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U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region V

Report No. 70-25/81-02/IE-V-433
Docket No. 70-25 License No. SNM-21 Safeguards Group 1

Licensee: Energy Systems Group
Rockwell International
2900 De Soto Avenue
Canoga Park, California 91304

Facility Name: _____

Inspection at: Canoga Park, California

Inspection Conducted: March 16-20, 1981

Date of Last Material Control and Accounting Inspection Visit: December 8-10, 1980

Type of Inspection: Unannounced, Material Control and Accounting

Inspectors: B. J. Brock 4/2/81
B. J. Brock, Chemist Date Signed
G. B. Nelson 4-2-81
G. B. Nelson, Chemist Date Signed

Approved by: L. R. Norderhaug 4/2/81
L. R. Norderhaug, Chief, Safeguards Branch Date Signed

Inspection Summary:

Areas Inspected: Routine, unannounced safeguards inspection of facility organization, facility operations, measurements and statistical controls, shipping and receiving, ID and LEID, and management review. The inspection involved 65 inspector-hours onsite time by 2 inspectors.

Results: No items of noncompliance or deviations were identified in the 6 areas inspected.

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DETAILS

1. Key Persons Contacted:

- *R. G. Jones, Vice President and Controller
- *M. E. Remley, Director, Health, Safety and Radiation Services
- *V. Schaubert, Manager Nuclear Materials Management
- C. Nealy, Manager, Analytical Chemistry
- R. Jaseph, Staff Engineer, QA Audits and Controls

The inspectors also interviewed a number of other licensee employees, including members of the Nuclear Materials Management and Production Division units.

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings.

There were no open items of noncompliance.

3. Exit Interview

The inspection scope and findings were discussed with licensee management (identified in Paragraph 1) at the conclusion of the inspection on March 20, 1981. Licensee personnel were advised that no items of noncompliance were identified during the inspection. In addition, inspectors provided the following comments with respect to their inspection activities and observations:

- a. The Analytical Laboratory completed the measurement of the uranium content of suspended solids in sample solutions prepared for uranium analysis. The results confirmed that the uranium content of the solids is not significant. (80-06-03, Closed).
- b. The licensee reviewed the control of the accumulation of SNM in exposed pipe threads in processing glove boxes. He succeeded in covering some exposed threads and for others elected to brush material from the threads for inventory because the glove box vibrations resulting from grinding and sieving operations precluded the use of slip fit plastic caps. (80-13-01, Closed).

4. Unresolved Items

No unresolved items remain outstanding for this facility.

5. Independent Inspection Effort

The licensee had reviewed the closed threaded glove box penetrations identified in the previous inspection (80-13-01). Those warranting priority attention were plugged except for two 2 inch diameter penetrations which were scheduled for routine cleanout before inventory because vibrations from grinding and sieving operations precluded the use of slip fit plastic caps. The use of plugs was only partially successful because different threads became available for holdup though cleanup of these threads was somewhat easier. The planned cleanup of these areas will adequately minimize the contribution of these areas to inventory differences. This item (80-13-01) is therefore closed.

6. MC 585202 Facility Organization

No items of noncompliance were identified.

The licensee's organizational structure for nuclear material control and accounting was reviewed for compliance with NRC requirements. Organizational charts of the FMC plan were examined and found adequate. Copies of charts reflecting changes (that did not reduce the effectiveness of the Material Control and Accounting system) were obtained during the inspection. The changes do not affect the NMM organization.

It was noted that the next management review will be the responsibility of a different reviewer currently working with the present auditor to assure program continuity.

7. MC 85204B - Facility Operations

No items of noncompliance were identified.

The licensee's operations were unchanged from the prior inspection. It was observed that reconfiguration of the compact press had been undertaken in MBA-40 (compact line) and an additional 24 UAl alloy vacuum storage stations had been provided in MBA-1 (Storage Vault).

The Low Enrichment Uranium (LEU) line is held in standby. No additional effort is currently being made to bring it closer to operation as an LEU line. This largely completed system is thus available for increased capacity as an HEU line (after appropriate testing) if it should be needed. Startup of this line would affect the LEID for the plant. It is uncertain at this point whether the new line will be used for replacement capacity for the existing line or additional capacity for other work. If it is used as replacement capacity then the plant throughput would remain largely unchanged and processing personnel would vary normally. If, however, the new line is used as additional capacity then the throughput would increase significantly in the near term and the processing personnel picture would necessarily change (more personnel would be needed). The training program, currently being reviewed for possible refinement, would play a significant roll

in assuring the continued control on the processing of special nuclear material though new personnel would be involved. Use of the new line and new personnel may be reflected as a change in the variation of material control indicators (currently I.D. and LEID). These changes would be reflected routinely in the licensee SNM Inventory Reports to the Commission and would be reviewed by inspectors from the regional office.

The production operations observed during this inspection included arc melting, grinding, sieving, pressing compacts, deburring compacts, fluoroscopy of rolled plates, ultrasonic examination of trimmed plates, and element assembly. No discrepancies between procedures and practices were identified.

8. MC 85206B Measurements and Statistical Controls

No items of noncompliance were identified.

- a. The licensee had previously determined from a small sample of solids separated from a sample being analyzed that the uranium content of the solids was not significant. To provide a more reliable result, the licensee separated the suspended solids (possibly Al_2O_3) from 89 samples representing 23 UAl alloy batches, dissolved the solids (salt fusion followed by acid dissolution) and measured the uranium content. The results indicated that the uranium content (0.0068%) was still not significant and the previous value (0.0047%) was a good indication of the magnitude of the correction to chemical analysis based on the uranium content of the suspended solids. This correction is not consequential (it represents revising the nominal uranium analysis from 71% to 71.0068%) and therefore no further effort is contemplated. This item (80-06-03) is closed.
- b. Eleven balances in the ATR plant and analytical chemistry laboratory were identified and inspected. The location, type, model, control limits, application and calibration tag data were tabulated.
- c. The licensee's analyst qualification records were current and the laboratory continues its participation in both the SALE (Safeguards Analytical Laboratory Evaluation) program and the GAE (General Analytical Evaluation) program. Current results reflect no bias between the licensee and the reference values for samples analyzed. Additionally, inventory verification sample results from the analysis of licensee feed and inprocess materials submitted for independent analysis at the New Brunswick Laboratory also reflect the absence of a bias. Whether sampling or storage conditions contribute to the recently observed nonrandom distribution of UAl alloy analytical results (still unbiased) has not been determined. No additional effort beyond the required control of all measurement systems is being directed towards evaluation of the nonrandomness. Sampling practices were not observed during this inspection.

With regard to the nonrandom difference noted between the licensee and NBL in the analysis of U metal, it appears that the sampling technique or the sample preparation may contribute to the difference in the analytical results. Though unbiased, U metal analysis reflected an average difference of $-0.023 + 0.138$ percent for 3 U metal samples reported in November 1979 and $-0.093 + 0.179$ percent for 4 U metal samples reported in January 1981. It may be significant that the 1979 samples were taken by cutting a solid piece from the U metal for cleaning and subsequent analysis versus drilling U metal and submitting the turnings for cleaning and subsequent analysis. The licensee and NBL both analyzed samples in the form of cut pieces for the first group of U metal samples. For the second shipment tested, the licensee and NBL both analyzed U metal turnings, however, the licensee revised his sample preparation to include the use of an ultrasonic bath during pretreatment and rinsing to assure adequate removal of the oxide coating and acid, water and alcohol rinses. The use of this bath has facilitated the licensee's use of the simpler drilling approach to sampling rather than cutting (using a cut-off saw). The distribution of analytical results will be reviewed again when more similar samples are taken.

9. MC 85208B Shipping and Receiving

No items of noncompliance were identified.

A random selection of Form NRC-741 for the period June 1980 to February 1981 were reviewed. There were no shipper-receiver differences of SNM that were both statistically significant and greater than 50 grams of U-235. Timeliness of dispatch of 741's for shipments and acknowledgment of 741's for receipts was verified.

10. MC 85214B ID and LEID

No items of noncompliance were identified.

The limit of error on the inventory difference (LEID) was within regulatory limits for the one material balance period reported since the last inspection. The report for the second material balance period since the last inspection was not due at the time of this inspection.

It was determined that an ID adjustment attributed to prior periods in the January 1981 report was made on a reasonable basis and did not change ID's for the affected periods to a level that would have required corrective action.

11. MC 85218B Management of Material Control System

No items of noncompliance were identified.

Annual reviews have been conducted at appropriate intervals, documented, and reported to management as required. No licensee identified items of noncompliance were noted. The next management review will be done by a different quality control engineer who is currently phasing into the audit responsibility. The licensee plans to review the statistical calculations in greater depth in the next review.

USNRC - INSPECTION & ENFORCEMENT STATISTICAL DATA

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 30.800

NOTE STATUS CODING:
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 F REOPEN THIS TRANSACTION
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LINE COLUMN NUMBER SHOWN IN BOTTOM LINE

CONTINUES ON SUBSEQUENT SHEET

As per file
15-V-405



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V
1450 MARIA LANE, SUITE 260
WALNUT CREEK, CALIFORNIA 94596
January 15, 1982

Docket No. 70-25 ~~MATERIAL CONTAINS~~

Energy Systems Group
Rockwell International
8900 De Soto Avenue
Conoga 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. L. R. Norderhaug, B. L. Brock, A. V. Wieder and G. B. Nelson of this office (assistance was provided by 3 NRC Headquarters technical staff) on October 19-23, November 2-6, 16-17 and 30, December 1-4, 1981. It also refers to the discussions of our inspection findings held by the inspectors with you and members of your staff on October 23, November 6 and December 4, 1981.

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.

Based on the results of this inspection, it appears that one of your activities was not conducted in full compliance with NRC requirements, as set forth in the Notice of Violation, enclosed herewith as Appendix A. Pursuant to the provisions of 10 CFR 2.201 you are required to respond as indicated therein.

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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January 15, 1982

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The responses directed by this Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL 96-511.

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

Sincerely,

for m. d. Schusta
LeRoy R. Norderhaug, Chief
Safeguards Branch

Enclosures:

- A. Appendix A - Notice of Violation
- B. Inspection Report No. 70-25/81-07
(IE-V-465)

MATERIALS CONTAINS