RESULTS

9. RADIATION AND CONTAMINATION SURVEYS	(C) NC

a. Radiation and Contamination surveys — (C) NC NA NI

1. radiation and contamination surveys recorded — y/n/na/(ni)
2. surveys performed at required frequency: ~~[illegible]~~ *periodically during production runs & changes in process* — (y)/n/na/ni
3. appropriate instruments used — (y)/n/na/ni
4. action limits observed, and post-docontamination surveys performed when necessary — y/n/(na)/ni
5. NRC inspector reviewed survey records for the period *1955* — *Cont. No changes since* to ________
6. maximum radiation levels in unrestricted area: ________

b. Airborne Radioactivity Surveys performed — (C) NC NA NI

1. Air sampling in restricted areas — (y)/n/na/ni
   a. maximum concentration levels: *< 1 mg/m³ Ni*
   b. typical concentration levels: *"*
2. bioassay procedures performed — y/n/(na)/ni
   a. type(s) ________
   b. maximum results ________
   c. typical results ________
3. bioassay and air sampling records maintained as required — y/n/(na)/ni
4. Principal isotopes *232 Th*

c. Leak tests of sealed sources performed as required — C NC (NA) NI

1. performed by user and method approved — y/n/na/ni
2. tested at required interval: ________ — y/n/na/ni
3. records maintained — y/n/na/ni
4. records reviewed by NRC inspector for the period ________ to ________

Comments: *Wipe samples @ E. Holford obtained during production run of 7/90 – not significantly different from background ([illegible] new [illegible] [illegible]). Wipe surveys have shown no contamination. Surveys done "periodically" when procedures or operations, etc. change. Air samples during 7/90 reported < 1 mg Ni/m³ of air during production runs lasting a couple of days. 1 mg Ni/m³ is action level for Th (which would be ≈ .04 mg/m³ ≈ .44 E-6 μCi/m³ or ~ 1000 dpm Th/m³)*

Never detected

No direct reading surveys performed @ E. Holford since [illegible]

[illegible] on Ni [illegible] – 1 mg/m³ OSHA [illegible]

[illegible] [illegible] Dale [illegible] computed [illegible] Sherritt Gordon Nickel [illegible]

	RESULTS			
10. EFFLUENT CONTROL, WASTE DISPOSAL	(C)	NC	NA	NI

a. Releases to the environment in accordance with requirements. (C) NC NA NI

1. airborne releases are made — y/(n)/na/ni
   a. evaluations adequate — y/n/(na)/ni
   b. releases within limits (10 CFR 20.106) — y/n/(na)/ni
   c. typical concentrations ______
   d. principal isotopes released
2. liquid releases are made to ______ (sewer, unrestricted) — y/(n)/na/ni
   a. evaluations adequate — y/n/(na)/ni
   b. releases within limits (10 CFR 20.106, 10 CFR 20.303) — y/n/(na)/ni
   c. typical concentrations ______
   c. principal isotopes released
3. Records maintained — y/n/(na)/ni

b. Waste disposal in accordance with requirements (C) NC NA NI

1. methods: ~~Atlas~~ ~~Barnwell~~ ~~NDL~~. Now shipped to Alberta [illegible] [illegible] last December, 1290 [illegible]
   [illegible] 1/3/91 [illegible] Waste was returned to supplier.
2. records of waste transfer maintained — (y)/n/na/ni
3. surveys of waste containers and material in storage-for-decay performed — y/n/(na)/ni
4. obliteration of labels — y/n/(na)/ni

c. Burial of licensed material done in past — Yes/(No)

1. Location of past burials ______
2. types of materials buried ______
3. types of surveys of area, results:

d. 10 CFR 61 Requirements Reviewed — y/n/na/(ni)

Comments All waste was sent to E. Hartford for disposal transfer to supplier. Shipment of 29, 55 gal drums returned to supplier @ Alberta Canada during December 1990. Waste no longer goes to burial @ Barnwell via NDL.

[illegible] 157
9/90
1500 [illegible]
~ 1B700 [illegible]
[illegible] 20

11. NOTIFICATIONS AND REPORTS	RESULTS C NC (NA) NI
1. Licensee is in compliance with	
a. reports of thefts or losses (20.402)	y/n/na/ni
b. reports of incidents (excessive releases, fires, or other catastrophes) (20.403)	y/n/na/ni
2. Licensee took appropriate action in response to the following Bulletins, Circulars, and Information Notices.	y/n/na/ni

a. _____

b. _____

c. _____

Comments

	RESULTS			
12. OTHER LICENSE CONDITIONS	C	NC	NA	NI

List any other license conditions which were reviewed during the inspection, and describe the results.

a. C NC

b. C NC

c. C NC

Comments

	RESULTS			
13. INDEPENDENT AND CONFIRMATORY MEASUREMENTS	C	NC	NA	NI

a. Type of Survey

Type of Survey	Areas Surveyed	Results (indicate units)
1. Radiation level	Waste in [illegible] - [illegible]	Contact w/ drum ~ 1.2 mR/hr
	@ ~12 inches from drum	~ 1 mR/hr
	@ ~ 1 meter "	~ 0.2 mR/hr
	Piece in [illegible]	~0.3 " - [illegible]
	waste [illegible] in [illegible]	~0.2 - 0.4 mR/hr
	Contact w/ [illegible] pieces in [illegible]	~ 1.2 mR/hr
	at 12" from " " " "	0.3-0.5 mR/hr
2. Wipe		
3. Sample (describe)		

4. Attach any sample analysis data from Region I laboratory

b. Survey Instruments Used

		a.	b.
1.	Type	E-120	
2.	NRC #	870	
3.	last calibration date	1/16/91	

Comments

APPENDIX A - DOCUMENTATION OF NONCOMPLIANCE

Requirement	Basis for noncompliance
1. 10 CFR _____ Lic Cond _____	
2. 10 CFR _____ Lic Cond _____	
3. 10 CFR _____ Lic Cond _____	
4. 10 CFR _____ Lic Cond _____	
5. 10 CFR _____ Lic Cond _____	
6. 10 CFR _____ Lic Cond _____	

APPENDIX B - LICENSEE ACTION ON PREVIOUS INSPECTION FINDINGS

Identification and summary of action taken	Status
Report No: _____ Severity Level _____	
Describe previous violation:	
Corrective Action taken:	OPEN
	CLOSED
Report No.: _____ Severity Level _____	
Describe previous violation:	
Corrective Action taken:	OPEN
	CLOSED
Report No: _____ Severity Level _____	
Describe previous violation:	
Corrective action taken:	OPEN
	CLOSED

APPENDIX B (continued)

Identification and summary of action taken	Status

Report No: _____ Severity Level _____

Describe previous violation:

Corrective action taken: OPEN

CLOSED

Report No: _____ Severity Level _____

Describe previous violation:

Corrective action taken: OPEN

CLOSED

Report No: _____ Severity Level _____

Describe previous violation:

Corrective action taken: OPEN

CLOSED

APPENDIX C - SUPPLEMENTARY INFORMATION

( ) Unusual occurrence, conditions, etc. ( ) Unresolved items

( ) Description of attachments to field notes (X) Inspector's comments

Very minimal production at E. Hartford site.
Production runs vary between 2/yr and every 2 yrs.
last 2 runs are in 1987 and 7/90.

Reduction Runs are more frequent @ Middletown Site.
Runs are between 1/yr and every 1 yr.

ATTACHMENT A

PERFORMANCE EVALUATION FACTORS CHECKLIST

Licensee (name & location) United Technologies Corp / Pratt & Whitney / E. Hartford/Middletown, CT

Inspector Clay

Inspection Date 3/26-27/91

a.	Lack of senior management involvement with the radiation safety program and/or Radiation Safety Officer (RSO) oversight	( ) Y (X) N
b.	RSO too busy with other assignments	( ) Y (X) N
c.	Insufficient staffing	( ) Y (X) N
d.	Radiation Safety Committee fails to meet or functions inadequately	( ) Y ( ) N (NA)
e.	Inadequate consulting services or inadequate audits	( ) Y (X) N

Remarks (consider above assessment and/or other pertinent PEFs):

Audits are not inadequate but are infrequent and required periodically. In reality, surveys are not conducted @ Middletown site unless production operations are changed. No ~~changes~~ changes for past few years. Production @ E. Hartford is not significant.

Regional follow-up on above PEFs citations:

ATTACHMENT B

LIST OF OTHER PERTINENT PEFs

- Users not familiar with safety procedures or license conditions
- Excessive missed surveillances
- Lack of audits
- RSO not separated from responsibility for production activities
- Repeated failure to correct violations identified by consultant or licensee
- Failure to implement adequate corrective actions on previous violations
- Inability to readily retrieve records and documentation pertaining to licensed program
- Reportable events/misadministrations since last inspection
- Numerous diagnostic misadministrations
- Numerous repeat violations
- Financial instability of licensee
- Frequent resignations of staff
- Inability to perform all required surveys on time
- Lack of training documentation
- Failure to assess the performance of personnel training
- Allegations/Office of Investigations referrals since last inspection
- Licensee not inventorying radioactive materials
- Lack of structure to identify staff responsibilities
- Company subject to name change, developed into a subsidiary, or transferred
- Failure to provide training to individuals before authorizing them to use licensed materials
- Radiation waste not being disposed of at same rate of generation
- Failure to retrain authorized users
- Inadequate RSO attention to radiation safety program
- Incomplete responses to previously identified violations
- No evidence of licensee capable of responding to a radiological event
- Inadequate surveys
- RSO spends insufficient time at facility
- Identified violations similar to those previously identified