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

REGION V

Report No. 70-25/78-07 (IE-V-271)

Docket No. 70-25 License No. SNM-21 Safeguards Group 1

Licensee: Energy Systems Group

8900 DeSoto Avenue

Canoga Park, California 91304

Facility Name: Energy System Group, Rockwell International

Inspection at: Canoga Park, California

Inspection Conducted: December 4-8, 1978, and January 2-3, 1979

Inspectors: <u><i>Y. Kobori</i></u>	<u>1/31/79</u>
<i>for</i> <u>G. Hamada, Statistician/Chemist</u>	<u>/Date Signed</u>
<u><i>Y. Kobori</i></u>	<u>1/31/79</u>
<u>Y. Kobori, Auditor</u>	<u>/Date Signed</u>
<u><i>A. Wieder</i></u>	<u>1/31/79</u>
<u>A. Wieder, Auditor</u>	<u>/Date Signed</u>

Approved By: *mD Norderhaug* 1/31/79  
*for* L. R. Norderhaug, Chief, Safeguards Branch Date Signed

Summary:

Inspection on December 4-8, 1978 and January 2-3, 1979 (Report No. 70-25/78-07 (IE-V-271))

Areas Inspected: Routine unannounced inspection of facilities organization, facility operation, measurements and statistical controls, shipping and receiving, storage and internal controls, MUF and LEMUF, records and reports, management of materials control system, and physical inventory. The inspection involved 136 inspection hours onsite by three IIRC inspectors.

Results: No items of noncompliance were identified in the nine areas inspected.

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DETAILS

A. Persons Contacted

- \*M. E. Remley, Manager, Health, Safety and Radiation Services
- \*V. J. Schaubert, Manager, Nuclear Materials Management
- D. C. Allen, Nuclear Materials Management Representative
- S. Wode, Management Systems Specialist
- C. L. Nealy, Manager, Analytical Chemistry
- J. D. Moore, Operational Safety and Waste Management
- J. Kim, Statistician
- R. Jaseph, QA Audits

\*Denotes those attending the exit interview, in addition to R. G. Jones, Vice President and Controller.

B. Functional Areas Inspected

1. Facility Organization

The organizational and functional structures remain essentially unchanged since the major corporate reorganization of July, 1978. With the implementation of the Measurements Control Plan, a Measurements Control Coordinator has been designated. This individual is a member of the Nuclear Materials Management staff and also has the title of statistician.

2. Facility Operation

- a. Plans have been developed to fabricate a second powder line for UALx of lower enrichment than currently being used for the ATR program. In anticipation of this, the ATR vault has been eliminated to provide the additional floor space needed for the new line. The main vault (MBA-1) has been modified to accomodate material normally kept in the ATR vault.

TRTR (Training Reactor-Test Reactor) fuel fabrication activity is not extensive and currently involves only 93 percent enriched material. It is anticipated that future TRTR fuel fabrication activities will include material containing 35 percent enriched uranium, as well as less than 20 percent enriched uranium.

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APPROVAL OF [redacted]

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- b. The delegations of authority to nuclear material custodians and alternates of material balance areas (MBA) and item control areas (ICA) are written by the licensee for an annual period ending September 30 of each calendar year. A review confirmed that all delegations to custodians had been renewed in writing for the new period starting October 1, 1978. This review also identified a single individual as being a delegated custodian in two different MBAs. However, the MBAs were confirmed as being in different "Plants" and due to a total difference in operating programs, there was no possibility of special nuclear material (SNM) transfers between the MBAs. The current custodial assignments are consistent with the NMS approved Fundamental Nuclear Material Control plan.

No items of noncompliance were identified.

- c. ESG Procedures to meet specific exemptions granted to them under Safeguards License Condition 2.4.1 and a companion condition 9.A.4.4 were reviewed for consistency with commitments made in the licensee's letter to the NRC August 4, 1978.

No items of noncompliance or deviations were noted.

### 3. Measurement and Statistical Controls

The licensee's measurement and statistical control programs were reviewed.

A small but persistent MUF (loss) in the ATR program has been evident for some time now. While it appears that this discrepancy might be due to some kind of measurement bias, all effort to date have failed to pinpoint this anomaly. Continued review of standards data from chemistry do not implicate this source as a significant contributor to the MUF discrepancy. The area currently under scrutiny involves the sampling of UALx powder. While the current sampling procedure for UALx powder is not necessarily suspect, because there is some evidence of fractionation of uranium and aluminum as a function of particle size, a potential for systematic errors in sampling does exist. The license is investigating the possibility of developing a special sampling tool for UALx powder and testing this against the current thief method of obtaining powder samples.

4. Shipping and Receiving

The licensee's Nuclear Material Transaction Reports (NRC-741) for receipts and shipments of SNM during the period July 1 through October 31, 1978, were examined for compliance with Regulatory requirements. All actions were completed on a timely basis and no significant shipper-receiver differences were indicated for the inspection period. Licensee's file of internal shipping and receiving reports were also reviewed.

No items of noncompliance were identified.

5. Storage and Internal Control

The inspection verified that the licensee continues to maintain a system of storage and internal controls for SNM which provides for current knowledge of the quantity, identity and location of all SNM within his facilities.

The inspection also included a review of the distribution and use of internal transfer documents so as to confirm that: (1) movement of SNM between MBAs and/or ICAs is controlled and documented, and (2) all documents are accounted for.

Custodian signatures on all internal transfer vouchers for the period July 5 through November 13, 1978, were visually examined and compared as necessary to specimen signatures on file. This review identified five instances (on consecutive days) of the same individual signing as both shipper and receiver during a period when the receiver custodian was absent due to illness. However, in each case an individual reporting to the Manager, Nuclear Materials Management, had countersigned the transfer document.

No items of noncompliance were identified.

The inspection also included a review of Energy Systems Group tamper-safing program. Such areas as; control of unused supplies of tamper-safing seals, written delegation of authorized users, and tamper-safing records were inspected.

No items of noncompliance were noted.

6. Physical Inventory

NRC inspectors observed practices and procedures associated with the physical inventory of January 2 and 3, 1979.

No items of noncompliance were identified.

7. MUF and Associated Limit of Error

The licensee's procedures for calculating MUF and LEMUF were reviewed. Also, discussions were held relative to the action taken or planned concerning the effect of small biases on cumulative MUF.

No item of noncompliance were identified.

8. Records and Reports

Records, reports and other documentation applicable to the period July 1, 1978, to October 31, 1978, were reviewed to determine that: (a) ESG has established and continues to maintain a records and reports system which provides accurate information sufficient to locate all SNM in its possession, and to close a material balance as specified by the Regulation and license conditions, and (b) the quantities of SNM in ESG's possession are not being used for unauthorized purposes.

A review was also made to confirm that all external transfers of SNM had been restricted to authorized recipients as specified in 10 CFR 70.42. Subsidiary records maintained by select MBA/ICAs were also examined and confirmation made that such records are reconciled to Central Plant Control records at the end of each accounting period.

The licensee's plan to convert its present computerized record system, which is dependent on an offsite computer, to an updated system which anticipates the use of a new to-be-purchased in-house mini-computer is delayed due to lack of Department of Energy (DOE) funding at the present time. A change to an onsite computer will enable ESG to satisfy certain DOE Safeguards classification requirements.

No items of noncompliance were identified.

9. Management of Materials Control System

The licensee was inspected against the requirements in his approved FMC procedures which provide for the development, revision, implementation and enforcement of nuclear material control and accounting procedures.

No items of noncompliance were identified.

C. Exit Interview

Inspection findings were discussed with licensee personnel as indicated in Paragraph A.



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UNITED STATES NUCLEAR REGULATORY COMMISSION  
INSPECTION & ENFORCEMENT - STATISTICAL DATA

FORM NRC 786  
FEBRUARY 1978  
(MC 0535)

FACILITY NAME <u>ENERGY SYSTEMS GROUP</u>		INSPECTOR(S) <u>E. HAMADA Y. NISHIDA</u>		PRINCIPAL INSPECTOR <u>G. H. H.</u>		
LICENSEE/VENDOR		REVIEWER				
AE	TRANS-ACTION TYPE 1 CHECK ONE) <input type="checkbox"/> Delete <input checked="" type="checkbox"/> Insert <input type="checkbox"/> Modify	DOCKET NUMBER 2 <u>07000025</u> 9 OR LICENSE NO. (BY PRODUCT) 2 14	(A) REPORT NO. (B) 15 <u>7807</u> 18	DATES INQ/INVEST/INSP FROM (C) <u>120478</u> M M D D Y Y TO (D) <u>010379</u> M M D D Y Y	REGION CONDUCTING ACTIVITY (E) 31 <u>5</u>	
	INSPECTION PERFORMED BY: 32 <input checked="" type="checkbox"/> REGIONAL OFFICE STAFF    2 <input type="checkbox"/> RESIDENT INSPECTOR 3 <input type="checkbox"/> PERFORMANCE APPRAISAL TEAM					
TYPE OF ACTIVITY CONDUCTED (CHECK ONE BOX ONLY) 33-34						
G		INSPECTION		OTHER		
02 <input type="checkbox"/> SAFETY 03 <input type="checkbox"/> INCIDENT 04 <input type="checkbox"/> ENFORCEMENT		05 <input type="checkbox"/> MANAGEMENT AUDIT 06 <input type="checkbox"/> MANAGEMENT VISIT 07 <input type="checkbox"/> SPECIAL 08 <input type="checkbox"/> VENDOR		09 <input checked="" type="checkbox"/> MATL ACCT. 10 <input type="checkbox"/> PLANT SEC. 11 <input type="checkbox"/> INVENT. VERIF. 12 <input type="checkbox"/> SHIPMENT/EXPORT		
		13 <input type="checkbox"/> IMPORT		14 <input type="checkbox"/> INQUIRY 15 <input type="checkbox"/> INVESTIGATION (IF INVEST, ALSO CHECK BLOCK S)		
H INSPECTION OR INVESTIGATION WARNING: 1 <input type="checkbox"/> ANNOUNCED    2 <input checked="" type="checkbox"/> UNANNOUNCED						
I INSPECTION SHIFT: 1 <input checked="" type="checkbox"/> DAY SHIFT    2 <input type="checkbox"/> OFF-SHIFT    3 <input type="checkbox"/> WEEKEND/HOLIDAY						
J INSPECTION INVESTIGATION NOTIFICATION (CHECK ONE BOX ONLY) 37						
1 <input type="checkbox"/> 591    2 <input checked="" type="checkbox"/> REGIONAL OFFICE LETTER    3 <input type="checkbox"/> REFERRED TO HQS FOR ACTION    4 <input type="checkbox"/> REGION LETTER & HQS FOR ACTION						
K INSPECTION INVESTIGATION FINDINGS (CHECK ONE BOX ONLY) 38						
1 <input checked="" type="checkbox"/> CLEAR    2 <input type="checkbox"/> NONCOMPLIANCE    3 <input type="checkbox"/> DEVIATION    4 <input type="checkbox"/> NONCOMPLIANCE & DEVIATION						
L ENFORCEMENT CONFERENCE HELD: 1 <input type="checkbox"/> 39						
M NUMBER OF NONCOMPLIANCE ITEMS IN LETTER TO LICENSEE:		40 41 <u>00</u>		NOTE: CHANGE MUST BE SUBMITTED ON 786 WHENEVER PREVIOUSLY CITED ITEM OF NONCOMPLIANCE IS OFFICIALLY DELETED FROM THE RECORD.		
N NUMBER OF DEVIATION ITEMS IN LETTER TO LICENSEE:		42 43 <u>00</u>				
O NUMBER OF LICENSEE EVENTS		44 45 <u>00</u>				
P 46 INSPECTION FEE 1 <input type="checkbox"/> NON-ROUTINE/VENDOR (No Fee)    2 <input type="checkbox"/> ROUTINE (No Fee)    3 <input type="checkbox"/> ROUTINE (Fee)    4 <input type="checkbox"/> ROUTINE (Fee Reduced)						
Q 47 CONTENTS 2.790D INFORMATION <input type="checkbox"/> 'S' YES						
R REGIONAL OFFICE LETTER OR REPORT TRANSMITTAL DATE FOR INSPECTION OR INVESTIGATION						
591 OR LETTER ISSUED TO LICENSEE 48 <u>013174</u> M M D D Y Y		REPORT SENT TO HQS FOR ACTION 54 M M D D Y Y		IMMEDIATE ACTION LETTER DATE 60 M M D D Y Y		
S SUBJECT OF INVESTIGATION (CHECK ONE BOX ONLY) 66-67						
TYPE A    10 CFR 20.403		TYPE B    10 CFR 20.405		MISC.		
01 <input type="checkbox"/> INTERNAL OVEREXPOSURE 02 <input type="checkbox"/> EXTERNAL OVEREXPOSURE 03 <input type="checkbox"/> RELEASE TO UNREST. AREA 04 <input type="checkbox"/> LOSS OF FACILITY 05 <input type="checkbox"/> PROPERTY DAMAGE		06 <input type="checkbox"/> 07 <input type="checkbox"/> 08 <input type="checkbox"/> 09 <input type="checkbox"/> 10 <input type="checkbox"/>		11 <input type="checkbox"/> INT. OVEREXPOSURE 12 <input type="checkbox"/> EXT. OVEREXPOSURE 13 <input type="checkbox"/> EXCESS RAD. LEVELS 14 <input type="checkbox"/> EXCESS CONC. LEVELS 15 <input type="checkbox"/> CRITICALITY 16 <input type="checkbox"/> LOSS/THEFT 17 <input type="checkbox"/> MUF 18 <input type="checkbox"/> TRANSPORTATION 19 <input type="checkbox"/> CONTAM/LEAKING SOURCE 20 <input type="checkbox"/> ENVIRONMENTAL EVENT		
				21 <input type="checkbox"/> EQUIP. FAILURE 22 <input type="checkbox"/> ALLEGATION/COMPLAINT 23 <input type="checkbox"/> PUBLIC INTEREST 24 <input type="checkbox"/> SABOTAGE 25 <input type="checkbox"/> ABNORMAL OCCUR. 26 <input type="checkbox"/> OTHER		
T HEADQUARTERS ENTRIES						
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DATE HOS ENFORCEMENT LETTER, NOTICE ORDER ISSUED		70 M M D D Y Y				
DATE CIVIL PENALTY ISSUED		76 <u>  </u>				
DATE 786 ENTERED INTO COMPUTER FILE (MO/YR):		77 80 M M Y Y				
				AITS REFERENCE		









UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

SUITE 202, WALNUT CREEK PLAZA  
1990 N. CALIFORNIA BOULEVARD  
WALNUT CREEK, CALIFORNIA 94596

FEB 14 1979

Docket No. 70-25

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

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

Gentlemen:

Subject: NRC Inspection

This letter refers to the inspection of your activities authorized under NRC License No. SNM-21 conducted by Mr. M. D. Schuster of this office on January 22-24, 1979. It also refers to the discussion of our inspection findings held by the inspector with you and members of your staff on January 24, 1979 and with Mr. M. E. Remley on February 1, 1979.

The inspection included examination of activities related to physical protection against industrial sabotage and against theft of special nuclear material in accordance with applicable requirements of Title 10, Code of Federal Regulations, Part 73, "Physical Protection of Plants and Materials," your Security Plan, and license conditions pertaining to physical protection 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 inspector.

Based on the results of this inspection, it appears that certain of your activities were not conducted in full compliance with NRC requirements, as set forth in the Notice of Violation, enclosed herewith as Appendix A. The items of noncompliance are categorized into the level as described in our correspondence to all NRC licensees dated December 31, 1974.

~~CONFIDENTIAL~~

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*Handwritten notes:*  
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Waiting Log

FEB 14 1979

Energy Systems Group

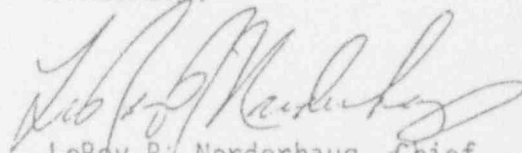
-2-

This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within 20 days of your receipt of this notice, a written statement of explanation in reply, including: (1) steps which have been or will be taken by you to correct the violation, and the results achieved; (2) steps which will be taken to avoid further violations; and (3) the date when full compliance will be achieved.

In accordance with Section 2.790(d) of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, documentation of findings of your control and accounting procedures for safeguarding special nuclear materials and your facility security procedures are exempt from disclosure; therefore, Appendix A, the inspection report, and your response to the items listed in Appendix A will not be placed in the public Document Room and will receive limited distribution.

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

Sincerely,



LeRoy R. Norderhaug, Chief  
Safeguards Branch

Enclosures:

1. Appendix A - Notice of Violation
2. Inspection Report  
No. 70-25/79-01 (IE-V-278)

cc (w/enclosures)  
Mr. M. E. Remley