



DEPARTMENT OF THE ENVIRONMENT

2500 Broening Highway, Baltimore, Maryland 21224

Area Code 301 • 631-

William Donald Schaefer
GovernorMartin W. Walsh, Jr.
Secretary

March 3, 1989

HAND DELIVEREDMr. Jackson A. Ransohoff
President
Neutron Products, Inc.
22301 Mt. Ephraim Road
Dickerson, Maryland 20842Information in this record was deleted in
accordance with the Freedom of Information Act.
Exemptions 2/16
FOIA 7008-0195RE: Modification of Radioactive Material
License MD-31-025-01

Dear Mr. Ransohoff:

Enclosed please find a Notice of Modification of Neutron Products Inc.'s ("NPI") Radioactive Material License MD-31-025-01. This modification, effective March 3, 1989, limits the use of all radioactive sources to possession and storage only. The amendment also restricts access to the Limited Access Area. The Maryland Department of the Environment has undertaken this action pursuant to its independent power to suspend, revoke or modify licenses in response to an emergency situation which threatens public health, safety, or interest under COMAR 10.14.02.01C.50. Pursuant to Section 10-405 of the State Government Article, Annotated Code of Maryland, a partial suspension may be undertaken without prior notice to the licensee and without affording the licensee a prior opportunity to contest the action. The enclosed Notice sets forth the Agency's grounds for amending NPI's license in this manner and also details the procedure by which NPI may contest this modification in an administrative forum.

The Agency's action was precipitated in part by recent discoveries of contaminations occurring at NPI involving (b)(6) 46
(b)(6) We are especially
concerned about the potential for dissemination of contamination

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into the public domain as a result of NPI's systemic deficiencies in monitoring and detecting radioactive exposures and contaminations. This potential is best illustrated by the (b)(6) incident in which an employee unknowingly transported cobalt-60 contamination from NPI in Dickerson, Maryland to Ontario, New York. Such incidents reflect a lack of adherence to minimum operational safety requirements which place both the employees of NPI and the public at risk. For these reasons, the Agency is compelled to modify NPI's license at this time in order to protect public health and safety.

The Agency is greatly disturbed by NPI's persistent nonresponsiveness to its repeated requests to install a new portal monitor in the exit vestibule of the Limited Access Area and to reconstruct the portal monitoring area in such a manner as to reduce the presence of high background radiation levels to twice background. As you know, in July of 1988, the Agency and NPI agreed that NPI would analyze shielding deficiencies in the monitoring area and physically modify the monitoring area in order to reduce high background levels. The Agency was later informed that a schedule for materials, procurement and construction of the monitoring area would be established on or about August 15, 1988 and that frisker instruments would be employed as a "temporary measure" until reconstruction of the portal monitor area was complete. This reconstruction was never undertaken by NPI. To date, no plans for such reconstruction have been submitted to the Agency.

The modification of NPI's license MD-31-025-01 shall remain in full force and effect until, at a minimum, the following terms and conditions are met to the satisfaction of the Agency:

1. Installation of a new portal monitor in the Limited Access Area capable of detecting radioactivity of at least 440 disintegrations per minute per 100 cm².
2. Submission of a plan to the Agency to reconstruct the portal monitor area in such a manner as to reduce radiation background levels to twice background.
3. Submission of a plan to the Agency to establish a Radiation Safety Training Program. This Program shall provide employee training sessions on a quarterly basis. These sessions are subject to approval by the Agency. Attendance at such

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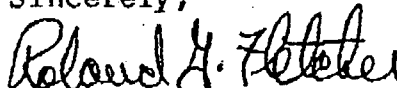
training sessions shall be mandatory and must be documented as to all employees.

4. Submission of a plan for documenting supervisory spot checks of employee safety performance. Such documentation shall be submitted and/or made available to the Agency for review on a quarterly basis.

The foregoing conditions shall be incorporated into and made a part of NPI's license upon reissuance.

The Agency reserves the right to seek civil or criminal penalties, injunctive relief or to undertake any other action it deems necessary in order to prevent violations of and ensure compliance with State environmental laws.

Sincerely,



Roland Fletcher
Administrator
Center for Radiological Health

RF/dmw

Enclosure



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Pursuant to the Maryland Radiation Act, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess and transfer radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations and orders of the Maryland State Department of the Environment, now or hereinafter in effect and to any conditions specified below. In accordance with application dated August 01, 1994 with attachments and Departmental revisions, Radioactive materials license MD-31-025-01 is renewed its entirety

LICENSEE		3. License No.
1. Name	Neutron Products, Inc. 22301 Mt. Ephraim Road	MD-31-025-01
2. Address	P.O. Box 68 Dickerson, Maryland 20842-0068	4. Amendment No. 43
		5. Expiration Date January 31, 2001

6. Radioactive material (element and mass number)	7. Chemical and/or physical form	8. Maximum amount of radioactivity which licensee may possess at any one time
A. Cobalt-60 with small quantities of activation products from impurities in encapsulation materials.	A. ¹ Sealed sources, singly or doubly encapsulated.	(b)(4)
B. Cobalt-60.	² Stellite bearings and axle rods mounted in stainless steel corners sheared from the top end of BWR control rod assemblies.	
Cesium-137.	B. Sealed Sources.	B. No source to exceed (b)(4) curies; total 30 sources.
	C. Sealed sources (3M models 6D6C).	C. 6 sources total; No source to exceed 14 millicuries.

Authorized Use

No. 47 - most current

3/12/03

46

45 - consent agreement (possession limit on waste)

44 - compact

43 - renewal



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6. Radioactive material
element & mass number:

D. Cesium-137.

E. Any radioactive material of
atomic numbers 3 to 92 as
activation products.

F. Any radioactive material of
atomic number 3 to 92 except
special nuclear material.

G. Cobalt-60.

7. Chemical and/or
physical form:

D. Sealed source (U.S.
Nuclear irradiator
model GR 8A).

E. Encapsulated thermal
and flux monitors.

F. Sealed sources.

G. Sealed source in
AECL Gamma Cell 220.

8. Maximum amount of radioactivity
which licensee may possess at
any one time:

(b)(4) curies.

E. No more than 10 millicuries each
radionuclide; total possession
100 millicuries.

F. No source to exceed one
millicurie; total possession 10
millicuries.

G (b)(4) curies.

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9. Authorized use:

A. ¹Manufacture of special form cobalt-60 sealed sources. ²Sealed source fabrication (b)(4) (b)(4) (b)(4) Operations sources distributed shall meet the current American National Standards Institute (ANSI) standard. The receipt of unencapsulated cobalt-60 is not permitted.

¹The source fabrication process permits the removal of an encapsulation to create a newly encapsulated source and the encapsulation of cobalt-60 as waste.

¹Removal of encapsulation and melting of unsealed cobalt-60 to fabricate solid slugs containing up to (b)(4) or slug.

¹Radioactive sources distributed by NPI shall be doubly encapsulated according to specification authorized by the registry of radioactive source and device sheet numbers MD-4745108S and MD-4745109S.

¹Research and development irradiation in the main pool, canals, and hot cell of material other than explosives, food, or materials whose degree of flammability hazard exceeds specification 0,1, or 2 of the National Fire Protection Association's Fire Protection Guide on Hazardous Materials (latest published edition).

¹Radioactive material authorized in Item 7.a(2) is for possession and storage only. No additional receipt of stellite is authorized.

B. For use in attenuation studies and as calibration sources.

C. Instrument calibration.

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- D. Possession and storage only until disposed of as waste.
- E. For removal of components from surveillance capsules and distribution to authorized licensees in accordance with letters dated August 2, 1977, October 12, 1977, and October 18, 1977.
- F. Calibration sources.
- G. Possession and storage only.

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10. The authorized place of use is the licensee's address stated in Item 2. The licensee must notify the Radiological Health Program 30 days prior to vacating a permanent use address as is required by Section D.1301 of COMAR 26.12.01.01.
11. A. The radiation protection program shall be under the supervision of Jeffrey D. Williams.
- B. Radioactive material shall be used by, or under the supervision of Jeffrey D. Williams, Jeffrey W. Corun, Donald S. Franklin, James R. Demory, Jackson A. Ranschoff, Dale L. Repp, and/or Marvin Turkanis.
- 12.A. Upon receipt or transfer of sealed sources in items 6,7, and 8 line A, the licensee shall perform leak testing in accordance with NPI procedures Q-3 and current ANSI Standards. In lieu of conducting six (6) month leak tests on the above sources, the licensee may use radioactive water concentration to evaluate the radioactive material leakage from sealed sources while stored in the main pool or canals. Samples shall be analyzed daily. If the radioactive material water concentration in the pool exceeds 5×10^{-4} microcuries per milliliter, then the licensee's documented evaluation should include the following:
- (1.) An evaluation to determine if the increased pool water concentration is the result of leakage from sealed sources stored in the pool.
 - (2.) If leakage of sources is determined, describe the extent and methodology of remediation necessary.
 - (3.) The methodology used to return pool parameters to those levels specified in license condition 27 C.1.

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12. B. Each sealed source as defined in items 6, 7, and 8, line B, C, D, & F, containing radioactive material, shall be tested for leakage and/or contamination at intervals not to exceed six (6) months. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the source transfer, the sealed source shall not be used until tested. If the test reveals the presence of 0.005 microcuries or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or disposed of in accordance with Departmental regulations. A report shall be filed within five days with the Maryland Department of the Environment, Radiological Health Program, 2500 Broening Highway, Baltimore, Maryland 21224, describing the equipment involved, the test results, and the corrective action(s) taken.
- C. The test shall be capable of detecting the presence of 0.005 microcuries of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of a device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate.
- D. Records of leak tests shall be kept in units of microcuries and maintained for inspection by the Department in the records room.
- E. If the test of singly encapsulated cobalt-60 sources reveals the presence of 0.05 microcuries or more of the removable contamination, the licensee shall immediately withdraw the sealed source from use or storage and shall cause it to be decontaminated and repaired. Records of such leak tests shall be maintained for inspection by the Department in the records room.

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- F. If the test of doubly encapsulated cobalt-60 or any other doubly encapsulated radioisotopic sources reveals the presence of 0.005 microcuries or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired. Records of such leak tests shall be maintained for inspection by the Department in the records room.
- G. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Department, the U.S. Nuclear Regulatory Commission or another Agreement State to perform such services.
13. Ownership, possession, or control of radioactive materials authorized in Item 7.A.(2) including incidental activation products, shall not be transferred to other persons, (as "person" is defined in COMAR 26.12.01.01.) except to a licensed burial site.
14. A. Neutron Products, Inc. may receive cobalt-60:
- (1.) From a vendor who has produced cobalt-60 in a reactor (after approval of the specifications by the Department); or
 - (2.) From a teletherapy unit when Neutron Products, Inc. installs a replacement source.

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B. Neutron Products, Inc. may not receive cobalt-60:

- (1.) That is contaminated with other isotopes; other than activation products normally present in activated materials e.g., (manganese-54) and received from a reactor.
- (2.) As any material contaminated with cobalt-60; or
- (3.) As a sealed source which is not received in exchange for a replacement source unless prior approval has been granted by the Radiological Health Program. Such prior approval may be granted only after a thorough review of a specific proposal that describes the source of cobalt, the total activity and quantity involved, other isotopes involved, the proposed use and the potential market of any product thus produced and the plan for disposal of any waste generated.

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- A. A gas proportional portal monitor equivalent to the Helguson HECM-2, capable of detecting 2500 dpm at one inch and 5000 dpm at three inches shall be utilized in a location approved by the Department. The monitor shall be used by all personnel who exit the Limited Access Area ("LAA"). They shall remain standing in the sensitive detection zone of the monitor for at least two full minutes. Each person shall expose his/her back, front, right and left sides to the detectors for thirty seconds each. The monitor shall be maintained and used in accordance with the manufacturer's specifications at all times. At a minimum, this monitor shall be inspected by the manufacturer in accordance with the terms of the Agency approved, service contract dated September 15, 1989, Agreement #SA/89/1. The monitor shall be maintained and used in such a manner as to ensure its ability to accurately detect levels of radioactivity of 2500 dpm on the hands and 5000 dpm on the whole body. The monitor must be fully operational and kept free from contamination at all times unless unforeseeable and unavoidable operational problems arise. The Department must be notified by telephone within one workday in the event that the portal monitor is not operational. The contingency plan describing personnel monitoring procedures for use during downtime shall be conducted as submitted in referenced letter of May 26, 1989. The portal monitor must be located in the access and egress area as identified in Attachment 7 to plans submitted by the licensee on April 21, 1989.
- B. Background radiation levels at the portal monitor shall not exceed 50 micro/R per hour unless otherwise authorized by the Department.
- C. The Radiation Safety Officer shall perform monthly evaluations of the portal monitoring area, the use of the portal monitor by employees, its functioning and the radiation safety training of employees, and submit monthly reports to the Department based upon such evaluations. These reports shall include the review of incidents of radioactive contamination above 22,000 dpm detected on personnel.

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16. A health physics consultant shall be retained by the licensee. This consultant shall be retained subject to the approval of the Department concerning qualifications. The licensee shall be deemed responsible for any failure of the consultant to submit reports or perform required evaluations and analyses. The health physics consultant shall perform, but not be limited to, the following functions:
- A. Submit monthly evaluations to the Department regarding the health physics/radiation safety status of the facility as it relates to on going and future operations under this license. Monthly reports by the licensee's consultant shall be submitted to the Department by the last day of the next calendar month. Such evaluations shall be in accordance with NPI letter dated January 13, 1995 and RHP letter dated February 9, 1995.
 - B. Ensure that the portal monitor is properly installed and maintained;
 - C. Oversee the maintenance of the portal monitor area as required in order to assure that background radiation levels do not exceed 50 micro/R per hour;
 - D. Oversee and evaluate the RSO report in Item 14.C and submit this evaluation to the Agency as part of Item 15.A.

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17. A full-time trained health physics technician or full-time equivalent health physics technicians shall be retained subject to the approval of the Department concerning their qualifications. The licensee shall maintain a log which documents the work of the health physics technician. The health physics technician shall perform the following functions:
- A. During working hours the technician shall ensure the proper use of the portal monitor, hand-held frisker and any other devices employed to detect levels of radioactivity present on persons or items which exit the LAA;
 - B. Ensure that all persons log in and out upon entering and exiting the LAA;
 - C. Ensure the proper use of hand-held friskers by all persons who incur levels of contamination detected by the portal monitor;
 - D. Report immediately to the Radiation Safety Officer any contamination levels above 10,000 dpm which are detected by the portal monitor, or if the portal monitor is inoperative, under contingency monitoring procedure date [put date in license]. In the event that contamination is detected above 22,000 dpm such incidents must be evaluated by the RSO and must be reported to the Department in monthly reports submitted to the Department by the health physics consultant. Evaluations of such incidents of contamination detected shall include the name of the person contaminated and the activity of contamination detected. The Department shall be notified within two hours concerning all contaminations above 50,000 dpm which are detected by the portal monitor, or if inoperative, under contingency monitoring. During non-work hours, call (410) 243-8700 and ask the operator for "Radiation Assistance."

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- E. Document, for evaluation by the RSO all sources of radioactive contamination of employees in excess of 22,000 dpm.
 - F. Conduct radiation surveys within the entire facility in accordance with documented procedures set forth elsewhere in this license.
 - G. Conduct water sampling of the main source pool, canals and waste water generated in the LAA in accordance with NPI's documented procedures set forth elsewhere in this license.
 - H. Conduct radiation surveys of soil and water contamination levels in accordance with NPI's plan titled, "Environmental Surveillance Plan", Procedure R1004, July 6, 1989, for the surveillance of radioactive contamination in surface and ground water at the plant's boundary and within a one kilometer radius of the licensee's facility. This plan shall include but not be limited to a decontamination plan, a schedule for remedial action and contingencies for obtaining access to private dwellings and commercial property.
 - I. Conduct radiation surveys of all personnel, vehicles, equipment, and personal belongings exiting the gate of the courtyard area in accordance with the limits specified in Condition 13A of this license, NPI Procedure R 1011, and U.S. Department of Transportation Regulations.
18. Following any detection of contamination by the portal monitor, hand-held friskers capable of measuring levels of radioactivity as low as 500 dpm shall be used to detect the precise areas of contamination. Upon discovery of a level of contamination at or above 500 dpm, contaminated individuals must be promptly decontaminated to a level as low as reasonably achievable and remonitored.

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19. A. NPI shall maintain an established "clean room " which shall be operated and maintained so that radioactive contamination shall be limited to less than 500 dpm per 100 cm² smearable, removable contamination on any surface area. The clean room shall be located immediately inside the entrance door to the LAA and shall provide storage space for all street clothing and equipment which shall not be worn or transported into other areas of the LAA.
- B. Any clothing worn outside the LAA shall not be worn in the LAA except in the clean room. Conversely, any clothing worn in other areas of the LAA shall not be worn outside the area. Such clothing may be worn in the clean room if a thorough frisking of a person detects no contamination in excess of 2500 dpm on the hands and 5000 dpm on the whole body.
- C. An NPI random inspection plan shall be conducted in accordance with NPI's "Random Inspection Program" revision dated May 14, 1993.
1. Each documented monthly inspection shall be completed by the second week of the next month.
 2. Quarterly inspections shall be documented and available for RHP inspector review within six (6) weeks of the end of each calendar quarter.
- D. All tools, containers, materials, equipment and facilities in the restricted area shall be maintained in a clean, orderly manner and properly identified to prevent unnecessary risk of personnel contamination or injury. Radioactive contaminated material(s) not properly maintained shall be declared waste and properly disposed of accordingly.

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20. The licensee shall maintain and implement a detailed Radiation Safety Training Program as approved by the Department. At a minimum, this Program shall provide, on a quarterly basis, training sessions provided by the Health Physics Consultant to all employees who, under any circumstances, may have access to the LAA. Attendance at such training sessions shall be mandatory and documented.
21. A. The compaction of radioactive waste prior to storage or disposal is prohibited unless the Department approves of a plan submitted by the licensee for conducting this activity in a safe manner.
- B. Within 90 days from the issuance of this license, NPI shall submit to the Department for approval a comprehensive plan for disposal of all low level radioactive wastes in accordance with the following:
- (1.) Any radioactive waste storage, either temporary or long term shall only be located in the LAA with the only exception being the underground waste water storage tank. Waste storage not in the main pool/canals shall not exceed a period of two (2) years. Waste storage in the main pool/canals shall not exceed four (4) years from date of placement in the pool.
 - (2.) Radioactive waste inventory not in the main pool/canals shall not exceed 600 curies and not more than 200 cubic feet at any one time. Radioactive waste inventory and any waste like materials at NPI located in the main pool/canals shall not exceed (b)(4)
 - (3.) All radioactive waste must be identified and dated as to when generated and containerized.
 - (4.) All radioactive waste shipments shall be composed of the oldest waste first.

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- (5.) Copies of radioactive waste shipment records shall be provided to RHP and Hazardous and Solid Waste Management Administration within 14 days of shipment dates.
- (6.) Procedures for radioactive waste handling, packaging and transportation must include personnel and equipment that will be used.

Failure to meet this schedule may result in the possession and storage of radioactive materials until actual shipment schedules are met.

A. Environmental thermoluminescent dosimeters (TLDs) shall be placed at the facility's boundaries. Such dosimeters shall be affixed to existing boundary structures (i.e., wall or fence) and shall be replaced on a monthly basis. Dosimeters shall be placed a maximum of one hundred feet apart along each boundary structure. The boundary radiation exposure limit shall not exceed 500 millirem per year at any point.

B. Evaluation and remediation of unrestricted areas, drypond and ground areas surrounding the facility shall be conducted in accordance with NPI procedure "R 1004" titled "Neutron Products, Inc. - Environmental Surveillance Plan" dated July 6, 1989. The criteria for acceptability of cobalt-60 contamination of ground areas are:

- (1.) The gamma exposure at one (1) meter above the ground surface shall not exceed 10 microR/hr above background for an area greater than 900 sq. ft. and shall not exceed 20 microR/hr above background for any discrete area (i.e. less than 900 sq. ft.).

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- (2.) The concentration limit for cobalt-60 soil contamination is 8 picocuries per gram above background for an area. All soil exhibiting levels of radioactivity in excess of the above, wherever found, shall be removed and properly stored/disposed of as radioactive waste by the licensee. The Department shall be furnished with documentation of the discovery, survey dates and disposition of such radioactive material found off-site on a monthly basis.
- C. A floor radiation monitor of a type approved by the Department shall be used on a weekly basis to detect surface levels of radioactive contamination on all surfaces within the facility outside of the LAA. The licensee shall maintain records regarding the use of this monitor, the contamination found and any decontamination performed.
3. Licensee shall, with employee permission, conduct or cause to be conducted employee home and vehicle surveys on an annual frequency, utilizing NPI procedure "Guideline for NPI Home Contamination Survey" R-8010 dated June 29, 1988.
4. NPI shall establish a records room in an unrestricted area within 90 days from the issuance of this license. The records in this room shall be inclusive of but not limited to legible copies of all health physics records, copies of bound logs, IRC and Radiation Safety meeting, radioactive waste inventories, surveys, environmental surveillance records, pool/canal conditions, radioactive material inventories, plant and personnel radiation incidents, calibrations performed, source melts conducted, personnel monitoring, NPI policies, procedures and drawings, and employee training and exposure records.

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25. NPI shall perform and document a radioactive material inventory within 90 days of the issuance of this license. Thereafter these inventories shall be performed on a six month basis (January and July each year) for review by the Department.
26. NPI shall develop and issue within 90 days of the issuance of this license for Agency approval a procedure specific to the clean-up of the cell following a cobalt-60 melt. The procedure shall include at least the following:
- A. Pre-entry cell dose-rate assessments.
 - B. Hot cell personnel entry requirements.
 - C. LAA health physics requirements.
 - D. Methods of radioactive waste handling and removal.
 - E. Management oversight.
 - F. Record keeping requirements.
 - G. Written post melt assessment.
27. A. Components used below water level in the main pool and canals which would compromise the integrity of the radiation shield during procedures such as maintenance, servicing or source addition or removal should be material with a specific gravity of 1.000 or more. All tools, vacuum tubing, or equipment which may reduce the shielding provided by the water, shall be monitored for direct radiation during introduction to the main pool or canals.

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All items removed from the storage pool and canals as well as the area above the pool and canals shall be monitored during the source handling or pool operations.

- B. The main pool and canals shall be cleaned on an annual basis beginning on or before 90 days following the issuance of this license in order to remove all foreign material which accumulates on the bottom and sides of the pool. Any vacuum system used for this purpose shall be equipped with an in-line filter(s). The licensee shall develop procedures and equipment prior to performing this operation. These procedures shall be submitted for approval by RHP 90 days following the issuance of this license.

C. Pool Operating Parameters:

1. Main pool/canal water activity must not exceed 5×10^{-4} uCi/cc.
2. Main pool/canal water conductivity must not exceed 10 micro siemens-cm.
3. Main pool/canal water must be within a pH range of 6 to 8.
4. Main pool/canal water temperature must ^{not} exceed 95 F.

When pool/canal water exceed these values for a period greater than 72 hours, all operations must cease until water quality is restored and maintained at these levels.

28. A. All LAA facility equipment, controls, piping and filters etc. dealing with RAM, shall be clearly labelled as to its purpose or function.
- B. The licensee shall maintain a log for review by the Department, of facility maintenance

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that has been performed. This log shall include repairs, replacement of safety equipment or building, plumbing and electrical equipment under areas affected by this license.

29. NPI shall notify RHP in writing a minimum of 30 calendar days prior to any melt operation.
30. NPI shall provide a written plan, within 90 days of the issuance of this license, describing the company's capability for fire fighting and prevention.
31. NPI shall afford to this Agency at all reasonable times opportunity to inspect materials, machines, activities, facilities, premises and records pursuant to the regulations of Section J.14(a) of Part J.
32. NPI shall conduct Radiation Safety Committee Meetings as often as necessary but not less than once per calendar quarter. These meetings shall be attended by at least the Radiation Safety Officer, Health Physicist Consultant, and Waste Management Coordinator.
33. The licensee shall install audible alarms both for high and low level water conditions to prevent overflow of pool/canals and/or lack of water shielding for sources. These alarms shall be incorporated into the off-site emergency notification system. Alarms shall be tested and documented for operation at least once each calendar quarter.
34. The number of existing radiation area monitors shall not be reduced without RHP approval and all such equipment shall have spares and operable backup instruments on hand to immediately replace any monitors.
35. NPI employees shall be monitored via a whole body counter at least once annually for those individuals performing tasks in the Limited Access Area. Additionally, individuals

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found with internal contamination following an incident of inhalation or ingestion of radioactive material shall have additional whole body counting performed within a time period necessary to determine the activity and personnel exposure.

36. Financial assurance and record keeping for decommissioning of the licensee's facility shall be conducted in accordance with Section C.29 of these regulations.
37. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material authorized by this license in accordance with statements, representations, and procedures contained in application dated August 1, 1994 and the documents as submitted by the licensee and approved by the RHP for safe operation of the facility. As currently constructed, the facility and equipment utilizing radioactive material under this license are considered a part of this license and any changes must have prior approval by RHP. Additionally, all changes in procedures, forms and checklists used under this license shall be submitted to RHP for approval and are also a part of this license. COMAR 26. 12. 01.01. "Regulations for Control of Ionizing Radiation" shall govern the licensee's statements in applications, letters or procedures unless these requirements are more restrictive than the regulations. The following documents are hereby incorporated as binding/mandatory parts of this license:

NEUTRON PRODUCTS, INC.

REFERENCES

- A. 1. NPI Sealed Source and Device evaluation of NPI radiation processing sources (February and March) 1984, and references contained therein MD 474S108S-2/29/84, per ANSI Standard N542, NPI drawing and test results.
2. NPI Fabrication and Installation and Testing of Main Storage and Canal Transfer Tanks Spec. E-4, 8/21/74 with drawings.

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3. NPI Fabrication of Canal Tank Sections - Spec. E-2, Rev. 0-1/25, 1974 Assembly of Canal Tank - E-3, 1/74.
4. NPI SS&D Registry MD 474S1095 Teletherapy Sources - NPII Series
NPI SS&D Registry MD 474S1085 Radiation Processing Sources.
5. NPI Specification Q-1, 6/93 "Q.C. and Procedures for Welded Covers of Stainless Steel Encapsulated Cobalt-60 Sources" with attachment.
6. NPI Specification Q-2, 2/73 "Procedure for Measuring Radiation Output from Cobalt-60 Sources".
7. NPI Specification M-1, 6/93 "Specification for Stainless Steel Testing for Encapsulation of Radioactive Sources."
8. NPI Specification P-1, 6/93 "Specifications, Procedures, and Quality Control for Sealed Cobalt-60 Sources."
9. NPI Specification P-4, 1/71 "Procedure For Encapsulation of Teletherapy Sources."
10. NPI Drawings:
 - 200200 - 3/19/81 - 9/16" x 18" source
 - 200190 - 7/08/77 - 9/16" x 14" source
 - 200173(A) - 12/15/75 teletherapy source
 - 200057 - 1/10/71 teletherapy source
11. NPI Document 1/22/86 - Quality Assurance Program for Transport.
12. NPI Document 12/4/85 - Quality Assurance Program for Transportation.

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13. NPI letter 7/30/85 - Leaking Picker Sources - repair.
14. Letter 1/27/89 from Frederick Memorial Hospital for facility care of NPI employees.
15. NPI letter dated 11/7/90, additional Hot Cell Work procedures.
16. NPI letter dated 1/22& 29/91 with Drwg. No. 120055 Rev. D - "Decon area" doors.
17. NPI letters dated 9/25/90 and 12/20/90 - Hot Cell interlock and detector.
18. ANSI Standard N449 - 1974

Neutron Products, Inc. (NPI) Procedures

	<u>TITLE</u>	<u>Revision</u>
1.	R1001 "Counting Procedures"(March 14, 1977)	2
2.	R1002 "Sampling Procedures"(June 7, 1989)	5
3.	R1003 "Procedure for Entrance to and Exit from Contamination Control Areas"(June 6, 1989)	1
4.	R1004 "NPI - Environmental Surveillance Plan"(July 6, 1989)	0
5.	R1006 "Procedure for Disposal of Liquid Waste"(March 1, 1977)	3

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- | | | | |
|-----|--------|--|---|
| 6. | R1007 | "NPI - Radiation Detection Instruments Calibration Procedure"(April 25, 1991) | 5 |
| 7. | R1010 | "NPI - Procedure for Reporting of Radiation and Contamination Levels"(May 4, 1982) | 0 |
| 8. | R1011 | "Procedure for the Limits for Decontamination and Release of People and Personal Effects from Limited Access Area"(January 31, 1991) | 1 |
| 9. | R1012 | "Procedure for Daily Operational Checkout for Routine Maintenance of the Helguson Mini HECM Booth Monitor"(October 19, 1989) | 2 |
| 10. | NR1013 | "Procedure For Changing Spent Pool Resin"(April 28, 1993) | 1 |
| 11. | NR2001 | "Procedure for Loading and Removal of Radioactive Shipping Containers from the Main Storage Pool"(February 11, 1977) | 1 |
| 12. | NR2002 | "Procedure for Dry Transfer of Sources from Pool to Hot Cell"(February 11, 1977) | 1 |
| 13. | R2003 | "General Procedures for In-Pool Source Operations"(March 1, 1977) | 2 |

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14.	R2004	"Procedure for In-Pool Irradiations" (November 26, 1973)	0
15.	NR2005	"Procedure for Decanning Cobalt-60 Sources from Zircaloy Tubes"(February 23, 1977)	0
16.	R2006	"Leak Testing in the Pool"(February 17, 1977)	1
17.	R2007	"Calibration of Effective Activity by Area Method"(January 19, 1979)	2
18.	NR2008	"Procedure for Placing and Unloading Casks in Main Storage Pool"(no date)	1
19.	NR2010	"Procedure for Loading and Unloading NPI Large Radioactive Shipping Containers" (January 13, 1983)	1
20.	R2014	"Unloading and Loading of NPI-20WC-6 Teletherapy Shipping Package at the Dickerson Hot Cell"(June 7, 1985)	0
21.	R2015	"Transportation of NPI-20WC-6 Teletherapy Shipping Package In NPI Vehicle Or Exclusive Use"(May 24, 1985)	0
22.	R2016	"Preparation for Shipment of the Model 500 Shipping Package, Dryloading"(April 26, 1994)	0

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- | | | | |
|-----|--------|---|---|
| 23. | NR2025 | "Transportation of NPI-WR-1 Shipping Containers"
(October 1, 1985) | 0 |
| 24. | NR2027 | "Special Procedure Unloading Cobalt-60
Shipment From Savannah River and Similar
Authorized Locations"(July 8, 1986) | 1 |
| 25. | R2028 | "Procedure for Entrance to the Limited
Access Area"(February 7, 1991) | 1 |
| 26. | R2029 | "Procedure for Exit From the Limited
Access Area"(June 14, 1989) | 0 |
| 27. | NR2501 | "NPI - Procedure for Decontamination of
AECL/Theratronics Teletherapy Machines"
(February 5, 1990) | 1 |
| 28. | NR3001 | "Procedure for Changing Spent
Pool Resin"(January 21, 1991) | 0 |
| 29. | NR3002 | "Dewatering, Sealing and Shipping
60-Gallon Polyethylene "HICS"
Provided by Chem-Nuclear Systems, Inc."
(January 22, 1991) | 0 |
| 30. | NR3003 | "Procedure for Use of the Drum
Storage Vault"(January 22, 1991) | 0 |
| 31. | R4000 | "Procedure for Canal Operations"(October 20, 1975) | 1 |

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- | | | | |
|-----|--------|---|---|
| 32. | NR4001 | "Procedure for Canal Entry" (January 28, 1974) | 1 |
| 33. | R4002 | "Monitoring of Water Loss in the NPI Main Pool and Canal" (January 31, 1974) | 0 |
| 34. | R4003 | "Procedure for Monitoring Canal Tanks" (February 11, 1977) | 1 |
| 35. | R4004 | "Procedure for Monitoring Main Pool Tank" (February 10, 1977) | 1 |
| 36. | R4005 | "Procedure for Testing Canal and Main Pool Leak Detection Channels" (February 11, 1977) | 0 |
| 37. | R5001 | "General Procedure for Hot Cell Operations" (December 15, 1988) | 3 |
| 38. | R5001A | "General Procedure for Hot Cell Source Operations Where the Canal is Isolated from the Hot Cell" (May 16, 1974) | 1 |
| 39. | R5002 | "Opening the Hot Cell Door After Processing Single and Double Encapsulated Cobalt-60" (July 15, 1976) | 1 |
| 40. | NR5003 | "Opening Hot Cell Door After Processing Exposed Cobalt-60" (July 15, 1976) | 1 |

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41.	R5004	"Transfer of Sources Between Hot Cell and Canal Tanks"(October 20, 1975)	0
42.	R5005	"Loading of Encapsulated Sources in Transfer and Shipping Containers From Hot Cell"(November 26, 1973)	0
43.	R5006	"Processing single and double Encapsulated Cobalt-60 Sources" (November 26, 1973)	0
44.	NR5007	"Procedure for Processing Exposed Cobalt-60"(April 4, 1978)	1
45.	NR5008	"NPI - Procedure for Changing the Primary Hepa Filter in the NPI Hot Cell Ventilation System"(April 12, 1982)	2
46.	R5009	"Procedure for Testing of Hepa Filter in Ventilation System of Hot Cell"(February 17, 1994)	2
47.	R5010	"NPI - Procedure for Changing the Roughing Filter in the Hot Cell Ventilation System"(April 21, 1982)	0
48.	NR5012	"Opening Hot Cell Door After Special Processing Operations with Exposed Cobalt-60"(July 28, 1986)	0

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|-----|-------|--|---|
| 49. | R5013 | "Procedure for the Use and Control of Radioactive Material in Teletherapy Operations"(July 29, 1986) | 0 |
| 50. | R7901 | "NPI - Procedure for Environmental Qualification Testing"(August 9, 1984) | 0 |
| 51. | R7902 | "NPI - Procedure for Reporting Defects and Non-Compliance in Environmental Qualification Testing"(August 9, 1984) | 0 |
| 52. | R7903 | "NPI - Procedure for Correcting Non-Conformances in Radiation Testing" (August 9, 1984) | 0 |
| 53. | R7904 | "NPI - Procedure for Retention of Documents pertaining to Environmental Qualification Testing"(August 9, 1984) | 0 |
| 54. | R7905 | "NPI - Procedure for Analytical Methods used in Radiation Testing"(August 9, 1984) | 0 |
| 55. | R7906 | "NPI - Procedure for Correcting Non-Conformances in the Quality Assurance Plan for Environmental Qualification Testing or Any of Its Implementing Procedures" (August 9, 1984) | 0 |

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56.	R7907	"NPI - Procedure for Control of Documents Pertaining to Environmental Qualification Testing" (August 9, 1984)	0
57.	R8010	"Guideline for NPI Home Employee Contamination Survey" (June 29, 1988)	0
58.	S1	"Special Procedure for Removal and Encapsulation of Failed and Other Selected Sources from Water Storage Facilities" (June 24, 1977)	0
59.	PR 001	"NPI - Program Radiation Protection Employee Exposure" (June 30, 1983)	3
60.	PR 002	"NPI - Radioactive Respiratory Protection Program and Implementing Procedure RP-01" (December 28, 1989)	7
61.	PR 003	"NPI - Requirements for the Documentation of Evaluations of Radiation Exposures" (October 10, 1980)	1
62.	PR 004	"Supplemental Training Program for Radiation Protection Participants" (July 6, 1989)	1

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Neutron Products Inc. Drawings

1. Location of Dickerson Site, Drwg. No. 120042, dated June 11, 1979
2. Layout of Dickerson Facility, Restricted Area, Drwg. No. AL-120086, 2 sheets dated June 17, 1991
3. Layout of Limited Access Area, Drwg. No. AL-120084, 2 sheets dated June 17, 1991
4. Contamination Control Zones in Limited Access Area, Drwg. No. AL-120085, 2 sheets dated June 17, 1991
5. Shielding Water Systems, Drwg. No. D-220036, Rev. B dated July 10, 1991
6. Limited Access Area Safety Circuits, Drwg. No. N-180012 dated July 18, 1991
7. Pool & Canal Layout, Drwg. No. N-1210055, 2 sheets Rev. E dated June 25, 1991
8. Drum Storage Vault, Drwg. No. N-220033 dated September 28, 1994
9. Resin Storage Vault, Drwg. No. A-220034 dated September 29, 1994
10. Hot Cell Exhaust Filtration System, Drwg. No. D-220037 dated June 26, 1991
11. Area Monitor Locations, Drwg. No. 220035-N Rev. B dated June 21, 1991
12. Location of Environmental Test Wells, Drwg. No. AL-120087 Rev. B dated June 17, 1991

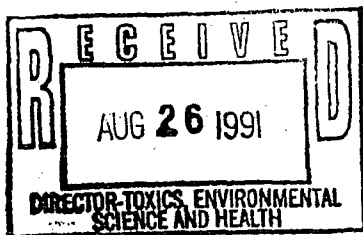
FOR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT

Printed: January 18, 1996

Robert G. Fletcher
RADIOLOGICAL HEALTH PROGRAM MANAGER II

REM, TDF, DKM

L1 (supp) (11/90)



NEUTRON PRODUCTS inc

22301 Mt. Ephraim Road, P.O. Box 68
Dickerson, Maryland 20842 USA
301/349-5001 TWX: 710-828-0542
FAX: 349-2333

August 23, 1991

Department of the Environment
2500 Broening Highway
Baltimore, MD 21224

Attn: Lawrence M. Ward, TESH
Richard W. Collins, Hazardous Waste

Ref: Neutron's Conceptual Waste Management Plan, dated June 5, 1991;
Meetings of June 6 and 19, 1991 between Neutron and MDE;
Meeting on July 5, 1991 with Secretary Perciasepe; and
RHP's letter of July 3, 1991 - received in Dickerson on July 6, 1991.

Gentlemen:

This letter is written in response to the constructive sense of the referenced meeting with Secretary Perciasepe; and to provide the factual information requested in the referenced letter of July 3, 1991. The negative aspects of RHP's letter of July 3 will be addressed elsewhere as necessary.

I. Estimates of Interim Waste Volume and Storage Capacity

I.1 The information requested on page 2 of the referenced letter of July 3, 1991 is set forth in Attachment #1 hereto. Requirements for additional waste storage space, based on projected waste volumes and activities, and the desirable thickness of shielding, are summarized in Table I.1.

Table I.1 - Summary of Additional Waste Storage Requirements

Waste Category	Form	Waste to be Stored by 6/30/97 Cu. Ft/Curies	Additional Vault Space Required Cubic Feet	Approx. Shield Thickness - Feet of Concrete
High Activity	HICS & Drums Uncompacted	325 / 500	800	3 feet
Intermediate	Compacted Drums (5:1)	50 / 6	100	2 feet
Low Activity	Compacted Drums (5:1)	1650 / 10	3300	1.5 feet
	B-25 Boxes Uncompacted	1700 / 2	2000	1 foot
Very Low	Contaminated Soil & Gravel	900 / 0.1	nil	< 1 foot

Notes to Table I.1

Required Vault Space is equal to 2 x Waste Volume packed in Drums;
3 x Waste Volume packed in HICs;
1.15 x Waste Volume packed in B-25s.

I.2 We suggest that the information furnished and the revised plan be reviewed in the context set forth in this subsection.

(a) In view of the much more restrictive regulatory limits on personnel exposures that will become effective during the next 16 months:

background levels now of little concern will become unacceptable;

radiation levels now acceptable for unshielded storage will require order of magnitude shielding; and

radiation levels that now require shielding will require substantially more shielding.

(b) Moreover, the larger shielded volume that will be required to satisfy interim storage requirements will further reduce the desired exposure rate at external shield surfaces.

(c) Thus, what has been high activity storage space will be useful for Low and Intermediate Activity Waste; intermediate activity storage space will be acceptable for Low Activity Waste; and low activity storage will be used for what is now Waste of Little Concern.

(d) It is economically optimum and technically feasible for Neutron to densify its compactible waste; and for purposes of planning and evaluation, we have assumed that such waste will be compacted on site. It will accrue at a rate of about 400 Vault Cubic Feet per year.

I.3 Technically, it has been feasible for Neutron to compact waste for two years. By discharging air from the compactor to the hot cell ventilation system, the risk of airborne release has been reduced to trivial levels; and pursuant to Conditions C and J of Amendment 33, we requested RHP approval on August 19, 1989. We have yet to receive a reply.

II. Background of This Revised Plan

II.1 The Conceptual Design of a Waste Management Plan for Neutron Products that was submitted on June 5, 1991 was responsive to the policy articulated by the State, comprehensive in scope, environmentally considerate and rendered in good faith. In our opinion, none of the reasons set forth in RHP's letter of July 3 for rejecting the Plan were valid, there is no indication of what portions are acceptable as drafted, and the letter gives little indication of what modifications are required to make the plan acceptable to MDE.

II.2 Nevertheless, the meeting of July 5 with Secretary Perçiaşepu was instructive; and in its context, we believe the revised Plan that is proposed herein should be acceptable to MDE for the purpose of defining scope.

We have reduced the scope of proposed storage to that which is likely to be required between now and mid 1997.

Rather than install contingent capacity now, we have provided flexibility so that additional storage capacity can be added if and when it is clearly required; and

we have shipped, for further processing and disposal, about 550 cubic feet of waste on August 2, 1991.

We doubt that the shipment of additional waste can be justified in the context of ALARA, or by a fair analysis of the relative costs and risks of shipping shielded waste for burial now vis-a-vis 30% of the Curies for above grade shielded storage later. We are, of course, prepared to consider MDE's reasons for believing otherwise.

II.3 It is a second purpose of this revised plan to respond constructively to RHP's request that Neutron cover the entire Courtyard of the Limited Access Area, and thereby reduce its waterborne emissions. Thus, the Revised Plan retains those provisions of the June 5 version which eliminate the flow of stormwater into the Limited Access Area and establish control over the flow of water from the Limited Access Area to the environment.

II.4 In undertaking the investment required to store our waste during the interim period now expected to end in 1997, we acknowledge that MDE has advised us that it is MDE's intent to require Neutron to ship waste to the Regional Compact within a reasonable period after its site becomes operational. We believe that policy is flawed, and it is our intent to do what we reasonably can in the interim to have it altered or set aside. The issue need not be resolved before we proceed with the facility proposed hereby.

III. Revised Interim Waste Storage Layout and Courtyard Enclosure

III.1 Reference is made to Neutron Drawing # 120106, which presents a plan view and one North-South elevation cross-section of the Limited Access Area, showing the courtyard as we now propose to cover it.

The hash-marked areas comprise the area to be enclosed;

Zone 1 is a high bay, served by a semicircular crane capable of lifting and moving 15,000 to 20,000 pounds.

Zone 2, currently the new waste storage room, will become the waste processing, handling and in-process storage facility.

Zone 3 shall continue to serve as a waste storage facility, but with some additional shielding provided to reduce the background therefrom.

In zone 4, the shed roof will be raised (perhaps extended) and used as a form for the concrete floor of a balcony, part of which may be enclosed.

Zone 5 will be a high bay served by an indoor fork lift and a monorail connecting the rear of the hot cell and the waste processing facility.

Zone 6 comprises seven shielded vaults approximately 15 feet deep, all of which are served by the semicircular crane. The vaults shall be designed to function in much the same manner described in the June 5 proposal.

Zone 7 comprises an open truck port and storage area at grade, covered by a closed second story warehouse with a hatch that permits the loading out of packaged waste into on-board shields, and the receipt and shipment of casks containing cobalt-60 sources and irradiated targets. The warehouse shall be maintained as a minimal contamination transfer zone within the Limited Access Area. The truck port is outside the Limited Access Area, and shall be maintained as a clean Restricted Area outside the Limited Access Area.

Zone 8 is a high bay within the Limited Access Area (perhaps with a balcony) and shall be maintained as a clean area or a minimal contamination zone. It is separated from the hot cell area and the waste storage area by doors, and can be effectively segregated. Its immediate function is to bring indoors the highbay door to the limited access Area and the stormwater collection basin in the northwest corner of the space it will enclose. Its interim use shall be for the outdoor storage of shielded low level waste; its tentative planned use is for the maintenance and storage of heavy, substantially clean equipment, such as hot cell windows, shipping containers, etcetera; but the ultimate use of the space is undecided.

IV. Concept for Interim Dry Waste Storage and Management

IV.1 From considerations of safety, reductions in personnel exposures and opportunities for reducing the volume and activity of waste, the waste management techniques and principals are substantially as presented in Section III of the June 5, 1991 proposal. However, the volume of the vaults provided in the current plan is only about a third of the shielded volume proposed in the concept that was presented in June, and although an ability to expand capacity is provided for contingencies, the installed capacity is much diminished from the original concept.

IV.2 Based on the crane hook elevation required to load a shielded container on a flat bed truck, or to clear an open van, the top of the waste storage vaults can be no higher than eighteen feet above the present level of the courtyard floor. Allowing for shield plugs of two to three feet in thickness, the available height inside the storage vaults will be 14 to 16 feet - enough to permit four levels of drums, HICS or B-25's to be stored. The vaults will be closed and sealed when not in use, and sub-pallet loads will be accrued in minishields in the high bay or the waste processing facility, so that the vaults need not be opened for partial (or single) pallet loads.

IV.3 During the period 1992 to 1997, we will experiment with various means of reducing waste volume, and if we succeed in any substantive way, the planned waste storage volume may prove to be generous. However, it is also possible that a shortfall in waste storage capacity will develop; and in such an event, there is enough space served by the crane in the high bay to accomodate additional waste storage vaults.

V. Underwater Storage of Encapsulated Waste

V.1 We are proceeding with a program to evaluate, further encapsulate where appropriate, and reorganize the spent sources, damaged targets and waste capsules presently housed in the main storage pool at Dickerson. Two leak testers are in operation; and an exploratory program has been initiated. At this point, we are working principally with spent sources and damaged targets to develop and refine techniques, explore alternatives for organizing the capsules into manageable groups, and scope the economics so that we can define the specific parameters of a prudent long range plan.

V.2 We are baffled by MDE's apparent insistence, per its letter of July 3, 1991, that we ship waste capsules from the main storage pool for burial at this time; and until its position is justified, we will assume that it derives from misconceptions or misinformation. Some of the in-pool waste has decayed by a factor of ten and is very low in activity; and in deference to MDE's desire that we ship some waste from the pool before 1993, we will assign a priority to the segregation of items that are low enough in activity to warrant transfer to dry storage or shipment for disposal. I trust MDE agrees that said priority should be subordinate to the verification of capsule quality, the organization of in-pool storage capsules, and the development of a plan for monitoring encapsulated waste inventory.

VI. Schedule

VI.1 Our proposed schedule for design, licensing, construction and the initiation of operations is set forth in this Subsection.

a) Approval of Scope by MDE - We need the approval of Montgomery County to cover as much of the courtyard as both MDE and Neutron believe is desirable; and MDE approval of scope is highly desirable, if not required. No authorization to proceed with construction is thereby conveyed, and it would help the schedule if MDE's approval is received by August 31.

b) Approval of Scope by Montgomery County - Given a letter from MDE endorsing the increased scope of courtyard coverage (over that which was proposed nearly ten years ago) we anticipate County approval of the scope by mid September.

c) We would like to reduce background exposure rates without further delay, and would prefer to do so by placing an appreciable portion of our waste in the proposed shield. Accordingly, we would appreciate a fast track review for any approvals that RHP considers necessary, and if we

could arrange that, we propose to furnish a detailed design by September 15; receive approval by September 30; complete construction during October; and put our waste to sleep in that way by Thanksgiving.

d) Alternatively, we can probably achieve an acceptable, but less efficient reduction in background exposure rate by the use of ad-hoc shields of a type that are within our existing scope; and if the accelerated review of a permanent shield is impractical, we will proceed in that manner.

e) With reference to subsection I.3 of this letter, we respectfully request that we be authorized, without further delay, to compact our waste more or less in the manner proposed in writing with the blessing of our Health Physics Consultant more than two years ago.

f) After we have received both MDE and County approval of the scope, we shall proceed with detailed design of both the courtyard enclosure and the entire Waste Storage and processing complex. The effort comprises:

application for license amendment submitted by October 31, 1991;

parameter design of functional items critical to the structural design, to be completed by November 30, 1991;

detailed structural design to be completed by January 15, 1992;

building permit by March 15, 1992;

detailed design of long lead equipment complete by January 31, 1992;

ordering of long lead items completed by March 31, 1992;

construction starts April 1, 1992, closed in by August 31, operational by October 31, 1992.

VI.2 A mechanism for interim, informal, face-to-face licensing reviews of the functional design as it progresses is required if we are to maintain schedule. Each such review can be topical, they need not take much time, and they will give your people an opportunity to ask timely questions (and state preferences if they wish) as the design progresses. Then when the license application is submitted (or as it is being reviewed) the questions and issues will have been resolved, the approval time will be reduced, and we can proceed efficiently.

VI.3 Although no approval is sought or required, we would be pleased to discuss with MDE, at our mutual convenience, the details of the in-pool waste management program that has evolved over the years, and the expanded program of capsule evaluation, repair (where warranted) and reorganization that is now in the process of being defined and implemented.

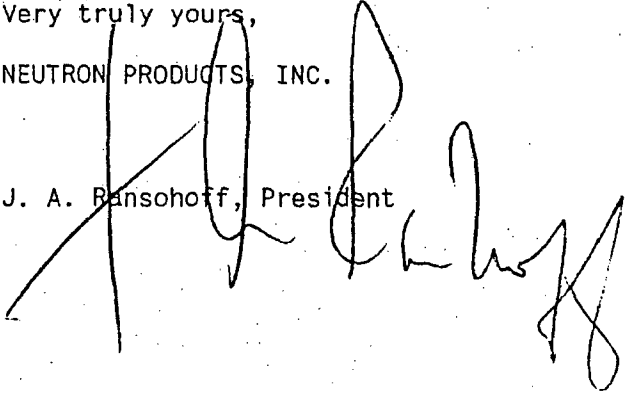
Department of the Environment
August 23, 1991
Page 7

The favor of an approval of scope, or a meeting to resolve any issues, during the week of August 26 is respectfully requested. Thank you for your attention.

Very truly yours,

NEUTRON PRODUCTS, INC.

J. A. Banschhoff, President



Attachment

JAR/1190

NEUTRON PRODUCTS inc

ATTACHMENT #1

RADWASTE VOLUMES, ACTIVITIES AND STORAGE VOLUMES

- Refs: 1. MDE/RHP letter to Neutron Products dated July 3, 1991
2. NPI letter to MDE/RHP dated August 7, 1991

GENERAL

This attachment responds to the four questions contained in Ref. 1, and indicates where existing waste storage space is adequate and where additional storage space is required for the 6-year period from now until mid-1997. The numbers of the following section headings correspond to the numbers of the questions in Ref. 1.

1. EXISTING DRY WASTE STORAGE AREAS

For "high activity" drums and high integrity containers (HICs):

Typically the average activity of this waste is from 10 to 15 Ci per drum or HIC and in unusual cases can be about 100 Ci per drum. These drums and HICs are stored in portable lead shields that are normally stored in the New Waste Room. The total volume of waste that can be so stored is about 70 cuft.

For polyethylene waste tubes:

There is a shielded dry vault in the north canal with a total volume of about 15 cuft. The vault is used to store sealed waste tubes, made of high density polyethylene, that contain "high activity" waste from past processing of cobalt-60.

For "intermediate activity" drums and HEPA filters:

Typically the average activity of this waste is from 0.2 to 1 Ci per drum. The primary location for storage of this waste is our drum vault, which has a total volume of about 900 cuft. A secondary location, outside the drum vault and behind a portable concrete shield in the old waste room, has a total volume of about 400 cuft.

For "low activity" drums and bagged waste:

Typically drums in this category contain 0.01 to 0.05 Ci per drum. Most of these drums are stored in the new waste room, which has a total volume of about 7,500 cuft. Low activity drums and bags are also stored in the old waste room in front of the drum vault and the portable shield referred to above. The latter location has a total volume of about 2,000 cuft.

For "low activity" B-25 boxes:

A B-25 box contains about 100 cuft and normally 0.1 to 0.2 Ci. Currently most of these are stored in the courtyard, which has a volume approximating 60,000 cuft for practical stacking heights.

For very low activity contaminated soil and gravel:

This waste is stored mainly in steel drums and its activity ranges from about 0.2 to 2 millicuries per drum. This waste is stored outdoors in the courtyard and an adjacent area within the Limited Access Area.

2. CAPACITY OF EXISTING DRY WASTE STORAGE AREAS

"Capacity" as used here is the volume of waste material that can be stored in the existing dry waste storage areas. Capacities are necessarily smaller than area volumes because of geometric effects (e.g., circular drums in rectangular spaces), space occupied by pallets, inaccessibility to some spaces with our forklift, and limits on dose rates, both inside and outside waste storage areas, that limit how much waste can be stored.

For high activity drums and HICs:

The capacity is about 70 cuft. However, dose rates outside the lead shields are such that, in order to reduce ambient radiation levels, it is desirable to reserve the shields for storage of waste being processed and to store the processed waste in a more highly shielded space.

For polyethylene waste tubes:

The capacity is about 9 cuft.

For intermediate activity waste:

The capacity of the drum vault is about 300 cuft. The capacity of the shielded space outside the drum vault is about 130 cuft.

For low activity drums and bagged waste:

The capacity of the new waste room is about 1,000 cuft. The capacity of the old waste room outside the vault and portable shield is about 400 cuft. The effectiveness of the new waste room is limited by high dose rates inside the room, which limit personnel access, and outside the room. Looking ahead to the lower dose limits of revised 10 CFR 20, we plan to use the new waste room for processing waste prior to storage and to store processed waste in a compartmented space with more shielding.

For low activity B-25s:

The volume of the courtyard is adequate for 10 or more B-25s, but the absence of shielding limits the capacity to less than that number, and to an even smaller number under the limits of revised 10 CFR 20.

For very low activity waste:

The volume of the courtyard and adjacent space is adequate for much more than the existing waste volume, but it is desirable to store this waste in a covered storage space.

3. PRESENT VOLUME AND ACTIVITY OF RADWASTE IN DRY STORAGE AREAS

Ref. 2, which summarizes radwaste inventory at Neutron Products as of 6/30/91, is the basis for radwaste quantities contained in this section.

High activity drums and HICs: About 70 cuft with about (b)(4)

Polyethylene waste tubes: About 8.3 cuft with about (b)(4)

Intermediate activity waste: About 225 cuft with (b)(4)

Low level drummed and bagged waste:

About 450 cuft with about (b)(4)

About 100 cuft with <1 Ci in bags. (A shipment of 550 cuft of bagged waste was made on 8/2/91.)

Low activity B-25 boxes: About 500 cuft with <1 Ci.

Contaminated soil and gravel: About 180 cuft with about 4 mCi.

4A. ESTIMATED VOLUMES AND ACTIVITIES OF DRY WASTE TO BE GENERATED THROUGH MID-1997

The bases for the estimates are as follows:

High activity waste:	2 HICs/yr @ 10 cuft & (b)(4) + 3 55-gal drums/yr @ (b)(4)
Intermediate activity waste: (@ 5:1 compaction)	6 55-gal drums/yr @ 0.2 Ci/drum
HEPA filters	1 HEPA filter/yr @ 4 cuft & 0.5 Ci ea
Low activity drums/bags: (before compaction)	1,000 cuft/yr & 0.5 Ci/yr
(@ 5:1 compaction)	200 cuft/yr
(@ 20:1 compaction)	50 cuft/yr
Low activity B-25s:	2 B-25s/yr @ 100 cuft & 0.1 Ci ea
Contaminated soil & gravel:	15 55-gal drums/yr @ avg of 500 uCi/drum

The estimated quantities for a six year period to mid-1997 are then as follows.

High activity drums and HICs: 255 cuft with (b)(4)

Polyethylene waste tubes: None anticipated

Intermediate activity waste: 250 cuft with (b)(4)

Low activity drummed waste (@ onsite compaction of 5:1): 1,200 cuft with about (b)(4)

Low activity boxed waste (e.g., B-25s): 1200 cuft and (b)(4)

Contaminated soil and gravel: 675 cuft and about 50 mCi.

4B. ADDITIONAL SPACE NEEDED TO STORE DRY RADWASTE THROUGH MID-1997

For high activity drums and HICs:

Because of the anticipated need for increased shielding, new storage space will be needed for all of the high activity drums and HICs now onsite plus those to be generated through mid-1997. This comes to a waste volume of about 315 cuft with an activity of about (b)(4) (including the effect of decay). The amount of vault space required for this waste volume is 800 cuft. The required shielding is approximately 3 ft of concrete.

For intermediate activity drums (compacted @ 5:1):

To supplement the existing drum storage vault and the shielded space outside the vault, additional storage will be required for about 50 cuft of waste. The required additional vault volume is about 100 cuft. The required shielding is about 2 ft of concrete.

For low activity drums (compacted @ 5:1):

Assuming that the new waste room will be reserved for processing waste, new storage space will be required for about 1,650 cuft of waste. The required additional vault volume is 3,300 cuft. The required shielding is about 1.5 ft of concrete.

For low activity B-25s (uncompacted):

As none of the existing indoor, shielded space is available for storage of B-25 boxes, additional storage is required for a total waste volume of 1,700 cuft. The required vault volume is 2,000 cuft. The required shielding is about 1 ft of concrete.

For very low activity contaminated soil and gravel:

The total waste volume onsite will be about 900 cuft. As the activity will be low, it is assumed that the only storage requirement will be to provide about 1,800 cuft of covered space.

NEUTRON PRODUCTS inc

**RADIOLOGICAL HEALTH PROGRAM
MARYLAND DEPARTMENT OF THE ENVIRONMENT
2500 Broening Highway
Baltimore, Maryland 21224
(410) 631-3302**

RADIOACTIVE MATERIALS INSPECTION REPORT

Neutron Products, Inc.
22301 Mt. Ephraim Road
P.O. Box 68
Dickerson, MD 20842

License Number: MD-31-025-01

Phone Number: (301) 349-5001

FAX Number: (301) 349-5007

Introduction:

On March 25, March 26 and April 2, 1998, Messrs. Bob Nelson, Ray Manley, Ms. Donna Thim and I conducted a routine unannounced radioactive materials inspection at NPI's Dickerson facility. The inspection examined radiation safety, compliance with conditions of the above referenced license, adherence to procedures, proper maintenance of records, interviews with personnel, general observations and independent measurements. Five items of noncompliance and two issues of concern were identified. These findings were discussed with Messrs. Jackson Ransohoff, Jeffrey Williams and Michael Repp at the licensee management exit interview which was held on April 9, 1998. These findings will also be described in a Departmental Letter-Notice of Violation.

Program:

This license authorizes NPI to possess a maximum of (b)(4) of cobalt-60 for the manufacturing of special form sealed sources, removal or encapsulation and melting of unsealed cobalt-60 to fabricate teletherapy sources. The licensee stated that for one day during the month of March 1998 they possessed (b)(4) which is the highest activity ever documented on the "01" license. NPI employs 60 persons at the Dickerson plant and also maintains three other Maryland radioactive materials licenses as described below:

MD-31-025-03	Installation and Service of Teletherapy Sources
MD-31-025-04	Dickerson II Pool Irradiator
MD-31-025-05	Dickerson I Pool Irradiator

Purpose And Scope:

The purpose of the inspection was to examine the licensee's use and control of radioactive material relative to Maryland radiation protection regulations and specific license conditions. The inspection staff implemented a performance based inspection plan which emphasized the achievement of quality in all facets of inspected operations.

Interviews:

Interviews were conducted with the following employees:

Jackson Ransohoff	President
Jeffrey Williams	Radiation Safety Officer
Michael Repp	Health Physicist
Jeffrey Corun	Hot Cell Manager
Joe Weedon	Manager-Limited Access Area (LAA)
Kathy Bupp	Health Physics Technician

Specific Areas of Review:

The following areas were inspected and reviewed: Dosimetry, Random Inspection Program, Quarterly Audits, Radiation Safety Committee Activities, Respiratory Protection Program, Inventory of Radioactive Materials, Daily Implementation of the Radiation Safety Program, General Operations in the LAA, Decommissioning Recordkeeping, Boundary Monitoring Program, One Kilometer Surveys, Shipping and Receiving (Cobalt-60), Cobalt-60 in Soil, Floor Monitoring, Health Physics Monthly Reports, Disposals, Training, Air Monitoring, Survey Meter Calibration, Water Monitoring, Emergency Generator Use and Operations, Status of Building Permit Application, Annual Reports and previous violations.

Results:

1. Monthly Audits **VIOLATION**

The Inspection Team reviewed records of monthly audits for the year of 1997 and year to date 1998. Several were missing. At the exit interview, NPI acknowledged that they did not conduct audits for the months of April 1997, July, 1997 and January, 1998. Furthermore, NPI management did not review the monthly audits at the required quarterly frequency. On October 31, 1997, NPI reviewed the monthly audits from August 1996 to October 1997. NPI management did not review the monthly audits for November 1997 and December 1997. This is a repeat violation from the April 1997 inspection. In NPI's Response Letter dated July 16, 1997 (which responded to violations and concerns identified during the 4/97 inspection), Mr. Williams indicated that they were in compliance with these requirements; however, they are still in violation.

2. Cobalt-60 Soil Concentration **VIOLATION**

NPI has still not removed contaminated soil from the adjacent railroad property to establish compliance with soil concentration limits describe in Condition 13.N. (Amendment 33). The Stipulation and Settlement (Civil Case No. 76639 in the Circuit Court for Montgomery County) dated January 3, 1994 required NPI to clean contaminated soils by June 15, 1994. NPI has missed this deadline and is refusing to remediate this property. Furthermore, NPI is refusing to inform this property owner regarding the cobalt-60 contamination that was released from their Dickerson facility. This is a repeat and ongoing violation.

3. Storage and Control of Licensed Radioactive Material **VIOLATION**

On April 2, 1998, I observed an unlocked Sea Land Container in NPI's parking lot. The

door to this container was open and it was not under surveillance. Mr. Repp and I inspected the contents of the container and identified Depleted Uranium which is possessed under NPI's MD-31-025-03 Radioactive Materials License. Specifically, we identified a "Picker Wheel" and a "Shield for a TEM Head". I informed NPI personnel that this was a violation of Section D. 801. titled "Security of Stored Sources of Radiation". The Depleted Uranium was not secured against unauthorized removal or access from the place of storage. Afterwards, I instructed NPI personnel to lock the Sea Land container and they did. On April 9, 1998 when I arrived at NPI for the exit interview, I found the Sea Land container unlocked. The door was open and the Depleted Uranium was not under surveillance. The door to the Sea Land container did not have a Caution-Radioactive Materials Sign on it and it was not identified as a restricted area. Section D. 802 titled, "Control of Sources of Radiation not in Storage", requires the licensee to control and maintain constant surveillance of licensed radioactive material that is in an unrestricted area. In addition, two TEM rings (which were found stored in the sea land container) contained approximately 17.0 kilograms of Depleted Uranium each and were not identified on the Depleted Uranium Inventory record.

4. Labeling Containers **VIOLATION**

On April 2 and April 9, 1998, I observed Depleted Uranium (which is possessed under NPI's MD-031-025-03 license) stored in the Sea Land Container in NPI' parking lot. The Sea Land Container, the box inside and the actual teletherapy parts which contained Depleted Uranium did not bear labels with the words, "Caution, Radioactive Material" or "Danger, Radioactive Material". At the exit interview, Messrs. Repp and Williams stated that they were certain that they are exempt from labeling requirements. I handed them a copy of the State Regulations, they reviewed it and could not identify an exemption which applied.

5. Recordkeeping for Decommissioning **VIOLATION**

The licensee's records of information important to safe and effective decommissioning of the facility were incomplete, missing, lost and/or not available for inspection. This is a repeat violation from the April 1997 Departmental Inspection. Specifically, records of spills, leaks, and other occurrences involving the spread of radioactive material in and around the facility were still not available for inspection by the Agency. The only records NPI could produce was records regarding the leaks in the canal and the main pool. Records involving the location of inaccessible radioactive contamination such as buried pipes and soil were still not available for inspection. In NPI's Response Letter date July 16, 1997, Mr. Williams stated that they were in substantial compliance with Section C.29(f) however they are still in violation. During the exit interview, Mr. Ransohoff talked at length about the volume, activity and location of approximately 2000 cubic feet of contaminated soil used as fill during construction which occurred from 1981 to 1983; however, there were no records available for inspection. In addition, NPI still cannot produce any records regarding buried contaminated drains and cobalt-60 soil concentrations of a partially remediated hole in the LAA. Current records regarding cobalt-60 soil concentration of the adjacent railroad property and other areas down grade were also not available for inspection.

6. Procedure For Exit From The LAA **ISSUE OF CONCERN**

On March 26, 1998, RHP Inspectors had completed the inspection of the LAA when Mr. Williams identified radioactive contamination on his left arm. Mr. Williams experienced

difficulty in decontaminating this area. At this time, a portal monitor technician was not available to operate the Helgeson Mini HECM Gas Proportional Booth Monitor. Mr. Williams walked passed the monitor twice while he was contaminated with cobalt-60 without "counting out". The first time, he walked passed the Booth Monitor so he could operate the Monitor's controls while Mr. Nelson was "counting out". The second time, a portal monitor technician was available however Mr. Williams again walked passed the Booth Monitor to obtain a scouring pad to remove the contamination from his shoulder. Afterwards, when Mr. Williams finally "counted out" in the Booth Monitor, he tripped the alarm which indicated that there still was contamination on his shoulder. Mr. Williams claims that this is not a violation because he never actually left the LAA without "counting out". It is the RHP's position that no person should ever physically pass the monitor prior to "counting out" and being free of cobalt-60 contamination. Upon further review, it was determined that NPI modified the procedure regarding "Exiting the LAA" on April 1, 1993 with out notification or permission from the RHP. This modified procedure allows a contaminated employee to bypass the Booth Monitor and operate it's controls as long as he remains in the LAA. Neither procedure is incorporated into the license or "tied down" by amendment. The RHP Inspection Staff considers this to be a poor health physics practice.

7. Survey Meter Calibration **ISSUE OF CONCERN**

NPI personnel could not demonstrate National Institute of Standards and Technology (NIST) traceability of their calibrator source (Cobalt-60, M-498, 6.10 mCi) which they use to calibrate 65 of their survey meters and 46 of their self reading dosimeters. No traceability or certification records were available for inspection. NPI's procedure for calibrating survey meters requires the source to be NIST traceable; however, this procedure is not "tied down" to the license by amendment. At the exit interview, NPI still could not explain or demonstrate how they know that their calibration procedure is accurate and NIST traceable.

8. Respiratory Protection Program **RECOMMENDATIONS**

The Inspection Team conducted a review of NPI's Respiratory Protection Program. I discussed their Respiratory Protection Program with Ms. Mardel Knight, a Certified Industrial Hygienist at MDE. Ms. Knight provided the following recommendations I presented to NPI management at the exit interview:

- a. NPI should conduct an annual review of their respiratory protection program
- b. NPI's written Respiratory Protection Program needs more detail such as quantity and types of respirators, model number of respirators, serial numbers of respirators, type of fit testing which is conducted, names of service contractors, and names of the emergency responders.
- c. A log should be kept which documents the "30 day checks" of each respirator.
- d. The SCBAs need to be checked within the 30 day frequency.
- e. Each Emergency Responder is required to pass the medical examination within a 12 month frequency and the new forms must be maintained for inspection.

Licensee Management Exit Interview

The licensee management exit interview was held on April 9, 1998 at NPI. Messrs. Nelson, Repp, Ransohoff, Williams and I attended the exit interview and we discussed the

results of the inspection. Mr. Ransohoff disagreed with all of the violations found. Messrs. Williams, Repp and Ransohoff also disagreed with the Issue of Concern regarding the Procedure For Exit From The LAA. Messrs. Repp and Ransohoff stated that the recommendations regarding their Respiratory Protection Program were reasonable and would be implemented prior to the next melting campaign when respiratory protection will be necessary. Messrs. Ransohoff and Repp also agreed with the Issue Of Concern regarding Survey Meter Calibration. Mr. Repp stated that they would demonstrate NIST traceability within one week. We also discussed other issues including training of visitors who enter the LAA, dose to members of the general public for 1997, Sediment and Stormwater Management application, MNCPPC application, ALARA and the Maryland Radiation Control Advisory Board's future tour of NPI's Dickerson plant.

During the exit interview, Mr. Ransohoff also made the following comments:

1. Mr. Ransohoff stated that Depleted Uranium does not need to be secured against unauthorized removal from place of storage because he is entitled to a general license and nobody locks up general licensed material. He also stated that he resolved this issue years ago. He went on to state that Cobalt-60 exists in cosmic dust from meteors and he recently saw one near the plant. Mr. Ransohoff stated that as a result, he was concerned about the accuracy of his environmental monitoring.
2. Mr. Ransohoff offered Mr. Nelson and I tickets to the Washington Wizards Basketball game on April 9, 1998 at the MCI Center in Washington D.C. and we declined. He asked again if we wanted to go to the game, he held an envelope up in the air and stated that he had extra tickets. Again, we declined and he tossed this envelope on the table.
3. Mr. Ransohoff asked if Mr. Nelson and I could change the soil concentration limits described in Amendment 33 to levels which would put NPI in compliance. I stated that I could not do that and showed him a copy of the Stipulation and Settlement. I pointed out paragraph 13 which describes the agreement to clean contaminated soils to Amendment 33 criteria by June 15, 1994. NPI has failed to meet this deadline because they never cleaned up the adjacent railroad property to concentrations below 8 picocuries per gram. In addition, they never notified the property owner regarding the contaminated soil.
4. Mr. Ransohoff stated that he does not have to comply with the soil concentration limits described in Amendment 33 and the June 15, 1994 deadline for clean up of contaminated soils because he has an oral agreement with Judge Pincus which supersedes the Stipulation and Settlement of January 3, 1994.
5. Furthermore, he stated that he is not required to comply with the terms and conditions of the Stipulation and Settlement because MDE dropped the law suit against NPI and he won. I disagreed and showed him paragraph 11 of the Stipulation and Settlement which describes the \$75,000 payment plan. I informed Mr. Ransohoff that he is required to comply and that is why NPI is paying \$10,000 a year in fines. Mr. Ransohoff stated repeatedly that it is not a fine. He told me never to call it a fine again. He told me that if I ever called it a fine again that he was going to shoot me. He stated again that this is not a fine. He told me that this is very serious. He leaned over towards me and again told me that if I ever called it a fine again that

he was going to shoot me. Mr. Ransohoff then said that if I ever called it a fine, he would terminate me.

At the conclusion of the exit interview, Mr. Ransohoff and I signed the Radioactive Material Inspection Findings and Licensee Acknowledgement Form (MDER E-1) which indicates that a letter will be sent to NPI describing Agency requirements and that corrective actions must be immediately initiated for the violations identified during the inspection.

Miscellaneous Notes:

NPI has still not obtained the permits necessary to begin construction of the courtyard enclosure. Specifically, NPI has not even applied to the Montgomery County Department for Sediment Control and Stormwater Management for a required permit. At the exit interview, Mr. Ransohoff explained that it is not his fault. He stated that he has not applied for the permit because there is a property line dispute and "county red tape". NPI plans to melt (b)(4) curies of cobalt as soon as this application is accepted. NPI has still not obtained the permit necessary to install the fire suppression system required for the two pool irradiators.

The Inspection Team reviewed Dosimetry records for the year of 1997. One employee received over 2.0 REM (2098 mRem) and six employees received over 1.0 REM. The occupational doses for the year of 1997 were substantially lower than previous years. There was no melt or hot cell clean up in 1997. The highest extremity exposure for 1997 was 4.283 REM.

The results of the boundary monitoring program were reviewed and determined to be incompliance with the 500 mRem per year limit at all locations. Monitors have been move inside the fence to prevent theft and tampering. The highest result was 456.9 mRem for the year at the 2019 Dry Pond location. Background was measured to be 68.2 mRem at the Lytle Storage Facility.

On March 26, 1998, Mr. Nelson and I inspected the LAA. We interviewed Messrs. Corun and Weedon. We verified the physical location of Cobalt-60 and Depleted Uranium as identified on the inventory records. Mr. Weedon demonstrated and explained procedures regarding daily checks, weekly checks, air monitoring, water monitoring and survey meter calibration.

For the year of 1997, the average release to WSSC was 1.4 E-5 uCi/ml . No monthly average exceeded 3.0 E-5 uCi/ml . The total activity which was dumped was 13.9 mCi or approximately 1.4% of the 1.0 Curie limit.

On 2/16/98, NPI shipped 100 cubic feet, 524 pounds, 36.0 mCi of dry solid radioactive waste (which was removed from the waste storage) to Barnwell, South Carolina for disposal.

The Inspection Team reviewed NPI's One Kilometer Surveys for the year of 1997. NPI personnel surveyed 54 acres and found seven cobalt-60 particles in the Dickerson community.

On March 26, 1998 Mr. Manley and Ms. Thim conducted a radiological survey of two residential properties near the plant. No radioactive particles were found.

State of Maryland

DEPARTMENT OF THE ENVIRONMENT
RADIOLOGICAL HEALTH PROGRAM
2500 Broening Highway
Baltimore Maryland 21224
(410) 631-3300

RADIOACTIVE MATERIAL INSPECTION FINDINGS AND LICENSEE ACKNOWLEDGEMENT

I. Licensee
Neutron Products, Inc.
22301 Mt. Ephraim Road
Dickerson, MD 20842

II. License No.
MD-31-025-01

III. Date of Inspection 3/25, 3/26 & 4/2/98

IV. Inspection Findings and Licensee Action

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Code of Maryland (COMAR) 26.12.01 "Regulations for Control of Ionizing Radiation", and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The findings of this inspection are as follows:

- A. ☐ No current use or storage of licensed radioactive material (no program). The licensee was informed that upon receipt of radioactive material RHP must be notified.
- B. ☐ Issuance of an Agency E-1: Within the scope of the agency inspection no items of noncompliance or unsafe conditions were found. No action is required by the licensee.
- C. ☐ Issuance of an Agency E-2: Within the scope of the inspection, violations of minor significance were found. For any violation, corrective action must be immediately initiated. Within 20 calendar days of your receipt of this notice you are to provide the Department with written statements of explanation describing:
- (1) corrective steps which have been or will be taken by you, and the results achieved or anticipated; (2) corrective steps which will be taken to avoid further violations; and (3) the date when full compliance will be achieved. Such a statement or explanation must be provided for each of the items listed.
- D. ☒ Issuance of an Agency E-1 with a letter sent to licensee further describing Agency requirements. For any violation, corrective action must be immediately initiated.

V. Licensee Acknowledgement

The inspector has explained and I understand any items of noncompliance identified during this agency inspection. Furthermore, I acknowledge that, if an Agency E-2 Description of Violations was issued, failure to comply may result in the revocation, suspension or modification of the license and possible fines for each day the violations continue.

April 9, 1998 Alan Jackson
Date RHP Inspector

J. P. Smith - President
Licensee Representative Title or Position