To assure the capability of each source material container to limit leakage within allowable limits.

Specification:

Tests for leakage and/or contamination from source material shall be performed as follows:

a. Each sealed source, except startup sources subject to core flux, containing radioactive material, other than Hydrogen 3, with a half-life greater than thirty-days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months.

b. The periodic leak test required does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakag prior to any use or transfer unless they have been leak tested within six months prior to the date of use or transfer. In the absence of a certificate from a transferor indicated that a test has been made within six months prior to the transfer, sealed sources shall not be put into use until tested.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
	c. Startup sources shall be leak tested prior to and following any repair or maintenance and before being subjected to core flux.
	d. Summaries and/or evaluations of the above leak tests shall be reported in accordance to Regulatory Guide 1.16.
	e. Records will be maintained in accordance to Section 6.10.1 of the Technical Specifications and Bases.

Ingestion or inhalation of source material may give rise to total body or organ irradiation. This specification assures that leakage from radioactive material sources does not exceed allowable limits. In the unlikely event that those quantities of radioactive by-product materials of interest to this specification which are exempt from leakage testing are ingested or inhaled, they represent less than maximum permissible body dose for total body irradiation. The limits for all other sources (including alpha emitters) are based upon 10 CFR 70.39(c) limits for plutonium.

ATTACHMENT C

Niagara Mohawk Power Corporation

License No. DPR-63

Docket No. 50-220

Technical Supplement (Radioactive Materials Safety)

Attachments A and B represent changes in Facility Operating License DPR-63 and associated Technical Specifications (Appendix A), respectively. Attachment C represents a radioactive materials safety program.

The above material is in response to a Commission letter dated December 16, 1974.

I. Materials Safety Program

A program for the safe storage, handling, and use of sealed and unsealed special nuclear, source, and byproduct materials is based on personnel awareness and documented Radiation Protection Procedures. Personnel awareness is accomplished through a training program for Site employees which includes aspects of radiation protection dealing with maintaining exposures as low as practicable. Employees are made aware of their responsibilities and Niagara Mohawk's responsibility and commitment to achieve this end. Also, approved written procedures are available and in use for the safe handling, storage, and use of radioactive materials. The responsibility for this materials safety program rests with the Radiochemistry and Radiation Protection Supervisor.

II. Facilities and Equipment

The radiation protection and related facilities, located on the ground-level floor of the Turbine Building, are shown in Figure XII-2 of Volume I of the FSAR. Although most of the work with byproduct material is performed in these facilities, byproduct material is used throughout the restricted areas of the Station to calibrate and check radiation detecting equipment. Large calibration sources in excess of 100 millicuries are located in shielded wells in the Instrument Calibration Room. The americium - berylium and antimony-berylium sources may be stored in the spent fuel storage pool anytime it is necessary to remove them from the reactor.

A. Laboratories

1. High-Level Laboratory

The High-Level Laboratory is equipped with one radiochemical fume hood, a sink, and bench space adequate for the analysis or dilution of highly radioactive samples. This laboratory is provided with an air-lock at each entrance so that it can be isolated in the event of a serious spill. Normally, Station samples are delivered to this laboratory where the highly radioactive samples are diluted, as required, for convenient handling in the Low-Level Laboratory.

2. Low-Level Laboratory

The Low-Level Laboratory is equipped with four radiochemical fume hoods, four peninsular work areas and miscellaneous work benches and equipment to provide space for the preparation and analysis of all Station samples.

All drains in both laboratories are drained to the Waste Disposal Building where the waste is processed in the appropriate liquid waste system.

The ventilation system supplies air to the southern end of the Low-Level Laboratory. This air is then exhausted through the constant

2. Low-Level Laboratory (cont'd)

flow fume hoods in both the low and high-level laboratories to the stack. The ventilation system is described in more detail in Section III of Volume I of the FSAR, and is shown schematically in Figure III-14 of that section.

3. Low-Level Laboratory at the Nine Mile Point Progress Center

This is located within the Nine Mile Point Progress center and is a low-level laboratory. This laboratory houses the whole body counter and appropriate facilities for counting low background environmental samples. This includes a sodium iodide gamma spectral analysis system and sample handling equipment.

B. Instrument Facilities

1. Counting Room

The Counting Room is shielded to maintain a background of less than 0.1 mr/hr. This room is equipped with benches to support radiation detection equipment for measuring Station samples, and is provided with a "once-through" air supply.

An Auxiliary Counting Room is included in Station design for possible future use as a low-background counting facility.

2. Instrument Calibration Room

The Instrument Calibration Room is equipped with two 21 foot deep wells. In each well, a Cobalt-60 source is placed in a cone-shaped stainless-steel pan. This pan, which, is pully-equipped, is moved up and down the well with a steel cable wound on a crank-operated take-up reel. This remote source handling device is designed to reproduce vertical position to $\pm$ 0.2 inch so that portable beta-gamma dose rate instruments can be calibrated at various radiation levels. These calibrations will occur at least quarterly. The radiation level versus height calibration curves are checked periodically (at least quarterly) with an R-meter which has been calibrated and certified by the supplier. The R-meter is carefully stored and handled as a secondary standard and will be recalibrated by the original supplier or the National Bureau of Standards as deemed necessary.

Beta-gamma activity monitors are calibrated periodically (at least quarterly) by using a Radium-226 source, calibrated by the source supplier.

The neutron dose-rate instrument is calibrated periodically (at least annually) by a contracted instrument calibration facility.

The alpha detecting probe is calibrated with a Plutonium-239 source before use. This is calibrated by the source supplier.

Personnel contamination monitors are calibrated periodically (at least quarterly) with Cesium-137 sources which are fabricated and calibrated in the Station laboratory, or with a Radium-226 source,

2. Instrument Calibration Room (cont'd)

calibrated by the source supplier. Thermoluminescent Dosimeters are calibrated prior to placing each batch in service, using the Cobalt-60 source wells. Batches are re-calibrated when calibration checks reveal significant deviation from expected readings.

Counting room instrumentation are calibrated periodically (at least quarterly) with commercially obtained standards and/or standards fabricated and calibrated in the Station laboratory. The wells and the Instrument Calibration Room are shielded to maintain radiation levels outside the room to less than 5 mr/hr.

3. Instrument Storage Room

The Instrument Storage Room is equipped with open shelves to store the portable radiation detection instruments. This room opens into the Station main-access corridor so that personnel can easily obtain and return instruments on their normal route into and out of the restricted areas of the Station.

A listing of the portable radiation detection instruments available at the Station is included in Table 1. This listing updates Sections XII B. 3.5.1 and XII B. 3.5.2 of Volume I of the FSAR.

C. Chemical Storage Room

The Chemical Storage Room is equipped with open shelves to store case quantities of chemicals and laboratory supplies prior to smaller quantities being taken into the laboratory for use. This area may also be used to store equipment which is infrequently used.

D. Personnel Monitoring Provisions

1. Film Badges

Film badge service, currently supplied by R. S. Landauer, Jr. and Company, includes beta-gamma and fast neutron film badges for whole-body exposure monitoring. These badges are processed at least monthly. Annual contracts are awarded for this service. Film badge service would remain equivalent even if a change in supplier were to occur.

All personnel regularly assigned to the Station are required to wear beta-gamma film badges if their visit requires entry into restricted areas of the Station. Fast neutron film is included in the badge or separate fast neutron film badges are worn by personnel when fast neutron exposure levels are expected to exceed 2 mrem/hr or in which they would receive a dose greater than 5 mrem.

2. Direct-Reading Dosimeters

A direct-reading dosimeter is worn by all personnel entering Radiation or High Radiation Areas, based on 10CFR20, to determine whole-body gamma exposure on a daily basis. These dosimeters

2. Direct-Reading Dosimeters (cont'd)

are leak checked and calibrated with Cobalt-60 at least annually.

3. Thermoluminescent Dosimeters (TLD's)

TLD's are used to supplement the personnel monitoring at the Station by providing an accurate check of the direct-reading dosimeters. They are issued for maintenance work in High Radiation Areas, to personnel who have received in excess of 2000 mrem in a calendar quarter, or 4000 mrem in a calendar year, and for operations where supplemental dosimetry is desired. Finger rings are issued as deemed necessary to evaluate hand exposures. The TLD's are processed on-site using an Eberline TLR-5 Thermoluminescent Dosimeter Reader.

4. Whole Body Counting

All Station personnel are given a whole body count at least annually. Personnel who frequent restricted areas are given one at least twice annually, if scheduling permits. Anyone suspected of having received an intake of radionuclides is also counted. The whole body counter is located at the Niagara Mohawk Progress Center.

III. Personnel and Procedures

The experience and qualifications of the key personnel responsible for handling and monitoring radioactive materials are given in the resumes contained in Tables 2 and 3.

Radiation protection instructions are contained in a number of documents. "Administrative Procedure for Maintaining Occupational Radiation Exposure as Low as Practicable" (AP-26), describes the overall responsibilities of key personnel and Niagara Mohawk's commitment to maintaining radiation exposures as low as practicable.

The Site Radiation Protection Procedures describe the controls that are in effect at the Site to minimize radiation exposure. They also describe the procedures to be used for access control, Radiation Work Permits, survey techniques, personnel monitoring, radiation guides and limits. "Administrative Procedure for Special Nuclear Material Control" (AP-37), specifies the requirements necessary to ensure the control and accountability of all special nuclear material at the Site. Other procedures that deal with radiation protection instructions are presented in Table 4.

IV. Required Materials

Listed below are the required radioactive materials inventory limits.

A. Special nuclear material, as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation. The current proposed expansion of the spent fuel pool would provide the capability for the storage and use of 3800 kilograms of contained uranium 235. Information concerning this expansion to the spent fuel pool has been previously submitted to the Commission.

B. Byproduct, source and special nuclear material, as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

C. Byproduct, source or special nuclear material, without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components;

D. Byproduct and special nuclear materials for possession only, as may be produced by the operation of the facility.

TABLE 1

PORTABLE RADIATION DETECTION INSTRUMENTS

AVAILABLE AT THE STATION

	Type of Instrument	Number Available	Radiation Detected	Sensitivity Range	Window Thickness	Use
1)	Victoreen Inst. Company, Model No. 490 Thyac	17	Beta-Gamma	0- 800 c/m 0- 8,000 c/m 0- 80,000 c/m	30 mg/cm^2	Activity Survey
2)	Victoreen Inst. Company, Model No. 740F Cutie Pie	21	Beta-Gamma	0- 25 mrad/hr 0- 250 mrad/hr 0- 2,500 mrad/hr 0- 25,000 mrad/hr	0.00025 inch Mylar	Dose Rate Survey
3)	Eberline Inst. Corporation Model No. 6112 Teletector	5	Beta-Gamma	0- 2 mrad/hr 0- 50 mrad/hr 0- 2 rad/hr 0- 50 R/hr 0- 1,000 R/hr	30 mg/cm^2	Dose Rate Survey
4)	Nuclear Chicago Corporation, Model No. 9412	1	Neutrons	0- 1 mrem/hr 0- 10 mrem/hr 0- 100 mrem/hr 0- 1,000 mrem/hr		Dose Rate Survey
5)	Victoreen Inst. Company, Model No. 702 (Probe fits Model No. 490 Thyac)	1	Alpha	0- 800 c/m 0- 8,000 c/m 0- 80,000 c/m 0-800,000 c/m	1 mg/cm^2	Activity Survey

TABLE 1 (Cont'd)

	Type of Instrument	Number Available	Radiation Detected	Sensitivity Range	Window Thickness	Use
6)	Eberline Inst. Corporation Count-Rate Meters	15	Beta-Gamma	0- 500 c/m 0- 5,000 c/m 0- 50,000 c/m	30 mg/cm^2	Personnel Contamination Monitoring
7)	Victoreen Inst. Company, Model No. 570 Condenser R-Meter and 6 Chambers	1	Gamma	25 mR 250 mR 1 R 5 R 25 R 100 R		Source Calibration
8)	Technical Measurements Corporation, Model No. 401-D 400 Channel Pulse Height Analyzer with Isomet Corp. 3 inch x 3 inch NaI (Tl) Scintillation Detector	1	Gamma			Measurement
9)	Nuclear Chicago Corporation, Model No. 8273 Automatic Low Background Planchet Counting System	1	Alpha, Beta		150 mg/cm^2	Measurement

TABLE 1 (Cont'd)

	Type of Instrument	Number Available	Radiation Detected	Sensitivity Range	Window Thickness	Use
10)	Nuclear Chicago Corporation Five Decade Scaler, Amplifier, Timer and Descriminator with a Harshaw 1-3/4 inch x 2 inch Well Scintillation Detector	1	Gamma			Measurement
11)	Canberra 8100 Multi-channel analyzer with HP calculator and GeLi detector	1	Gamma			Measurement
12)	Eberline Inst. Corporation Model No. BC-4 End Window GM Detector	2	Beta-Gamma		2 mg/cm^2	Measurement

TABLE 2

RESUME-RADIOCHEMISTRY AND RADIATION PROTECTION SUPERVISOR

Name: Edward W. Leach — Radiochemistry and Radiation Protection Supervisor

EDUCATION AND TRAINING:

1957-1959	Attended Massachusetts Institute of Technology as Mechanical Engineering Student.
1961	Completed USN Basic Nuclear Training, Vallejo, California (6 months).
1962	Completed A1W Naval Nuclear Power Prototype Training, Idaho Falls, Idaho (6 months).
1967-1969	Completed requirements for BS in Chemistry Degree at New Mexico State University under AEC Technician Scholarship Program.
1969-1972	Completed requirements for MS Degree in Chemistry at New Mexico State University.

EXPERIENCE:

1) 1962-64	Served on Staff of the A1W Reactor Facility as Operator and Instructor. Qualified as Engineering Laboratory Technician in June 1962. Remainder of period performed Chemistry and Radiological Surveillance, and Training of new personnel, at the A1W prototype.
2) 1964-65	On board Nuclear Frigate USS Bainbridge as Eng. Lab. Technician.
3) 1965-67	Worked as Reactor Operator and Technician at the Omega West Research Reactor, Los Alamos Scientific Laboratory, Los Alamos, New Mexico.
4) 1969-72	Worked as Teaching Assistant, New Mexico State Univ., Las Cruces, New Mexico. Taught General Chemistry, Analytical Chemistry and Instrumental Analysis Labs.
5) 1972-75	Assistant to the Superintendent - Assigned to Radiation Protection and Chemistry Department of the Nine Mile Point Nuclear Station for supervision of technicians, developing procedures and training material, and special projects.
6) 1975-76	Assistant Radiochemistry and Radiation Protection Supervisor-Site. Duties included supervision of five technicians in areas of site chemistry, dosimetry, and emergency equipment: training of personnel in radiation protection and emergency procedures; development of computerized dosimetry system; procedure review; radiation exposure authorization review.

TABLE 2 continued...

7) 1976-Present	Radiochemistry and Radiation Protection Supervisor - Responsibile for the radiochemistry and radiation protection programs for Nine Mile Unit 1 and the James A. Fitzpatrick Nuclear Power Plant. Also involved in the design review of all chemical and radwaste systems for Nine Mile Point Unit 2. Presently responsible for 17 technicians and four supervisory personnel.

TABLE 3

RESUME - ASSISTANT RADIOCHEMISTRY AND RADIATION PROTECTION SUPERVISOR

Name: James Duell

Assistant Radiochemistry and Radiation Protection Supervisor

Education and Training:

1960	Graduated from Phoenix High School
1961-63	Attended West Virginia University in a chemistry curriculum.
1963-68	Attended Onondaga Community College, enrolled in physics and chemistry courses. Also attended training courses in Particle Characteristics, Gas Chromatography, C.D. Radiological Monitoring, Statistical Quality Control & Sewage Treatment Plant Operation.
1973	Attended a 12 week Radiochemistry training course at the Vallecitos Nuclear Center, Pleasanton, Cal.

Experience:

1) 1963-1968 Employed as Plant Chemical Technician at Alcan Aluminum Corp. where responsibilities were: Plant Chemical Analyses, Analytical Procedures Development and Lubricant Development.

2) 1968 Begin employment at Nine Mile Point Unit 1 as Radiation Protection Chemistry Technician with job duties including: chemistry, radiochemistry, radiological monitoring, instrument calibrations and dosimetry.

3) 1972 Promoted to Assistant Radiation Protection-Radiochemistry supervisor with duties being:

a) Supervision of 5-10 Radiation Protection Chemistry technicians.

b) Supervision of Station personnel in Radiation Protection.

c) Assistance in day-to-day station operation.

d) Training of Station personnel in Radiation Protection.

TABLE 4

OTHER RADIATION PROTECTION PROCEDURES

	Calibration Procedures
S-RTP-1	Radiation Survey Procedures for Receiving New Fuel
S-RTP-14	Well Calibration Procedure
S-RTP-15	Procedure for Calibrating Low Range Beta-Gamma Dose-Rate Instrument
S-RTP-16	Operation and Calibration of the Teletector
S-RTP-17	Calibration and Operation of Beta-Gamma and Alpha Activity Monitor (490 Thyac)
S-RTP-39	Operation and Calibration of G-M Survey Instrument, E-120.
S-RTP-40	Operation and Calibration of the Rad Owl
	Sampling Procedures
S-SP-1	Liquid Grab Sample - Sample Station
S-SP-2	Liquid Grab Sample - Local Sample Point
S-SP-6	In-Line Filterable Solids Sampling
N-SP-7	Off-Gas Stack Sampling, NMP-1
S-SP-8	Gas Sampling - Pre-Treatment Off-Gas
S-SP-14	Resin Sampling
S-SP-15	Compositing of Liquid Waste Samples
N-PSP-1	Reactor Water Sampling and Analysis, NMP-1
S-PSP-4	Sampling and Analysis of Wastewater
N-PSP-5	Circulating Water Sampling and Analysis, NMP-1
S-PSP-7	Radioactive Airborne Effluent Sampling and Analysis
S-PSP-9	Solid Radwaste Sampling and Analysis