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

REGION V

IE Inspection Report No. 70-25/76-08 (IF-V-138)

Licensee Atomics International Division
Rockwell International
8900 DeSoto Avenue

Docket No. 70-25

License No. SNM-21

Canoga Park, California

Priority 1

Facility _____

Group _____

~~Category~~ 1

Location Canoga Park, California

Type of Facility Fuel Fabrication

Type of Inspection Special Inspection, Mat'l Acct., unannounced.

Dates of Inspection July 8, 1976

Dates of Previous Inspection June 1-4, 1976

Principal Inspector G. H. Hamada *GH*

7/30/76
Date

Accompanying Inspectors B. Brock *B. Brock*

7/30/76
Date

Date

Other Accompanying Personnel: None

Reviewed by *M. Rizzolo*
V. N. Rizzolo, Chief, Safeguards Branch

7/30/76
Date

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SUMMARY OF FINDINGS

Enforcement Action

None.

Licensee Action on Previously Identified Enforcement Items

Not applicable.

Other Significant Findings

This was a special inspection.

Management Interview

Conducted on July 8, 1976 with the following:

- M. Remley, Manager, Health, Safety and Radiation Services
- V. Schaubert, Nuclear Materials Manager

Discussion

This inspection was conducted as a followup to the inspection of June 1-4, 1976. During the prior inspection there were several unresolved items remaining outstanding. Also, it appeared that a potential MUF problem in the ATR program, similar in scope to the "oxidation problem" experienced with heels in the EBR program, was beginning to surface as indicated by the fact that a statistically significant difference was observed between ATR powder analysis data and input data. The powder data were almost always lower than the percent U value calculated from input data to the U-Al alloy mixture. Additionally, there appeared to be a significant difference between the powder value and the value determined by NDA measurement of plates fabricated from the same powder batch.

With respect to ATR measurements, although there are several mechanisms that are being evaluated to see if they will provide answers to this problem, it is not yet clear at this time what factors are responsible for this discrepancy. The relatively high values for nitrogen and oxygen associated with the U-Al alloy seem to indicate that these contaminants could be a contributing factor. A review of procedures and performance experience for chemistry appears to rule out faulty analyses as a cause. All aspects of this potential problem are being scrutinized including a review of operational procedures and methodologies in an effort to effect a timely resolution of this question.

factor. Seven of these are then force-fit such that the average value corresponds to this factor. Subsequently, every time a new calibration point is generated, the "oldest" point is dropped and the new point added to the last six points to always provide seven points from which an average value may be determined. This average represents the "unbiased" calibration factor and accordingly is applied to samples analyzed during this period. For ATR, this "period" is usually daily. Additionally, a criterion has been established to determine when a new calibration may not be included in the averaging process. This criterion is the 95% confidence limit. When a calibration point falls within the 95% confidence limits as established by the initial calibration, it is accepted for averaging. If not, several other standards are analyzed to see if they fall back within the limits, and if these additional points fall within the limits they are accepted for averaging. If these additional points still fall outside the 95% confidence limits, a new calibration effort similar in scope to the initial one, is conducted and a new factor is established. All samples analyzed during this period are reanalyzed.