

Energy Systems Group
8900 De Soto Avenue
Canoga Park, California 91304

Telephone: (213) 341-1000
TWX: 910-494-1237
Telex: 181017



Rockwell
International

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REGION V 128

February 5, 1982

In reply refer to 82ESG-726

Mr. L. R. Norderhaug, Chief
Safeguards Branch, Region V
Nuclear Regulatory Commission
1450 Maria Lane, Suite 260
Walnut Creek, California 94596

Dear Mr. Norderhaug:

Your letter of January 15, 1982, which reported on inspections conducted by NRC Region V personnel on October 19-23, November 2-6, 16, and 17, and November 30-December 4, 1981, of activities authorized under NRC License SNM-21, indicated one activity which was deemed to be a Severity Level V violation. This will summarize our actions to correct the apparent item of noncompliance.

A special training class was conducted on November 24, 1981, for all personnel directly involved in special nuclear material inventories and the application and control of tamper seals. The instruction in this class reviewed the requirements for verification of the integrity of all tampersealing seals during physical inventories of SNM and emphasized that not only items with improperly applied tamper seals but also those with broken or damaged seals must be remeasured and resealed properly. It was also emphasized that both seal identity and integrity must be inspected and verified during inventory of sealed items, even though our normal practice is to check the seal integrity whenever tamper-sealed items are moved. In addition, the proper methods for applications of tamper seals were reviewed in detail.

These actions will assure correct application of tamper seals, proper identification of seals, and verification of seal integrity on all sealed items during inventories in full compliance with NRC requirements. Continuing review and monitoring of tamper seal handling and control will avoid future items of noncompliance.

Section 9 of the inspection report discusses a number of observations made during the conduct of the physical inventory in addition to the citation for the item of noncompliance. While the discussion is not incorrect, we believe the following commentary will contribute to a more

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82ESG-726
February 5, 1982
Page 2

complete and coherent description of the activities under consideration. We believe and so stated to the inspector that the item identified as "apparently inadequately sealed with a Type E metal cup seal" was adequately sealed. Further, the item was a 55-gallon drum of SNM waste which had been so identified and was stored in the SNM waste yard, where it was not subject to the physical security requirements. The "similar container" was indeed improperly sealed, but it was still within the security area and was scheduled for measurement that day. When the improper application of the seal was demonstrated, the item was resealed properly, then measured, and transferred to the waste yard. Recognition of this deficiency in our seal application practice resulted in the major emphasis on seal application methods and procedures in the training session as described above.

Please note that this letter contains information of a type specified in 10 CFR 2.790(d) and is thus deemed to be commercial or financial information within the meaning of 10 CFR 9.5(a)(4) and is not subject to public disclosure.

Sincerely yours,

M. E. Remley, Director
Health, Safety, and
Radiation Services
Energy Systems Group

11j:5/2-3



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 260
WALNUT CREEK, CALIFORNIA 94596

Safeguards

April 13, 1982

~~MATERIAL TRANSMITTED BY THIS MAIL CONTAINS~~

Docket No. 70-25 (SG)

Energy Systems Group
Rockwell International
8900 DeSoto Avenue
Canoga Park, California 91304

Attention: Mr. Robert G. Jones
Vice President and Controller

Gentlemen:

Subject: NRC Safeguards Inspection

This letter refers to the routine safeguards inspection of your activities authorized under NRC License No. SNM-21 conducted by Messrs B. L. Brock, A. V. Wieder, and G. B. Nelson of this office on March 1-2 and 15-19, 1982. It also refers to the discussions of our inspection findings held by the inspectors with you and members of your staff on March 19, 1982.

The inspection included examination of activities related to your program for the control and accounting of special nuclear material in accordance with applicable requirements of Title 10, Code of Federal Regulations, Part 70, "Domestic Licensing of Special Nuclear Material," and pertinent license conditions as described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and records, interviews with facility personnel, and observations by the inspectors.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790(d) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, documentation of the findings of your control and accounting procedures for safeguarding special nuclear material are exempt from public disclosure; therefore, the enclosed inspection report will not be placed in the Public Document Room.

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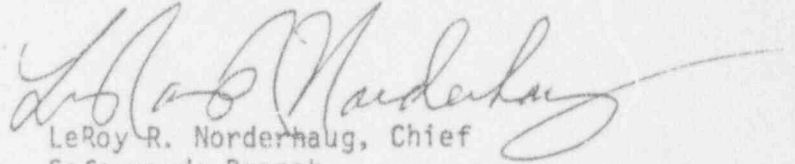
Energy Systems Group

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APR 13 1982

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,



LeRoy R. Norderhaug, Chief
Safeguards Branch

Enclosure:
Inspection Report
No. 70-25/82-02 (SG)
(IE-V-485)

The information on this page is considered to be appropriate for public disclosure pursuant to 10 CFR 2.790.

U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 70-25/82-02(SG)(IE-V-485)
Docket No. 70-25 License No. SNM-21 Safeguards Group 1
Licensee: Energy Systems Group, Rockwell International
8900 DeSoto Avenue
Canoga Park, California 91304

Facility Name: Energy Systems Group, Atomic International
Inspection at: Headquarters, DeSoto Facility
Inspection conducted: March 1-2 and 15-19, 1982
Date of Last Material Control and Accounting Inspection: October, November, & December 4, 1981
Type of Inspection: Unannounced, Material Control and Accounting

Inspectors: G. B. Nelson 4-9-82
G. B. Nelson, Chemist Date Signed
A. V. Wieder 4/12/82
A. V. Wieder, Safeguards Auditor Date Signed
B. L. Brock 4/9/82
B. L. Brock, Chemist Date Signed
Approved by: L. R. Norderhaug 4/12/82
L. R. Norderhaug, Chief, Safeguards Branch Date Signed

Inspection Summary:

Areas Inspected: Routine safeguards inspection of facility organization and operations, measurement control program, shipper-receiver verification, loss mechanism analysis, records and reports, follow-up on item of noncompliance, and independent safeguards inspection effort. The inspection involved 89 inspector-hours onsite by three inspectors.

Results: There were no items of noncompliance within the eight areas inspected.

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~~CONFIDENTIAL INFORMATION~~

DETAILS

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APPROVAL OF IE:V

1. Key Persons Contacted

- *M. E. Remley, Director Health, Safety and Radiation Services
- *V. J. Schaubert, Manager, Nuclear Materials Management
- D. C. Allen, Engineer, Nuclear Materials Management
- J. A. Birg, Staff Engineer, QA Audits and Controls
- C. L. Nealy, Manager, Analytical Chemistry Laboratories
- M. M. Klenck, Member of Technical Staff
- S. Wode, Management Systems Specialist
- J. Kim, Statistician
- R. McCurnin, Manager, Nuclear Operations

The inspectors also interviewed other licensee personnel employed in production, QA measurements, and nuclear material control and accounting.

*Denotes those attending the exit interview.

2. Licensee Action on Previous Inspection Findings

Noncompliance, (70-25/81-07(SG)(IE-V 465) (Closed): Failure to verify the integrity of tamper safing devices on containers. The licensee conducted a training class for all persons involved on the proper methods of application of tamper seals.

3. Exit Interview

The inspection findings were discussed with the licensee personnel denoted in paragraph 1.

- a. A significant decrease in the population of waste barrels was noted. A plan for overpacking 27 waste barrels stored in MBA-14 vault pad was reviewed.
- b. The Rockwell International Hot Laboratories (RIHL) facility was inspected. A production development program for decladding of coextruded Fermi fuel using a centerless grinder was reviewed.
- c. The handling and storage of the unused portions of U metal and UAl_x powders in the analytical chemistry laboratories was re-examined.
- d. An incident involving the loss of 3.2 g of U-235 during the physical inventory taking in MBA-01 on March 2, 1982 was discussed.
- e. The licensee believes that the source of his ID in excess of LEID results from sampling procedures in the powder room when UAl_x powder is sampled for chemical analysis.

~~CONFIDENTIAL INFORMATION~~

4. MC 85202B - Facility Organization

No items of noncompliance were identified.

The licensee's organizational structure is in accordance with the licensee's approved FNMC plan. The structure minimizes conflicts of interest and affords the licensee the ability for effective management of the material control and accounting program.

5. MC 85204B - Facility Operations

No items of noncompliance were identified.

Energy Systems Group will apply for renewal of license No. SNM-21, which will expire on September 30, 1982. Current operations are in accordance with federal laws and NRC directives. Fabrication of ATR fuel assemblies will continue through November 1982, then this production will cease and only TRTR fuel assemblies will be fabricated. Activities at Rockwell International Hot Laboratories (RIHL) were inspected. One activity discussed was the development of a process for removal of zirconium cladding and a possible uranium-zirconium intermetallic compound (UZr₂) from uranium - 10 wt% molybdenum alloy fuel rods from the Fermi reactor.

6. MC 85206B - Measurement Control Program

No items of noncompliance were identified.

The analytical chemistry laboratories were inspected. Documents were reviewed on analytical balance calibrations and check measurement evaluations. Licensee's analytical data shown in the Safeguards Analytical Laboratory Evaluation (SALE) report, January 1982, was examined. Inspectors read the latest audit by the licensee of their contract measurements laboratory, Teledyne Isotopes, Westwood, N.J. Inspectors verified the licensee's use of reference standards from NBS and NBL. Qualifications of the chemists were verified by the inspectors. Reviews were performed of the destructive and non-destructive assay systems.

7. MC 85208B - Shipper-Receiver Verification

No items of noncompliance were identified.

Licensee's documents show that he only ships Special Nuclear Material (SNM) to authorized recipients. He measures the SNM content before shipment (destructive assay methods during processing and nondestructive methods after encapsulation) and completes and dispatches Form-741 NRC/DOE.

The licensee measures SNM content of receipts. Shipper-receiver differences are statistically analyzed and an investigation is initiated if the difference exceeds 50 grams U-235.

~~TOP SECRET~~

8. MC 85211B - Loss Mechanism Analysis

No items of noncompliance were identified.

SNM losses in liquid and gaseous waste streams for the six months period ending in December, 1981 (the latest data available) was 0.11 grams U-235 and 5.6×10^{-2} grams U-235 respectively from the processing areas. These small quantities are reasonable considering that processing operations from weighing feed through pressing compacts are in controlled and filtered environments. The loss mechanism review therefore followed more closely those streams not clearly addressed. In all cases, the reviews indicated that questionable areas were appropriately controlled under current operating conditions. If significant changes in production throughput occur, additional review would be necessary to assess whether currently adequate controls remained appropriate for the new conditions.

A review of the SNM loss resulting from an accident involving a container holding 808 grams of $UA1_x$ (635 grams U and 591 grams U-235) found that 805 grams $UA1_x$ was recovered and only 3.22 grams of $UA1_x$ (2.53 grams U and 2.36 grams U-235) remained as a difference on a material balance for the container. The 3.22 grams of $UA1_x$ includes the quantity cleaned up and added to a drum containing other SNM waste. Therefore, the 3.22 grams represents a maximum loss whereas if the cleanup materials had been measured separately, the 3.22 gram may have been somewhat smaller. The licensee considers this item to be a Normal Operating Loss (NOL).

9. MC 85216B - Records and Reports

No items of noncompliance were identified.

An audit of Energy Systems Group's material balance data for the period from October 1, 1981 through January 4, 1982 included:

- a. a verification of the group's November 2, 1981 and January 4, 1982 special nuclear material inventory results
- b. an examination of all November 2 physical inventory differences
- c. confirmation of this inventory difference data to Energy Systems Group material control and accounting source documents, special nuclear material records, and inventory reports made to the Nuclear Regulatory Commission
- d. review of external shipment and receipt documents, and
- e. selective tests of internal material transfer vouchers chosen by random sample.

10. MC 92702 - Follow-up on Items of Noncompliance

The one item of noncompliance (70-28/81-07(SG)(IE-V-465), a violation of 10 CFR 70.51, was responded to Region V NRC in a timely manner. The measures taken to correct the item and avoid further items of noncompliance were effected as described below and within the time period specified in the reply. The licensee conducted a special training class on November 24, 1982 for all personnel involved in SNM inventories and the application of tamper seals were reviewed in detail. The class instructions reviewed the requirements for verification of the integrity of all tamper safing seals during physical inventories of SNM. Instructions emphasized that items with improperly applied tamper seals and those with broken or damaged seals must be remeasured and resealed properly. Seal identity and integrity must be inspected and verified during physical inventory of sealed items.

11. MC 92713B - Independent Safeguards Inspection Effort

No items of noncompliance were identified.

The physical inventory on March 1-2, 1982 was observed by an inspector. The purpose was to verify that the licensee's efforts to correct an item of noncompliance was efficacious. The physical inventory taking proceeded efficiently and indicated that the training class review and monitoring of tamper seals applications were effective.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 260
WALNUT CREEK, CALIFORNIA 94596

Safeguards

August 20, 1982

Docket No. 70-25

MATERIAL IDENTIFICATION [REDACTED]

Energy Systems Group
Rockwell International
8900 De Soto Avenue
Canoga Park, California 91304

Attention: Mr. Frank W. Feiler
Vice President and Controller
Finance and Administration

Gentlemen:

Subject: NRC Safeguards Inspection

This letter refers to the routine safeguards inspection of your activities authorized under NRC License No. SNM-21 conducted by Messrs. A. V. Wieder, and G. B. Nelson of this office on July 12-23, 1982. It also refers to the discussions of our inspection findings held by these inspectors with you and members of your staff on July 16 and 23, 1982.

The inspection included examination of activities related to your program for the control and accounting of special nuclear material in accordance with applicable requirements of Title 10, Code of Federal Regulations, Part 70, "Domestic Licensing of Special Nuclear Material," and pertinent license conditions as described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and records, interviews with facility personnel, and observations by the inspectors.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790(d) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, documentation of the findings of your control and accounting procedures for safeguarding special nuclear material are exempt from public disclosure; therefore, the enclosed inspection report will not be placed in the Public Document Room.

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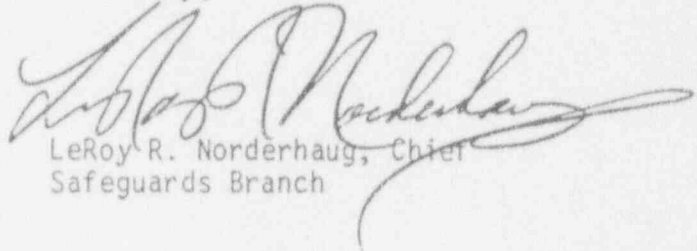
Energy Systems Group

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August 20, 1982

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,



LeRoy R. Norderhaug, Chief
Safeguards Branch

Enclosure:
Inspection Report
No. 70-25/82-06 (IE-V-507)

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U.S. NUCLEAR REGULATORY COMMISSION

Region V

Report No. 70-25/82-06 (IE-V-507)
Docket No. 70-25 License No. SNM-21 Safeguards Group 1
Licensee: Energy Systems Group, Rockwell International
8900 De Soto Avenue
Canoga Park, California 91304

Facility Name: Energy Systems Group, Atomics International Division
Inspection at: De Soto Facility and Rockwell International Hot Laboratory

Inspection Conducted: July 12-16 and 19-23, 1982

Date of Last Material Control and Accounting Inspection Visit: March 1-2 and 15-19, 1982

Type of Inspection: Unannounced, Material Control and Accounting

Inspectors: *A. V. Wieder* *8/19/82*
A. V. Wieder, Safeguards Auditor Date Signed

G. B. Nelson *8-19-82*
G. B. Nelson, Safeguards Chemist Date Signed

Date Signed

Approved by: *L. R. Nordmark* *8/19/82*
L. R. Nordmark, Chief, Safeguards Branch Date Signed

Inspection Summary:

Areas Inspected: Routine safeguards inspection of facilities organization, measurement control plan, shipper-receiver verification, internal control, records and reports, management of material control and independent safeguards inspection effort. The inspection involved 63 inspector-hours onsite by two inspectors.

Results: There were no items of noncompliance within the seven areas inspected.

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REPORT DETAILS

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1. Persons Contacted

- *F. W. Feiler, Vice President and Controller
- *M. E. Remley, Director, Health, Safety and Radiation Services
- *V. J. Schaubert, Manager, Nuclear Materials Management
- D. C. Allen, Engineer, Nuclear Materials Management
- J. A. Birg, Staff Engineer, QA Audits and Controls
- C. L. Nealy, Manager, Analytical Chemistry Laboratories
- S. Wode, Management Systems Specialist
- J. Kim, Statistician
- W. R. McCurnin, Manager, Nuclear Operations

The inspectors also interviewed other licensee personnel employed in production and nuclear material management.

*Denotes those attending the exit interviews.

2. Licensee Action on Previous Inspection Findings

Not applicable

3. Exit Interview

The inspection findings were discussed with licensee management personnel denoted above.

- (a) Reviewed and observed the decladding of South East Fast Oxide Reactor (SEFOR) fuel pins at Rockwell International Hot Laboratories (RIHL). Recorded material control and accounting aspects of the operation and handling equipment changes in the plan. Inspected and reviewed the efforts in development of a plan to declad Fermi Reactor fuel pins.
- (b) Recorded facility organizational changes.
- (c) Inspected the measurements control program.
- (d) Inspected shipper-receiver differences for the period January 5, 1982 through May 2, 1982.
- (e) Accomplished an inspection of the licensee's internal control program.
- (f) Performed an audit of the licensee's records and reports.

(g) Reviewed a recent management audit of the material control and accounting plan.

4. MC-927138 Independent Inspection Efforts Safeguards

Reviewed and observed the decladding of SEFOR fuel pins at RIHL. Items noted were the planned improvements in operations to reduce radiation exposure to personnel and to increase the rate of decladding. A modified plan for the operation will be written by August 31, 1982. At present the licensee is operating under an unnumbered license condition to Amendment MPP-1 to License No. SNM-21 effective July 30, 1982. Such work shall be limited to a maximum of 30 fuel pins and shall be completed by August 31, 1982. The observed MC&A procedures are adequate.

Inspected an R&D effort to develop a procedure to declad Fermi fuel pins.

No items of noncompliance were observed.

5. MC-85202B Facility Organization

No items of noncompliance were noted.

Energy Systems Group nuclear material management has had to adjust for the loss of one person due to a reduction-in-force. Certain of that person's material control and accounting responsibilities were reassigned to other NMM members. The reassigned responsibilities were outlined in a March 24th memorandum which was reviewed during the inspection. As circumstances now exist, one member of the NMM group acts as an MBA custodian, also has the responsibility for controlling and issuing the supplies of material vouchers and tamper safing seals, and working with the nuclear material accountability records. A conflict of interest apparently does not exist while other NMM members continue to interact with many of this person's clerical duties/functions. Such interactions are intended to serve as cross checks which lessen this person's chances of acting alone in a given set of circumstances without another's knowledge.

6. MC-85206B Measurement Control Program

Inspected the measurement control practices of the licensee and found them in compliance with the FNMC plan and applicable sections of the Code of Federal Regulations.

No items of noncompliance were observed.

7. MC-852088 Shipper-Receiver Verification

No items of noncompliance were noted.

A review was made of some eighteen form NRC-741 documents that represent shipments or receipts of reportable quantities of special nuclear material by Energy Systems Group during the period January 5, 1982 through May 2, 1982.

Each NRC 741 was; examined for significant shipper and receiver differences, checked for timeliness of issuance or acknowledgement, and verified to corresponding entries in the Nuclear Material ledgers.

8. MC-852108 Internal Control

No items of noncompliance were noted.

Both supplies of unused material transfer vouchers and the metal and paper tamper-safing seals, controlled by the Nuclear Material Management Group, were verified by a physical inventory and random sample.

Both the vouchers and tamper seals were noted to be maintained in separately locked safes in an office that is also locked when unattended.

9. MC-852168 Records and Reports

No items of noncompliance were noted.

The audit of Energy Systems Group special nuclear material records included:

- 1) A verification of its October 1, 1981 to March 31, 1982 Semi Annual Material Balance Report (Form NRC-742) to previously audited data and data audited for the period January 5th through March 31st, 1982.
- 2) An examination of the special nuclear material transactions posted to the accountability ledgers during April 1st and May 2nd.
- 3) Confirmation of the May physical inventory differences that had been reported to the NRC Regional Office by letter dated June 2, 1982, and
- 4) Confirmation of the material balance data shown in Energy Systems Group May 28th special nuclear material inventory balance report.

10. MC-85218B Management of Materials Control System

The licensee's nuclear material control and accounting (MC&A) management system, staff and procedures are in compliance with conditions of the operating licensee, Code of Federal Regulations and the licensee's FNMC plan.

No items of noncompliance were observed.

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IF 750-930

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PORT

MODULE NUMBER

INSPECTOR'S REPORT (Continuation)

Office of Inspection and Enforcement

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MATERIAL CONTAINS



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

Signature

September 28, 1982

Docket No. 70-25

MATERIAL TRANSMITTED CONTAINS
[REDACTED]

Energy Systems Group
Rockwell International
8900 De Soto Avenue
Canoga Park, California 91304

Attention: Mr. Frank W. Feiler
Vice President and Controller
Finance and Administration

Gentlemen:

Subject: NRC Safeguards Inspection

This letter refers to the routine safeguards inspection of your activities authorized under NRC License No. SNM-21 conducted by G. B. Nelson of this office with H. Bartz, NMSS Headquarters, USNRC on September 13-16, 1982. It also refers to the discussions of our inspection findings held with you and members of your staff on September 16, 1982.

The inspection included examination of activities related to your program for the control and accounting of special nuclear material in accordance with applicable requirements of Title 10, Code of Federal Regulations, Part 70, "Domestic Licensing of Special Nuclear Material," and pertinent license conditions as described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and records, interviews with facility personnel, and observations by the inspectors.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790(d) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, documentation of the findings of your control and accounting procedures for safeguarding special nuclear material are exempt from public disclosure; therefore, the enclosed inspection report will not be placed in the Public Document Room.

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Energy Systems Group

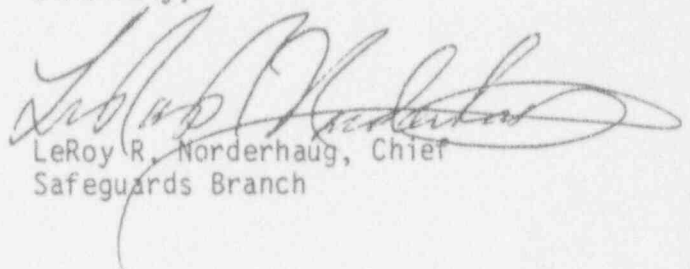
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September 28, 1982

~~MATERIAL CONTAINS INFORMATION~~

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,



LeRoy R. Norderhaug, Chief
Safeguards Branch

Enclosure:
Inspection Report
No. 70-25/82-08 (IE-V-523)

~~MATERIAL CONTAINS INFORMATION~~

REPORT DETAILS

1. Persons Contacted

Energy Systems Group, Rockwell International

- *F. W. Feiler, Vice President and Controller
- *M. E. Remley, Director, Health, Safety and Radiation Services
- *V. D. Schaubert, Manager, Nuclear Materials Management
- D. C. Allen, Engineer, Nuclear Materials Management
- J. D. Moore, Health and Safety Engineer
- S. J. Wode, Management Systems Specialist
- J. Kim, Statistician

Fuel Facility SG Licensing Branch, Division of Safeguards, NMSS, USNRC

- *H. Bartz,

The inspectors also interviewed other licensee personnel employed in nuclear materials management and spent-fuel decladding operations.

*Denotes those attending the exit interview.

2. Licensee Actions on Previous Inspection Findings

Not applicable.

3. Exit Interview

The inspection findings were discussed with licensee management personnel denoted above.

- (a) Observed a part of the decladding operations of South East Fast Oxide Reactor (SEFOR) fuel pins at Rockwell International Hot Laboratory (RIHL).
- (b) Completed measurement control program inspection, this included the acquisition of twelve samples for measurement systems verification at the New Brunswick Laboratory and Oak Ridge National Laboratory.
- (c) Announced a planned inventory verification inspection and inspection of physical inventory taking the first week of November.

- [REDACTED]
- (d) Discussed and reviewed the new plan currently under development for SEFOR fuel pin decladding.
 - (e) Noted future plans of ESG on ATR and TRTR fuel fabrication and the decontamination efforts in UAl_x powder blending and compacting laboratories.

4. MC-92713B Independent Inspection Efforts Safeguards

Observed a part of the SEFOR fuel pin decladding at RIHL. Radiation exposures have been reduced by the use of master slave manipulators and an automated pin cutting device.

Reviewed with nuclear material management a revision to the plan, now under development, for SEFOR fuel pin decladding. The plan will be reviewed by Fuel Facility SG Licensing Branch, NMSS.

Management at ESG plans to complete HEU fuel element fabrication by December 31, 1982. UAl_x powder blending is completed and compacting operations are almost finished. ESG's goal is to have less than a formula quantity of uranium-235 on site at the end of December 1982.

No items of noncompliance were identified.

5. MC-85206B Measurement Control Program

Completed the measurement control program inspection. Twelve samples were acquired for measurement systems verification. The samples included four 1.5 g samples of blended UAl_x powder, four scrap compacts and four scrap plates. The samples contain a total of 15 g of uranium-235. The samples will be analyzed by destructive assay techniques for Wt.% U and Wt.% U-235. Two laboratories will perform the analyses, the New Brunswick Laboratory and Oak Ridge National Laboratory.

No items of noncompliance were identified.

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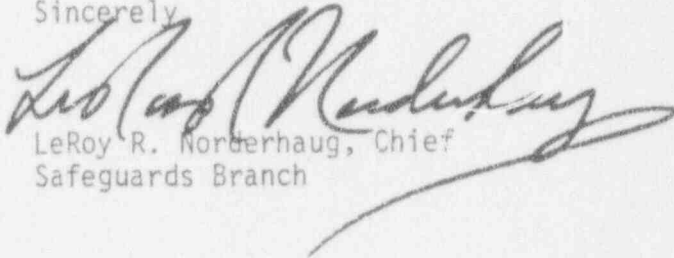
Energy Systems Group

- 2 -

December 14, 1982

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,



LeRoy R. Norderhaug, Chief
Safeguards Branch

Enclosure:
Inspection Report
No. 70-25/82-10 (IE-V-531)

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CONFIDENTIAL INFORMATION~~

The information on this page is considered to be appropriate for public disclosure pursuant to 10 CFR 2.790.

U.S. NUCLEAR REGULATORY COMMISSION

Region V

Report No. 70-25/82-10 (IE-V-531)
Docket No. 70-25 License No. SNM-21 Safeguards Group I
Licensee: Energy Systems Group, Rockwell International
8900 De Soto Avenue
Canoga Park, California 91304

Facility Name: Energy Systems Group, Atomic International
Inspection at: Headquarters, De Soto Facility
Inspection Conducted: October 18-20 and November 1-5, 1982
Date of Last Material Control and Accounting Inspection Visit: September 13-16, 1982
Type of Inspection: Announced, Material Control and Accounting

Inspectors:	<u>G. B. Nelson</u>	<u>12/9/82</u>
	G. B. Nelson, Chemist	Date Signed
	<u>A. V. Wieder</u>	<u>12/8/82</u>
	A. V. Wieder, Safeguards Auditor	Date Signed
	<u>B. L. Brock</u>	<u>12/13/82</u>
	B. L. Brock, Chemist	Date Signed
Approved by:	<u>L. R. Norderhaug</u>	<u>12/13/82</u>
	L. R. Norderhaug, Chief, Safeguards Branch	Date Signed

Inspection Summary:

Areas Inspected: Routine announced safeguards inspection of physical inventory, inventory verification and independent safeguards inspection effort. The inspection involved 155 inspector-hours onsite by 4 inspectors.

Results: There were no items of noncompliance in the three areas inspected.

8712210246

~~CONFIDENTIAL~~
REPORT DETAILS

1. Persons Contacted

Energy Systems Group, Rockwell International

- *F. W. Feiler, Vice President and Controller
- *M. E. Remley, Director, Health, Safety and Radiation Services
- *V. D. Schaubert, Manager, Nuclear Materials Management
- D. C. Allen, Engineer, Nuclear Materials Management
- J. D. Moore, Health and Safety Engineer
- S. J. Wode, Management Systems Specialist
- J. Kim, Statistician

The inspectors also interviewed other licensee personnel employed in nuclear materials management and spent-fuel decladding operations.

*Denotes those attending the exit interview.

2. Licensee Actions on Previous Inspection Findings

Not applicable.

3. Exit Interview

The inspection findings were discussed with licensee management personnel denoted above.

- (a) Observed physical inventory taking by licensee personnel.
- (b) Completed, partially, the NRC's inventory verification effort.
- (c) Announced an inspection starting November 29, 1981 to inspect the reconciliation and adjustment of the book record to the results of the physical inventory, the calculation of the ID for U element and U-235 in the material balance interval, and to complete verification.
- (d) Reviewed an investigation of ignition of UA1 powder scrap during a blending operation in an inert box in the powder room on October 26, 1982.

4. MC-92703B Independent Safeguards Inspection Effort

No items of noncompliance were identified.

Reviewed an investigation by the licensee of an ignition and oxidation of some UA1 scrap powder on October 26, 1982 during a blending operation. Routinely, the blending of UA1 powders is conducted in a gloved dry-box containing an argon atmosphere. The dry box used had a malfunctioning exhaust valve that remained in the open mode and prevented the proper argon atmosphere being maintained. When the technician poured the powder into the blender, the particles ignited. The fire was extinguished, the material recovered and samples taken for chemical analyses of U element.

~~10-11-1974~~

5. MC-85212B Physical Inventory

No items of noncompliance were identified.

Inspected and observed the taking of the physical inventory by the licensee.

Audited and made closure around ESG's inventory sticker distribution log and inventory sheet distribution log.

Observed NMM personnel perform overcheck in MBA-01.

6. MC-85213B Inventory Verification

Partially completed the inventory verification. Eleven of thirteen populations were examined and verified; and no defects were identified in the eleven strata.

One scrap fuel plate, 17KU908AT, and two chunks of U metal from a can containing feed stock were aquired and packaged for shipment to the New Brunswick Laboratory for chemical analyses of U and mass spectrometric measurement of U-235. The measured values of U and U-235 when reported by NBL should give independent verification of the inventory in the strata from which they came.

~~10-11-1974~~ INFORMATION



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

December 22, 1982

Docket No. 70-25

Energy Systems Group
Rockwell International
8900 De Soto Avenue
Canoga Park, California 91304

Attention: Mr. Frank W. Feiler
Vice President and Controller

Gentlemen:

Subject: NRC Safeguards Inspection

This letter refers to the routine safeguards inspection of your activities authorized under NRC License No. SNM-21 conducted by Messrs. A. V. Wieder and G. B. Nelson of this office November 29 through December 3, 1982. It also refers to the discussions of their inspection findings with you and members of your staff on December 3, 1982.

The inspection included examination of activities related to your program for the control and accounting of special nuclear material in accordance with applicable requirements of Title 10, Code of Federal Regulations, Part 70, "Domestic Licensing of Special Nuclear Material", and pertinent license conditions as described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and records, interviews with facility personnel and observations by the inspectors.

Within the scope of this inspection, no items of noncompliance or deviations were observed.

In accordance with Section 2.790(d) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, documentation of the findings of your control and accounting procedures for safeguarding special nuclear material are exempt from public disclosure; therefore, the enclosed inspection report will not be placed in the Public Document Room.

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B 40

Wieder

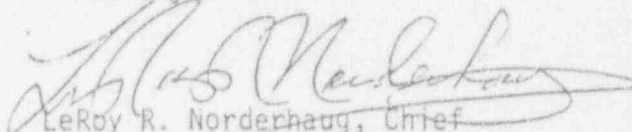
Energy Systems Group

- 2 -

December 22, 1982

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,



LeRoy R. Norderhaug, Chief
Safeguards Branch

Enclosure:
Inspection Report
No. 70-25/82-12 (IE-V-537)

The information on this page is considered to be appropriate for public disclosure pursuant to 10 CFR 2.790.

U.S. NUCLEAR REGULATORY COMMISSION

Region V

Report No. 70-25/82-12 (IE-V-537)
Docket No. 70-25 License No. SNM-21 Safeguards Group I
Licensee: Energy Systems Group, Rockwell International
8900 De Soto Avenue
Canoga Park, California 91304
Facility Name: Energy Systems Group, Atomics International
Inspection at: De Soto Facility
Inspection Conducted: November 29 through December 3, 1982
Date of Last Material Control and Accounting Inspection: November 1-5, 1982
Type of Inspection: Material Control and Accounting
Inspectors: *L. R. Nordernaug* 12/21/82
A. V. Wieder, Safeguards Auditor Date Signed
G. B. Nelson 12-21-82
G. B. Nelson, Chemist Date Signed

Date Signed
Approved by: *L. R. Nordernaug* 12/21/82
L. R. Nordernaug, Chief, Safeguards Branch Date Signed

Inspection Summary:

Areas Inspected: Routine announced safeguards inspection of the following areas: Facility Operations; Shipping and Receiving; Inventory Verification; Records and Reports; Management of Nuclear Materials; and Independent inspection.

The inspection involved 60 inspector-hours onsite by two NRC inspectors during regular hours.

Results: There were no items of noncompliance with NRC requirements in the six areas examined.

8212280137

REPORT DETAILS

1. Persons Contacted

Energy Systems Group, Rockwell International

- *F. W. Feiler, Vice President and Controller
- *M. E. Remley, Director, Health, Safety and Radiation Services
- *V. D. Schaubert, Manager, Nuclear Materials Management
- D. C. Allen, Engineer, Nuclear Materials Management
- S. J. Wode, Management Systems Specialist
- J. Kim, Statistician

The inspectors also interviewed or interacted with other licensee personnel in the course of this inspection.

*Denotes those attending the exit interview.

2. Licensee Actions on Previous Inspection Findings

Not applicable.

3. Exit Interview

Inspectors findings were presented to Mr. Feiler, Dr. Remley and Mr. Schaubert at the conclusion of this inspection.

All acknowledged the findings of no items of noncompliance.

4. Inspection Details

There were no items of noncompliance noted in the following areas.

(a) MC-85204B Facility Operations

MC-85208B Shipper-Receiver Verification

MC-85208B Inventory Verification

MC-85216B Records and Reports

1. Material status Reports for the period 4-1-82 through 9-30-82.
2. Special Nuclear Material Inventory Reports for the periods:
 - 5-3-82 through 6-27-82,
 - 6-28-82 through 8-29-82 and
 - 8-30-82 through 10-31-82

MC-85218B Management of Materials Control System

Reviewed an Annual Management Audit Review of Materials Control System Report 2B1, 3-24-82.

(b) MC-92713B Independent Safeguards Inspection Efforts

Observed the loading and verified the container numbers and type E tamper seal numbers to shipping data sheets of a SST shipment of TRTR elements and plates. The shipment represented approximately 14 percent of the 11-1-82 inventory.

Discussed with the manager, Nuclear Materials Management, future plans with regard to SSNM shipments offsite, decontamination and decommissioning of fuel fabrication facility areas of building 1, and the decladding of SEFOR pins at RIHL.

Inspected the licensee's calculated ID for U-235 for the inventory period ending 11-1-82. The LEID associated with the ID exceeded the applicable limits as specified in 10 CFR 70.51(e)(5). The licensee responded with a letter (82-ESG-7864) dated 11-30-82 as required by 10 CFR 70.53(b)(2) stating the probable reasons for the LEID.

1E-V-537

NRC DR-766
(11-81)
IE MC 0625

U.S. NUCLEAR REGULATORY COMMISSION

PRINCIPAL INSPECTOR (Name, last and middle initials)

Arnold V. Wieder

INSPECTOR'S REPORT

Office of Inspection and Enforcement

REVIEWER

LeRoy R. Norderhaug

INSPECTORS

Arnold V. Wieder
Gilbert B. Nelson

LICENSEE/VENDOR

TRANSACTION TYPE

DOCKET NO. (8 digits) OR LICENSE NO. (BY PRODUCT) (13 digits)

REPORT NO.

NEXT INSPEC DATE

Energy Systems Group
Rockwell International
8900 De Soto Avenue
Cancoga Park, CA 91304

- I - INSERT
- M - MODIFY
- D - DELETE
- R - REPLACE

070000258212

NO.	SEQ.	MO.	YR.

PERIOD OF INVESTIGATION/INSPECTION

INSPECTION PERFORMED BY

ORGANIZATION CODE OF REGION/HQ CONDUCTING ACTIVITY (See ISAC 0530 Manpower Reporting - Weekly Manpower Reporting for code)

FROM			TO		
MO.	DAY	YR.	MO.	DAY	YR.
11	29	82	12	03	82
20			25		31

- 1 - REGIONAL OFFICE STAFF
- 2 - RESIDENT INSPECTOR
- 3 - PERFORMANCE APPRAISAL TEAM

OTHER

REGION	DIVISION	BRANCH

REGIONAL ACTION (Check one box only)

TYPE OF ACTIVITY CONDUCTED (Check one box only)

- 1 - NRC FORM 501
- 2 - REGIONAL OFFICE LETTER

- 02 - SAFETY
- 03 - INCIDENT
- 04 - ENFORCEMENT
- 05 - MGMT. AUDIT

- 06 - MGMT. VISIT
- 07 - SPECIAL
- 08 - VENDOR
- 09 - MAT. ACCT.

- 10 - PLANT SEC.
- 11 - INVENT. VER.
- 12 - SHIPMENT/EXPORT
- 13 - IMPORT

- 14 - INQUIRY
- 15 - INVESTIGATION

INSPECTION/INVESTIGATION FINDINGS (Check one box only)

TOTAL NUMBER OF VIOLATIONS AND DEVIATIONS

ENFORCEMENT CONFERENCE HELD

REPORT CONTAIN 2780 INFORMATION

LETTER OF REPORT TRANSMITTAL DATE

A	B	C	D
1			

- 1 - CLEAR
- 2 - VIOLATION
- 3 - DEVIATION
- 4 - VIOLATION & DEVIATION

A	B	C	D
0	0		

A	B	C	D

1 - YES

A	B	C	D

1 - YES

MO.	DAY	YR.	MO.	DAY	YR.
12	22	82			

MODULE INFORMATION

MODULE INFORMATION

REC. ORD.	MODULE NUMBER INSP.										REC. ORD.	MODULE NUMBER INSP.										
	TYPE	NUMBER	PHASE	MANUAL	CHAPTER	PROCEDURE	NUMBER	LEVEL	SEQ.	PRIORITY		DIRECT INSPECTION EFFORT IN STAFF HOURS EXPENDED THIS INSPECTION	PERCENTAGE COMPLETED	TO DATE	STATUS	PHASE	MANUAL	CHAPTER	PROCEDURE	NUMBER	LEVEL	
B	53	07	03	16	A						6											
	ENTRANCE & EXIT INTERVIEW											PHYSICAL INTERVIEW VERIFICATION										
B	59	07	03	16	A						10											
	INDEP. INSPECTION																					
B	58	05	20	81	A						2	100										
	FACILITY OPERATIONS											RECORDS & REPORTS										
B	58	05	20	81	A						7	100										
	SHIPPER RECEIVER											MANUFACTURING MATERIALS										

* CIRCLE SEQUENCE IF VIOLATION OR DEVIATION



ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

Safeguards

MAR 21 1983

Docket No. 70-25

Energy Systems Group
Rockwell International
8900 De Soto Avenue
Canoga Park, California 91304

Attention: Mr. Frank W. Feiler
Vice President and Controller

Gentlemen:

Subject: NRC Safeguards Inspection

This letter refers to the routine safeguards inspection of your activities authorized under NRC License No. SNM-21 conducted by Mr. A. V. Wieder of this office March 7 through March 11, 1983. It also refers to the discussions of his inspection findings with you and members of your staff on March 11, 1983.

The inspection included examination of activities related to your program for the control and accounting of special nuclear material in accordance with applicable requirements of Title 10, Code of Federal Regulations, Part 70, "Domestic Licensing of Special Nuclear Material", and pertinent license conditions as described in the enclosed inspection report. Within these areas, the inspection consisted of selective examinations of procedures and records, interviews with facility personnel and observations by the inspectors.

Within the scope of this inspection, no items of noncompliance or deviations were observed.

In accordance with Section 2.790(d) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, documentation of the findings of your control and accounting procedures for safeguarding special nuclear material are exempt from public disclosure; therefore, the enclosed inspection report will not be placed in the Public Document Room.

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ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED

B 41

~~CONFIDENTIAL~~ MATERIAL CONTAINS
CONFIDENTIAL INFORMATION

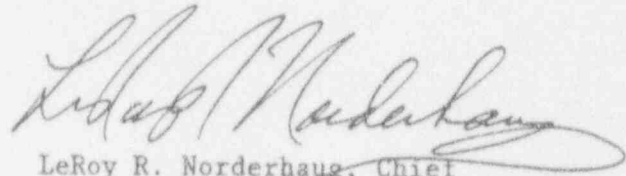
Energy Systems Group

-2-

MAR 21 1983

Should you have any questions concerning this letter, we will be glad to discuss them with you.

Sincerely,



LeRoy R. Norderhaug, Chief
Safeguards Branch

Enclosure:
Inspection Report
No. 70-25/83-02 (IE-V-553)

~~CONFIDENTIAL~~ MATERIAL CONTAINS
CONFIDENTIAL INFORMATION