

FOIA/PA NO: _____2014-0475_____

GROUP ^B
RECORDS BEING RELEASED IN THEIR ENTIRETY



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
831 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

JUN 15 1981

Docket No. 70-33

Texas Instruments Incorporated
ATTN: Mr. William K. Goetz
Manufacturing Manager,
Metal Systems Department
34 Forest Street
Attleboro, Massachusetts 02703

Gentlemen:

Subject: Inspection No. 70-33/81-07

This refers to the routine inspection conducted by Mr. W. W. Kinney of this office on June 8-12, 1981 of activities authorized by NRC License No. SNM-23 and to the discussions of our findings held by Mr. Kinney with yourself and members of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Our inspector also verified the steps you have taken to correct the item of noncompliance brought to your attention in the enclosure to our letter dated May 22, 1980. We have no further questions regarding your action at this time.

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

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractors) believe to be exempt from disclosure under 10 CFR 9.5(a)(4), it is necessary that you (a) notify this office by telephone within ten (10) days from the date of this letter of your intention to file a request for withholding; and (b) submit within 25 days from the date of this letter a written application to this office to withhold such information. Consistent with section 2.790(b)(1), any such application must be accompanied by an affidavit executed by the owner of the information which identifies the document or part sought to be withheld, and which contains a full statement of the reasons on the basis which it is claimed that the information should be withheld from public disclosure. This section further requires the statement to address with specificity the considerations listed in 10 CFR 2.790(b)(4). The information sought to be withheld shall be

IE07

3
1/1

ADD:

DOE/Barber E 201

B108030406 B10715
PDR ADOCK 07000033
C PDR

JUL 15 1981

incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified periods noted above, the report will be placed in the Public Document Room. The telephone notification of your intent to request withholding, or any request for an extension of the 10 day period which you believe necessary, should be made to the Supervisor, Files, Mail and Records, USNRC Region I, at (215) 337-5223.

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

Sincerely,



R. R. Keimig, Chief
Projects Branch #2, Division of
Resident and Project Inspection

Enclosure: Office of Inspection and Enforcement Inspection
Report Number 70-33/81-07

cc w/encl:
W. Quimby, Assistant Vice President and Manager,
Metallurgical Materials Division
F. L. Sherman, Manager, HFIR Project

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

REGION I

Report No. 70-33/81-06

Docket No. 70-33

License No. SNM-23 Priority 1 Category UR

Licensee: Texas Instruments

34 Forest Street

Attleboro, Massachusetts

Facility Name: Texas Instruments

Inspection At: Attleboro, Massachusetts

Inspection Conducted: June 3-5, 1981

Inspectors: P. Clemons, Radiation Specialist

6/3/81
date

Approved by: P. J. Knapp, Chief, Facility Radiological Protection Section

6/4/81
date

Inspection Summary:

Inspection on June 3-5, 1981 (Report No. 70-33/81-06)

Areas Inspected: Routine, unannounced inspection by a regional based inspector of the Radiation Protection Program including: IE Circular, audits, dosimetry, annual report, annual drill, terminations, procedures, bioassay, air samples, stack samples, receipt of radioactive material, ventilation, contamination control, respirators, posting, training and instrument calibration. Shortly after arrival, areas where work was being conducted were examined to review radiation safety control procedures and practices. The inspection involved 18 inspector hours on site by one regional based NRC inspector.

Results: No items of noncompliance were identified.

Region I Form 12
(Rev. April 1977)

DETAILS

1. Persons Contacted

Dr. R. Schwensfeier, Manager, Nuclear Safety and Materials
Mr. F. Sherman, Manager, HFIR Project

2. IE Circular No. 80-14

(Closed) Information Circular (33/80-C1-14) This circular, describing cross contamination problems, was sent to the licensee on, or about, June 24, 1980. The licensee has reviewed the matter, and determined that it was not applicable to their facility.

3. Audits

Condition No. 13 of Special Nuclear Material License No. SNM-23 states, "Audits of the radiological...safety aspects conducted pursuant to this license shall be conducted at least quarterly..."

The inspector verified that the required audits had been performed by reviewing audit reports that had been submitted to the licensee, dated June 25, 1980, September 18, 1980, December 11, 1980 and March 30, 1981. The audits did not identify any problems. The audits were performed by individuals who were independent of the licensee's organization.

No items of noncompliance were identified.

4. Dosimetry

The licensee's personnel monitoring program was reviewed against the requirements of 10 CFR 20.101, 401 and 408 and the guidance provided in ANSI N7.2-1963, "Radiation Protection in Nuclear Reactor Fuel Fabrication Plants".

Film badges are regularly issued to approximately 70 employees and are exchanged quarterly. Film badges are also used for personnel external dosimetry for visitors. Approximately 30 visitors are provided dosimetry per quarter. The licensee does not provide neutron personnel dosimetry to employees routinely, but the licensee has criticality monitors distributed through the HFIR facility. Neutron radiation is not normally encountered in the operations performed at the facility.

The licensee utilized the services of a commercial vendor to supply and analyze the film badges. The licensee has not implemented a quality control program to check on the services provided.

The external personnel dosimetry program is managed by the Manager, Nuclear Safety and Materials who is qualified in radiation protection. His training and experience are as follows:

Ph.D-Physics
 Seven years in Nuclear Safety
 Two years in Health Physics
 Three short courses in Nuclear Safety
 One short course in Health Physics

The personnel monitoring program organization prepares and issues the following reports as required:

Annual Personnel Monitoring Report
 Termination Reports

Activities in the external monitoring area are governed by the following procedure N.S.3.2.5.2, Rev. A, "Film Badge Monitoring". The procedure was found to be consistent with the regulatory requirements of 10 CFR 20.

The inspector reviewed personnel dosimetry results for the 70 employees issued film badges during the period January through March 1981. The inspector noted that the maximum dose reported was 80 millirem for each of six employees for the quarter.

No items of noncompliance were identified.

5. Annual Report

10 CFR 20.407 requires that a personnel monitoring report, covering the preceding calendar year, be submitted to the Director of Management and Program Analysis, U.S. Nuclear Regulatory Commission, within the first quarter of each calendar year.

The inspector reviewed the licensee's personnel monitoring report that had been submitted to the Director of Management and Program Analysis on January 23, 1981.

No items of noncompliance were identified.

6. Annual Drill

Section 10.2.4.1.3 of the Health and Safety Manual, incorporated by Condition No. 8 of SNM-23, requires that evacuation drills be held annually. The inspector reviewed a critique memorandum that indicated that a drill was conducted on May 20, 1981.

No items of noncompliance were identified.

7. Termination Report

10 CFR 20.408 requires a licensee to submit a report of an individual's exposure to radiation and radioactive material incurred during the period of employment to the USNRC, Director of Management and Program Analysis, when the individual terminates employment with the licensee. Such report shall be furnished within 30 days after the exposure of the individual has been determined by the licensee or 90 days after the date of termination of employment or work assignment, whichever is earlier.

10 CFR 20.409 requires the licensee to report to the individual the same information as required by 10 CFR 20.408.

The inspector reviewed termination reports for five individuals who terminated employment with the licensee during the period March 1980 to February 1981. The reports had been submitted as required.

No items of noncompliance were identified.

8. Procedures

Condition No. 21 of SNM-23 requires that operating procedures be available on the floor for each operation.

The inspector toured the Fuel Manufacturing Area (FMA) on June 3, 1981, and noted that operating procedures were available for the five operations observed in the FMA.

No items of noncompliance were identified.

9. Bioassay

Section 5.5.1.1.1 of the Health and Safety Manual, incorporated by Condition No. 8 of Special Nuclear Material License No. SNM-23, requires urinalyses for enriched uranium quarterly for people employed more than 50 percent of the time in the Fuel Manufacturing Area (FMA), and scrap and salvage personnel. The inspector reviewed data for 1980 and the first quarter of 1981 for eight employees. The data did not indicate any problems with exposure.

No items of noncompliance were identified.

10. Air Samples

The inspector reviewed air sample data for the period January through May 1981 for six sampling points within the Fuel Manufacturing Area. The data indicated that all results were within the regulatory requirements.

No items of noncompliance were identified.

11. Stack Samples

The inspector reviewed stack sample data for the two stacks serving the FMA for the period January through May 1981 to determine that the stacks were being sampled, and that the sample results were within regulatory limits.

No items of noncompliance were identified.

12. Receipt of Radioactive Material

10 CFR 20.205(b)(1) requires each licensee upon receipt of a package of radioactive material to monitor the external surfaces of the package for radioactive contamination.

The inspector reviewed documentation of two shipments that were received. One shipment was received on December 9, 1980, and the second shipment was received on March 3, 1981. The documentation indicated that the packages were monitored as required.

No items of noncompliance were identified.

13. Ventilation

The Fuel Manufacturing Area (FMA), in which unclad enriched uranium is handled, is normally maintained at a negative pressure so that air flow is always towards the manufacturing area. The inspector verified that the Fuel Manufacturing Area was at negative pressure relative to other areas of the facility.

No items of noncompliance were identified.

14. Contamination Control

On June 4, 1981, the inspector performed a smear survey in the Transition Area, the Change Room, the Anti Room and the Smidgen Clean area. The survey revealed very low levels of removable contamination. No removable contamination above the limits specified in the licensee's Health and Safety Manual were found.

No items of noncompliance were identified.

15. Respirators

The licensee does not make allowances for the use of respiratory protective equipment, however, Section 5.2.3.5 of the Health and Safety Manual states that records will be kept on all assignments, inspections, repairs, and leak tests of respirators.

The inspector reviewed respirator records for the period January through May 1981 to verify adherence to the Health and Safety Manual requirement.

No items of noncompliance were identified.

16. Posting

The inspector reviewed the posting of the facility to determine if it was posted in accord with the requirements of 10 CFR 19 and 10 CFR 20.

No items of noncompliance were identified.

17. Training

Section 10.2 of the Health and Safety Manual requires that all employees involved in the handling of fissionable material shall be given a reorientation lecture by the Health Physics Officer on an annual basis.

The inspector reviewed records which indicated that all employees received the required lecture, presented by the Health Physics Officer on August 27, 1980.

The inspector noted that the records indicated that one new employee received training as required by 10 CFR 19.12 on September 10, 1980.

No items of noncompliance were identified.

18. Criticality Alarm Calibration

Condition No. 16 of SNM-23 states, "The criticality accident alarm system shall be calibrated quarterly, as a minimum." The inspector reviewed calibration data for 1980 to verify that the criticality alarm system had been calibrated at the required frequency.

No items of noncompliance were identified.

19. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on June 5, 1981. The inspector summarized the purpose and the scope of the inspection, and the findings as presented in this report.

10 SEP 1981

Docket No. 70-33

Texas Instruments Incorporated
ATTN: Mr. William K. Goetz
Manufacturing Manager,
Metal Systems Department
34 Forest Street
Attleboro, Massachusetts 02703



Gentlemen:

Subject: Inspection 70-33/81-06

This refers to the inspection conducted by Mr. Clemons of this office on June 3 - 5, 1981 of activities authorized by NRC License No. SNM-23 and to the discussions of our findings held by Mr. Clemons with Mr. Sherman and Dr. Schwensfeir at the conclusion of the inspection.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

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

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractors) believe to be exempt from disclosure under 10 CFR 9.5(a)(4), it is necessary that you (a) notify this office by telephone within ten (10) days from the date of this letter of your intention to file a request for withholding; and (b) submit within 25 days from the date of this letter a written application to this office to withhold such information. Consistent with section 2.790(b)(1), any such application must be accompanied by an affidavit executed by the owner of the information which identifies the document or part sought to be withheld, and which contains a full statement of the reasons on the basis which it is claimed that the information should be withheld from public disclosure. This section further requires the statement to address with specificity the considerations listed in 10 CFR 2.790(b)(4). The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified periods noted above, the report will be placed in the Public Document Room. The telephone notification of your intent to request withholding should be made to the Supervisor, Files, Mail and Records, USNRC Region I, at (215) 337-5223.

RI:TIB
Clemons/cgl
3/28/81

cc 3/3

RI:DE&TI

Knepp
9/9/81

RI:DR&PI

Keimig

9/9/81

RI:TIB
Joyner

for 9/9/81

for 9/9/81

ADD:

DOE/Barb
E 201

OFFICIAL RECORD COPY

8109280408 810910
PDR ADOCK 05000033
PDR

Texas Instruments Incorporated

2

10 SEP 1981

No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

original signed by

R. R. Keimig

R. R. Keimig, Chief,
Projects Branch #2, Division of
Resident and Project Inspection

Enclosure: Office of Inspection and Enforcement Inspection
Report Number 81-06

cc w/encl:

W. Quimby, Assistant Vice President and Manager,
Metallurgical Materials Division
F. I. Sherman, Manager, HFIR Project
Public Document Room (PDR)
Nuclear Safety Information Center (NSIC)
Commonwealth of Massachusetts (2)

bcc w/encl:

Region I Docket Room (with concurrences)
Chief, Operational Support Section (w/o encl)

OFFICIAL RECORD COPY

ENCLOSURES TRANSMITTED HEREWITH
CONTAIN 10 CFR 2.790 INFORMATION

OCT 29 1981

Docket No. 70-33

Texas Instruments Incorporated
ATTN: Mr. William K. Goetz
Manufacturing Manager,
Metal Systems Department
34 Forest Street
Attleboro, Massachusetts 02703



Gentlemen:

Subject: Inspection 70-33/81-08

This refers to the routine safeguards inspection conducted by Mr. H. Zibulsky of this office on August 10-14, 1981, of activities authorized by NRC License No. SNM-23 and to the discussions of our findings held by Mr. Zibulsky with Mr. F. Sherman on August 13, 1981.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

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 findings of your control and accounting procedures for safeguarding special nuclear materials and your facility security measures for physical protection are deemed to be commercial or financial information within the meaning of 10 CFR 9.5(a)(4) and shall be subject to disclosure only in accordance with the provisions of 10 CFR 9.12; therefore, the enclosed inspection report will not be placed in the Public Document Room and will receive limited distribution.

No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

Original Signed By:

R. R. Keimig, Chief
Projects Branch #2, Division of
Resident and Project Inspection

RI:MC&AS
Zibulsky/mjd

10/28/81

RI:FP
Kibbey

10/28/81

RI:TIB
Joyner

10/27/81

RI:PB-2
Keimig

10/28/81

OFFICIAL RECORD COPY

8111130408 811029
PDR ADOCK 07000033
C

ENCLOSURES TRANSMITTED HEREWITH

ENCLOSURES TRANSMITTED HERewith
CONTAIN 10 CFR 2.790 INFORMATION

Texas Instruments Incorporated

2 OCT 29 1981

Enclosure: Office of Inspection and Enforcement Inspection Report Number
70-33/81-08 (Contains 2.790 Information)

cc (with copy of report cover sheet only):
W. Quimby, Assistant Vice President and Manager
Metallurgical Materials Division
F. L. Sherman, Manager, HFIR Project
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
Commonwealth of Massachusetts (2)

bcc:
Region I Docket Room (with concurrences)
Chief, Operational Support Section (w/o encl)

OFFICIAL RECORD COPY

ENCLOSURE

JAN 5 1982

Docket No. 70-33

Texas Instruments Incorporated
ATTN: Mr. William K. Goetz
Manufacturing Manager,
Metal Systems Department
34 Forest Street
Attleboro, Massachusetts 02703

Gentlemen:

Subject: Inspection No. 70-33/81-10

This refers to the special, safety inspection conducted by Mr. J. Roth of this office on December 18, 1981 of activities authorized by NRC License No. SNM-23 and to the discussions of our findings held by Mr. J. Roth with Mr. Sherman of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

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

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractors) believe to be exempt from disclosure under 10 CFR 9.5(a)(4), it is necessary that you (a) notify this office by telephone within ten (10) days from the date of this letter of your intention to file a request for withholding; and (b) submit within 25 days from the date of this letter a written application to this office to withhold such information. Consistent with section 2.790(b)(1), any such application must be accompanied by an affidavit executed by the owner of the information which identifies the document or part sought to be withheld, and which contains a full statement of the reasons on the basis which it is claimed that the information should be withheld from public disclosure. This section further requires the statement to address with specificity the considerations listed in 10 CFR 2.790(b)(4). The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified periods noted above, the report will be placed in the Public Document Room. The telephone notification

OFFICIAL RECORD COPY

RI:DRPI

Roth

1-5-82

RI:DRPI

Keimig

1-5-82

RI:DRPI

Starostecki

1-5-82

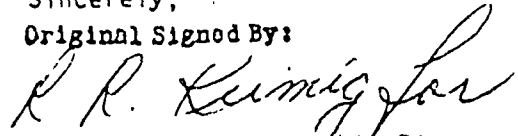
JAN 5 1982

of your intent to request withholding, or any request for an extension of the 10 day period which you believe necessary, should be made to the Supervisor, Files, Mail and Records, USNRC Region I, at (215) 337-5223.

No reply to this letter is required. Your cooperation with us in this matter is appreciated.

Sincerely,

Original Signed By:



Richard W. Starostecki, Director,
Division of Resident and Project
Inspection

Enclosure: Office of Inspection and Enforcement Inspection
Report Number 70-33/81-10

cc w/encl:

W. Quimby, Assistant Vice President and Manager,
Metallurgical Materials Division
F. L. Sherman, Manager, HFIR Project
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
Commonwealth of Massachusetts (2)

bcc w/encl:

Region I Docket Room (with concurrences)
Chief, Operational Support Section (w/o encls)

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

Region I

Report No. 70-33/81-10
Docket No. 70-33
License No. SNM-23 Priority 1 Category UR
Licensee: Texas Instruments Incorporated
34 Forest Street
Attleboro, Massachusetts 02702
Facility Name: HFIR Project
Inspection at: Attleboro, Massachusetts
Inspection conducted: December 18, 1981
Inspectors: J. J. Roth 12/30/81
J. Roth, Project Inspector date signed
Approved by: R. R. Keimig 1-5-82
R. R. Keimig, Chief date signed
Projects Branch #2
DRPI

Inspection Summary:

Inspection on December 18, 1981 (Report No. 70-33/81-10)

Areas Inspected: Special, unannounced inspection by a region-based inspector of: organization; review of operations; and, environmental evaluations. The inspection involved 5 inspector hours onsite by one NRC region-based inspector and was initiated on the day shift.

Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

- *F. Sherman, Manager, HFIR Project
- A. Hought, Facilities Engineer
- *denotes individual present at the exit interview

2. Organization

The inspector determined that the following organizational structure is in effect at this site.

Mr. F. Sherman, Manager, HFIR Project reports to Mr. W. K. Goetz, Manufacturing Manager, Metal Systems Department. Reporting to Mr. Sherman are:

- R. J. Schwensfeir, Manager, Nuclear Safety and Nuclear Material
 - W. Daft, Nuclear Safety Technician
- D. Collins, Equipment Engineer
- R. Murin, Group Leader, Decommissioning
 - G. Araujo, Operator
 - J. Leanelli, Operator
 - K. Rodgers, Operator

Mr. H. Artel will be returning after an extended sick leave on or about January 4, 1982. Mr. Artel will handle the Nuclear Material Accountability and Quality Assurance aspects of the facility and report to Mr. Schwensfeir.

No items of noncompliance were identified.

3. Review of Operations

The inspector made a physical examination of the facilities being decommissioned.

a. General Manufacturing Area

The inspector determined through discussions with licensee representatives that all fuel element manufacturing operations at this facility were completed during the month of October 1981. Since that time, all equipment from the General Manufacturing Area except for a press brake has been inspected, surveyed for contamination, packaged, and transported either to Oak Ridge National Laboratory or to the Babcock and Wilcox, Lynchburg, Virginia facility. Manufacturing operations in the General Manufacturing Area involved clad fuel elements and components. No operations with unclad special nuclear material were conducted in this area of the plant.

b. Fuel Manufacturing Area

The licensee has initiated decontamination of equipment and facilities located in the Fuel Manufacturing Area. Operations on unclad special nuclear material were conducted in this area of the plant.

c. Waste Drum Storage

The inspector verified that all accessible special nuclear material had been removed from the facility. The current facility license authorizes the storage of waste drums, containing up to 15 grams U-235 each, anywhere in the facility. The inspector noted that about 25 closed and sealed 30 and/or 55 gallon drums containing less than 15 grams U-235 each were stored in the General Manufacturing Area awaiting shipment to an approved burial site. Internal walls of the facility were being surveyed for contamination and packaged into 4 foot by 6 foot by 1.5 foot high wooden boxes for transport to an approved burial site.

No items of noncompliance were identified.

4. Environmental Evaluations

The licensee has initiated environmental evaluations at various locations on the owner controlled site where operations with special nuclear material may have been conducted.

a. Settling Pond

A settling pond/neutralization pond was located in an area approximately 50 yards east of Building 10 during the 1956 to 1965 time period. This area had been filled in and is currently under the parking lot located east of Building 10. During the weeks of December 7 and 14, 1981, the licensee conducted coring tests in this area to specifically locate the pond and to determine whether the pond sediment contained radioactive contaminants. The core samples were split and sent to a vendor for analysis. The licensee will supply NRC Region I with a portion of the split soil samples for verification analyses.

b. Onsite Burial of Special Nuclear Material

During AEC inspections conducted on October 31, 1958 and August 13-14, 1962, it was determined that the licensee buried slightly contaminated ventilation ductwork and approximately 23.4 millicuries (approximately 425 grams) of enriched uranium noncombustible scrap onsite as previously authorized by 10 CFR 20.304. The latter burial was completed on June 1, 1961. The licensee has determined that the latter burial and possibly both burials were

conducted in a trench located approximately 100 yards north-northeast of Building 11. The licensee has installed 10 monitoring wells to a maximum depth of 10 feet around the trench. The wells are located no closer than 50 feet to the perimeter of the trench. In addition, four core samples were obtained from the trench itself in an attempt to determine the extent of contamination and whether the radioactive material is moving in a vertical direction. Water samples obtained from the wells and split soil samples were sent to a vendor for analysis. The licensee will provide NRC-Region I with a portion of the split soil samples and a portion of the ground water samples for verification analyses.

No items of noncompliance were identified.

5. Exit Interview

The inspector met with the licensee representative (denoted in paragraph 1) at the conclusion of the inspection at about 12:00 noon on December 18, 1981. The inspector presented the scope and findings of the inspection and stated that no items of noncompliance were identified.

EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT
SUPPLEMENTAL INFORMATION
FOR TIME PERIOD July 1, 1981 to December 31, 1981

1. Regulatory Limits

Code of Federal Regulations Title 10 Part 20 only

2. Maximum Permissible Concentrations

- a. Fission and activation gases: None
- b. Iodines: None
- c. Particulates, Half-lives > 8 days: 4×10^{-12} μ Ci/ml
- d. Liquid effluents: 3×10^{-5} μ Ci/ml

3. Average Energy

185 KEV for gamma radiation

4. Measurements and Approximations of Total Radioactivity

- a. Fission and activation gases: None
- b. Iodines: None
- c. Particulates: Stack samples are alpha counted and converted to μ Ci/ml. The confirmed receiving and chemical and isotopic analysis is used.
- d. Liquid effluents: None

5. Batch Releases

- a. Liquid: None
- b. Gaseous:

- 1. Number of batch releases: 135 batches for each of two stacks.
- 2. Total time period for batch releases: 1080 hours
- 3. Maximum time period for a batch release: 8 hours
- 4. Average time period for batch releases: 8 hours
- 5. Minimum time period for a batch release: 8 hours

6. Abnormal Releases

- a. Liquid: None
- b. Gaseous: None

7. Material: U_3O_8 High Fired 84.64% Total U 93.15% ^{235}U

8201220310 820107

~~NAC 11890~~

~~20-05038-03~~

PDR

2DR Adock 0700033 //

TABLE 1A
 EFFLUENT AND WASTE DISPOSAL SEMIANNUAL REPORT 19
 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	Unit	Quarter 3	Quarter 4	Est. Total Error %
--	------	--------------	--------------	-----------------------

A. Fission & Activation
gasses: None

B. Iodines: None

C. Particulates

1.	Particulates with half-lives >8 days	Ci	1.10E-06	1.10E-06	3.18E + 02
2.	Average release rate for period	µCi/sec	5.89E-07	5.48E-07	
3.	Percent of technical specification limit	%	5.34E+00	4.96E+00	
4.	Gross alpha radioactivity	Ci	1.10E-06	1.10E-06	

D. Tritium

None

TABLE 1B
 GASEOUS EFFLUENTS-ELEVATED RELEASE

Nuclides Released	Batch Mode	
	3rd Quarter	4th Quarter
1. Fission gases: None		
2. Iodines: None		
3. Particulates	1.10E-06	1.10E-06
93.15% Enriched U		

TABLE 1C
 Not Applicable

TABLE 2A
 Not Applicable

TABLE 2B
Not Applicable

TABLE 3

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (NOT IRRADIATED FUEL)

	<u>Unit</u>	<u>6 Month Period</u>	<u>Est. Total Error, %</u>
1. Type of Waste			
a. Spent resins, filter sludges, evaporator bottom, etc.	m ³ Ci	None	
b. Dry compressed waste, contaminated equip., etc.	m ³ Ci	5.68E-01 4.22E-04	3.11E + 01
c. Irradiated components, control rod, etc.	m ³	None	
d. Other			

2. Estimate of major nuclide composition (by type of waste)

a. ²³⁴ U	% 1.01 E + 00
b. ²³⁵ U	% 9.32 E + 01
c. ²³⁶ U	% 4.60 E - 01
d. ²³⁸ U	% 5.38 E + 00

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
2 0	Laundry Truck Truck	Indian Orchard, MA

B. IRRADIATED FUEL SHIPMENTS (Disposition)

Not Applicable

TABLE 4A
Not Applicable - No Data

TABLE 4B
Not Applicable - No Data



TEXAS INSTRUMENTS INCORPORATED

ATTLEBORO, MASSACHUSETTS 02703

Metallurgical Materials Division

TEHQ FILE COPY

January 7, 1982

70-33

SMM-23

U.S. Nuclear Regulatory Commission
Region 1
631 Park Avenue
King of Prussia, PA 19406

Gentlemen:

Attached please find the Texas Instruments (TI) semi-annual Effluent Release Report per 70.59 of Title 10 Code of Federal Regulations. TI reports effluent release from exhaust stacks only, since there is no measurable liquid effluent release.

If there are any questions about this report, please do not hesitate to write or call.

Sincerely,

Robert J. Schwensfeir, Jr.

Robert J. Schwensfeir, Jr.
Manager Nuclear Safety

RJS/jmg

Enclosures (2)

- Distribution:
- (2) Director, MIPC
Nuclear Regulatory Commission
Washington, D.C. 20555
 - (6) Director, Inspection & Enforcement
Nuclear Regulatory Commission
Washington, D.C. 20555
 - (1) U.S. Nuclear Regulatory Commission
c/o Document Management Branch
Washington, D.C. 20555

8201220308 820107
NHS-LTC38
20-09838-03 PDR
PDR ADock 97000433
Jiffy Mail
Generation