



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

July 22, 2013

Docket No. 040-00791
EA 13-032

License No. SMB-151

David J. Alberghini
Site Manager, Environment, Health & Safety
United Technologies Corporation
Pratt & Whitney
400 Main Street
MS 124-26
East Hartford, CT 06108

SUBJECT: NRC INSPECTION REPORT NO. 040-00791/2012-002, UNITED TECHNOLOGIES CORPORATION, PRATT & WHITNEY, MIDDLETOWN, CONNECTICUT AND NOTICE OF VIOLATION

Dear Mr. Alberghini:

On August 8, 2012, Betsy Ullrich of this office conducted a safety inspection which was limited to a review of decommissioning activities related to Building 10 at the Middletown, Connecticut site. Additional information provided in your correspondence dated January 20, July 18, and December 17, 2012, and during the telephone conversations on January 7 and February 12, 2013, between you and Sandy Soucy of your organization and this office were also examined as part of the inspection. The findings of the inspection were discussed with you and Sandy Soucy at the conclusion of the inspection. The enclosed report presents the results of this inspection.

Based on the results of this inspection, the NRC has determined that two violations of NRC requirements occurred. The violations involved: 1) the failure to adequately demonstrate that Building 10 located at the Middletown, Connecticut site was acceptable for release for unrestricted use pursuant to 10 CFR 20.1402; and 2) failure to properly dispose of 0.061 to 4.2 microcuries of natural thorium as residual contamination in demolition debris by providing it to a recipient who was not authorized to dispose of radioactive material, or otherwise authorized or approved by the Commission or its regulations.

These violations were evaluated in accordance with the NRC Enforcement Policy and determined to be Severity Level IV. The current Enforcement Policy is included on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. Because the two violations are closely linked, they were considered as a single issue. The violations are cited in the enclosed Notice of Violation (Notice), because the violations were identified by the NRC.

In addition, the NRC is reviewing if the activities at Building 10 in 2000 were considered to be "decommissioning" as described in 10 CFR 30.36. If so, a separate letter will be issued to address violations of the requirement to complete decommissioning within 24 months, since the report of the results of the survey performed in 2000 was not submitted to the NRC until 2012.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. For your consideration and convenience, an excerpt from NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," is enclosed. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

During our inspection exit meeting on February 12, 2013, you indicated that you intend to decommission facilities at your East Hartford location in the near future, and that you will use the 10 CFR 20.1402 criteria for release of those facilities. You stated that you are committed to radiation safety and to compliance with NRC regulations and licensed conditions.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

The NRC's Safety Culture Policy Statement became effective in June 2011. While a policy statement and not a regulation, it sets forth the agency's *expectations* for individuals and organizations to establish and maintain a positive safety culture. You can access the policy statement and supporting material that may benefit your organization on NRC's safety culture Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>. We strongly encourage you to review this material and adapt it to your particular needs in order to develop and maintain a positive safety culture as you engage in NRC-regulated activities.

D. Alberghini

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Please contact Betsy Ullrich at (610) 337-5040 if you have any questions regarding this matter.

Sincerely,

Original Signed By Judith A. Joustra

Judith A. Joustra, Chief
Commercial and R&D Branch
Division of Nuclear Materials Safety

Enclosures:

1. Inspection Report No. 040-00791/2012-002
2. Notice of Violation
3. Information Notice 96-28

cc:

Sandy Soucy, Radiation Safety Officer
State of Connecticut

D. Alberghini

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Please contact Betsy Ullrich at (610) 337-5040 if you have any questions regarding this matter.

Sincerely,

Original Signed By Judith A. Joustra

Judith A. Joustra, Chief
Commercial and R&D Branch
Division of Nuclear Materials Safety

Enclosures:

- 1. Inspection Report No. 040-00791/2012-002
- 2. Notice of Violation
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cc:

Sandy Soucy, Radiation Safety Officer
State of Connecticut

Distribution:

OEMail
NHasan, OE
LSreenivas, OE
MBurgess, FSME
RSun, FSME
D. J. Holody, RI
MMcLaughlin, RI
CCrisden, RI

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OFFICE	DNMS/RI	N	ORA/RI	DNMS/RI		
NAME	EUllrich/bu		MMcLaughlin/mmm	JJoustra/jaj		
DATE	7/15/13		7/15 /13	7/15/13		

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NOTICE OF VIOLATION

United Technologies Corporation
East Hartford, CT

Docket No. 040-00791
License No. SMB-151
EA-13-032

During an NRC inspection conducted on August 8, 2012; January 7 and February 12, 2013, two violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. 10 CFR 20.1501(a)(1) requires that each licensee shall make or cause to make, surveys that may be necessary for the licensee to comply with the regulations in this part.

10 CFR 20.1003 defines "Survey" as an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal or presence of radioactive material or other sources of radiation. When appropriate, such an evaluation includes a physical survey of the location of radioactive material and measurements or calculations of levels of radiation or concentrations or quantities of radioactive material present.

10 CFR 20.1402 requires, in part, that a site will be considered acceptable for release for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a total effective dose equivalent (TEDE) to an average member of the critical group that does not exceed 25 millirem per year.

Contrary to the above, in July 2000, United Technologies/Pratt & Whitney (UPW) considered Building 10 of its Middletown, Connecticut site to be acceptable for release for unrestricted use without adequately demonstrating that residual radioactivity that was distinguishable from background radiation resulted in a TEDE to an average member of the critical group that did not exceed 25 millirem per year. Specifically, UPW conducted a survey of the building and compared the results to previous release criteria that were superseded in 1997 by the requirements in 10 CFR 20.1402.

- B. 10 CFR 20.2001(a), in part, requires that a licensee shall dispose of licensed material only by transfer to an authorized recipient as provided in § 20.2006 or in the regulations in parts 30, 40, 60, 61, 63, 70, and 72 of this chapter

10 CFR 20.2002, in part, requires that a licensee apply to the Commission for approval of proposed procedures, not otherwise authorized in the regulations in this chapter, to dispose of licensed material generated in the licensee's activities.

Contrary to the above, between August and December 2004, UPW disposed of licensed material in a manner that did not involve transfer to an authorized recipient or that was otherwise authorized or approved by the Commission or its regulations. Specifically, UPW demolished Building 10 of its Middletown, Connecticut site and, because it considered the building to be released for unrestricted use, disposed of contaminated building material by shipping it to a hazardous waste landfill. The landfill was not an authorized recipient for radiologically contaminated material, and UPW did not apply to

the Commission for approval to dispose of the material in this manner or first verify with the NRC that the site met the proper NRC criteria for unrestricted release.

These violations are categorized collectively as a Severity Level IV problem (Section 6.7)

Pursuant to the provisions of 10 CFR 2.201, United Technologies Corporation is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region I, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response.

If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, any response which contests an enforcement action shall be submitted under oath or affirmation.

Your response will be placed in the NRC Public Document Room (PDR) and on the NRC Web site. To the extent possible, it should, therefore, not include any personal privacy, proprietary, or safeguards information so that it can be made publically available without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated This 22 day of July 2013

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 040-00791/2012-002
Docket No. 040-00791
License No. SMB-151
Licensee: United Technologies Corporation, Pratt & Whitney
Address: 400 Main Street, MS 124-26, East Hartford, Connecticut
Locations Inspected: Aircraft Road, Middletown, Connecticut
Inspection Dates: August 8, 2012
Additional Information: Letters dated January 20, 2012 and July 18, 2012 with attachments; preliminary survey results submitted by email on December 17, 2012; telephone discussions on January 7 and February 12, 2013

Inspector:	Original Signed By:	7/22/13
	_____	_____
	Betsy Ullrich	date
	Senior Health Physicist	
	Commercial and R&D Branch	
	Division of Nuclear Materials Safety	
Approved By:	Original Signed By:	7/22/13
	_____	_____
	Judith A. Joustra, Chief	date
	Commercial and R&D Branch	
	Division of Nuclear Materials Safety	

EXECUTIVE SUMMARY

United Technologies Corporation, Pratt & Whitney
NRC Inspection Report No. 040-00791/2012-002

The inspection was limited to review of decommissioning activities of Building 10 at Aircraft Road, Middletown, Connecticut, a location where thorium material was possessed and used under License No. SMB-151 issued to United Technologies Corporation/Pratt & Whitney (UTC Pratt & Whitney). As a result of an amendment request in a letter dated January 20, 2012, from UTC Pratt & Whitney, the NRC learned that activities with licensed radioactive materials in Building 10 ceased in 2000; surveys for residual contamination in Building 10 were performed in July 2000; and Building 10 was demolished in 2004 with much of the debris disposed of in a hazardous material landfill. The scope of the inspection included a review of past actions related to the release and demolition of Building 10, and current activities to demonstrate that the remaining concrete pad from Building 10 was suitable for release for unrestricted use.

Two apparent violations were identified: (1) In July 2000, UTC Pratt & Whitney failed to demonstrate that Building 10 of its Middletown, Connecticut site was acceptable for release for unrestricted use. Specifically, the licensee considered Building 10 of its Middletown, Connecticut site to be acceptable for release for unrestricted use without adequately demonstrating that the residual radioactivity distinguishable from background radiation resulted in a Total Effective Dose Equivalent to an average member of the critical group did not exceed 25 millirem per year, as required in 10 CFR 20.1402. Instead, the licensee conducted a survey of the building and compared the results to previous release criteria that were superseded in 1997 by the requirements in 10 CFR 20.1402; and (2) The licensee disposed of 0.061 to 4.2 microcuries of natural thorium as residual contamination in demolition debris in a manner that did not involve transfer to an authorized recipient or that was otherwise authorized or approved by the Commission or its regulations. Specifically, when Building 10 of its Middletown, Connecticut site was demolished in 2004, the contaminated building material was disposed of by shipping it to a hazardous waste landfill that was not authorized to receive radioactive material. Because the two violations are closely linked, they were considered as a single issue. In addition, the NRC is reviewing if the activities at Building 10 in 2000 were considered to be "decommissioning" as described in 10 CFR 30.36. If so, a separate letter will be issued for a violation of the requirement to complete decommissioning within 24 months, because the report of the results of the survey performed in 2000 was not submitted to the NRC until 2012.

In 2012, based on data from the licensee surveys performed in 2000, NRC staff confirmed that doses to members of the public from residual material sent to the hazardous landfill would be only a few millirem to the most-exposed person. NRC staff also confirmed that the likely dose to persons working in Building 10 after July 2000 was calculated to be consistent with the requirement for release for unrestricted use that dose would not exceed 25 millirem in a year.

REPORT DETAILS

I. Organization and Scope of the Decommissioning Activities

a. Inspection Scope

The inspection was limited to review of decommissioning activities of Building 10 at Aircraft Road, Middletown, Connecticut, a location where thorium material was possessed and used under a license issued to United Technologies Corporation/Pratt & Whitney (UTC Pratt & Whitney). The scope of the inspection included a review of past actions related to the release and demolition of Building 10 and current activities to demonstrate that the remaining concrete pad from Building 10 was suitable for release for unrestricted use. The inspection was performed in order to determine if the decommissioning activities at Building 10 were performed in accordance with NRC regulations.

b. Observations and Findings

In a letter dated January 20, 2012, the licensee requested that their license be amended to remove Building 10 at the Middletown location. As a result of this letter, the NRC learned that: 1) activities with licensed radioactive materials in Building 10 had ceased in 2000; 2) surveys for residual contamination in Building 10 were performed in July 2000 and determined to be suitable for release for unrestricted use by a consultant for the licensee; and 3) as a result of extensive contamination with polychlorinated biphenyl materials (PCBs), Building 10 was demolished in 2004 with much of the debris disposed of in a hazardous material landfill located in Model City, New York. However, the licensee did not submit this information to the NRC until January 2012.

10 CFR 30.36(h) requires, in part, that licensees complete decommissioning within 24 months following the initial of decommissioning. 10 CFR 30.36(j)(2) requires that, as a final step in decommissioning, the licensee shall conduct a radiation survey of the premises where licensed activities were carried out and submit a report of the results of this survey. Although UTC Pratt & Whitney performed surveys of Building 10 in 2000, the report of those surveys was not submitted until 2012, which appears to be an apparent violation of the requirement to complete decommissioning within 24 months. However, the NRC is reviewing if the activities performed in Building 10 would be considered "decommissioning" as described in 10 CFR 30.36. A separate letter will be issued if the NRC determines that a violation of 10 CFR 30.36 occurred.

A licensing action was opened to review the licensee's amendment request, and additional information was requested. The UTC Pratt & Whitney amendment request was of particular concern to the NRC because the licensee used thorium, which can be difficult to demonstrate that residual levels meet the 10 CFR Part 20, Subpart E criteria for release of facilities for unrestricted use. The consultant's survey from July 2000 provided actual results, but compared those results to the NRC's "Guidelines for Decontamination of Facilities and Equipment Prior to Release or Termination of Licenses for Byproduct, Source or Special Nuclear Materials" (Guidelines). Neither the

actual

results of the survey, nor the Guidelines criteria for thorium, clearly demonstrated that the facilities met the current NRC criteria in Subpart E of 10 CFR Part 20. These criteria require that the dose to members of the public from residual contamination does not exceed 25 millirem in a year. In addition, the licensee disposed of the Building 10 debris to a hazardous materials landfill, because of the PCB contamination, although some of this building debris contained residual contamination from activities with thorium. These issues are discussed in Section II of this report. As part of the license amendment process, the licensee performed an assessment of the dose from the total activity of thorium disposed of with the PCB-contaminated materials, and developed a final status survey plan for the unrestricted release of the remaining concrete pad.

The inspection was opened in order to observe current activities at the Building 10 concrete pad, as well as to determine if past actions were performed in accordance with NRC regulations. The inspector reviewed documents submitted during the amendment process, and NRC records of licensing and inspection of activities in Building 10.

The inspector discussed decommissioning activities for the former Building 10 location with licensee representatives during a site visit to the Middletown location on August 8, 2012, and during subsequent telephone discussions. Preliminary results of the surveys of the remaining concrete pad were provided to the inspector on December 17, 2012, and discussed with licensee representatives on January 20, 2013.

c. Conclusions

The licensee ceased performing licensed activities in Building 10 in July 2000, and performed radiological surveys in August 2000 to determine that Building 10 was suitable for release. The licensee demolished Building 10 in 2004, but did not submit the certification of disposition of materials, or the results of the August 2000 surveys until January 2012. The NRC is reviewing if the activities at Building 10 in 2000 were considered to be "decommissioning" as described in 10 CFR 30.36. If so, a separate letter will be issued for a violation of the requirement to complete decommissioning within 24 months, because the report of the results of the survey performed in 2000 was not submitted to the NRC until 2012.

II. Dose Assessment for Building 10 Residual Contamination and Disposal

a. Inspection Scope

The scope of this inspection included a review of results of radiological surveys performed of Building 10, the PCB remediation activities for Building 10, and the licensee's evaluation of doses from disposal of residual radioactivity in Building 10. Staff members from the NRC Division of Waste Management and Environmental Protection (DWMEP) provided assistance in the dose assessment evaluation.

b. Observations and Findings

In addition to NRC licensing and inspection records, the inspector reviewed the following licensee documents: (1) :Final Radiological Status Report, Pratt & Whitney, Middletown

Facilities Building 10" dated August 9, 2000 (RSA-2000) [ML12025A297], and (2) the letter dated July 18, 2012 and the enclosed Decommissioning Plan for Building 10 [ML12213A111]. These documents were provided to NRC DWMEP staff for evaluation of the licensee's dose assessment for the disposal of building debris, and independent verification of doses to members of the public from the residual thorium on material sent for disposal to a hazardous material landfill during PCB remediation and demolition of Building 10.

Building 10 covered an area of about 5 acres, with licensed activities taking place in 14 discrete locations inside the building. These locations were relatively small, each measuring approximately 25 feet by 39 feet, except one location which was approximately 39 feet by 39 feet. Based on licensee statements and review of NRC inspection documents, the only radioactive material used in Building 10 consisted of pre-fabricated parts made of nickel-thorium alloy for use in aircraft engines. Minor machining of the pre-fabricated parts was performed, such as drilling, grinding, and deburring. Based on the results of the surveys performed in 2000, residual contamination was limited to the wood block flooring in several of the 14 areas where thorium was used, assuming that all alpha activity detected was from thorium. The licensee consultant calculated that the amount of residual thorium material contained in the Building 10 demolition debris, that was disposed of to the hazardous materials landfill because of the debris contained high levels of PCBs, was 0.061 microcuries of thorium based on the best estimate of actual residual material, or 4.2 microcuries of natural thorium assuming that all 14 areas contained residual material at the highest survey result (worst-case amount). The licensee's health physics consultant used the computer code, "RESRAD" version 6.5 (RESRAD) to determine the dose to an industrial worker from the residual contamination. The licensee determined the dose to be 0.4 to 1.1 millirem per year depending on whether input was based on their calculation of the actual amount of residual material, or the amount calculated from the worst-case amount of residual material.

The NRC staff concluded that the licensee's modeling performed for the industrial worker scenario was appropriate, and that the dose modeling completed was reasonable and appropriate for the exposure scenario under consideration. The NRC staff used RESRAD to evaluate additional scenarios for various members of the public involved in handling the disposal to a landfill of the debris containing residual thorium (landfill worker, transportation worker, and intruder into the landfill) as well as to a resident farmer. NRC staff determined that the calculated dose from these scenarios was comparable to the dose calculated by the licensee for the industrial worker. Based on the dose modeling analyses submitted by the licensee and independent analyses performed by the NRC staff, the NRC staff concluded that the potential dose from the disposal of this wood block flooring material is in the "few millirem" range that is consistent with disposals approved under 10 CFR 20.2002.

The NRC staff further evaluated the dose to persons continuing to work in Building 10 after 2000. NRC staff used the computer code "RESRAD-BUILD" and the licensee's results of surveys for residual contamination performed in 2000. The NRC staff concluded that credible doses were consistent with the current NRC criteria for release for unrestricted use of 25 millirem in a year, as required by Subpart E of 10 CFR Part 20.

The disposal of licensed radioactive material to the hazardous waste landfill is a violation of NRC regulations because it was not a method authorized by the NRC regulations. An unauthorized disposal of licensed material would be considered as a loss of material, and could be required to be reported to the NRC pursuant to 10 CFR 20.2201 if the amount lost exceeds 10 times the quantity listed in Appendix C. For natural thorium, the 10 CFR 20 Appendix C quantity is 100 microcuries of thorium, and therefore the loss of material from the UTC Pratt & Whitney license would not be required to be reported to the NRC. The NRC staff notified the state in which the hazardous materials landfill was located.

The licensee's failure, in July 2000, to demonstrate that Building 10 of its Middletown, Connecticut site was acceptable for release for unrestricted use is a violation of NRC regulations. Specifically, UTC Pratt & Whitney conducted a survey of the building and compared the results to release criteria that were superseded in 1997 by the requirements in 10 CFR 20.1402. Based on the comparison to the superseded release criteria, the licensee considered Building 10 to be released for unrestricted use. Although the NRC, in January 2013, independently analyzed the licensee's 2000 survey results and concluded that the building material likely did meet the criteria in 10 CFR 20.1402, the licensee did not, itself, demonstrate that the proper criteria were met.

c. Conclusions

Two apparent violations were identified: (1) the failure of the licensee to demonstrate if the residual contamination in Building 10 would result in doses of 25 millirem or less to persons continuing to work in the building; and (2) the unauthorized disposal of licensed material resulting in the loss of licensed material. Specifically, the licensee disposed of 0.061 to 4.2 microcuries of natural thorium as residual contamination contained in demolition debris from the UTC Pratt & Whitney Building 10, when the demolition debris containing PCBs was sent to a hazardous materials landfill. Independent evaluations performed by NRC staff determined that dose to persons working in Building 10 after July 2000 would be consistent with the 25 millirem in a year requirement for release for unrestricted use, and dose to members of the public from residual material sent to the hazardous landfill would be only a few millirem to the most-exposed person.

III. Final Status Surveys of the Building 10 Pad

a. Inspection Scope

The scope of the inspection included observation of the implementation of the licensee's decommissioning plan for the Building 10 concrete pad on August 8, 2012, review of preliminary results of the surveys provided December 17, 2012, and discussions with licensee representatives.

b. Observations and Findings

The licensee performed the decommissioning surveys of the Building 10 concrete pad in

order to confirm that residual thorium material did not migrate to the pad from licensed

activities prior to July 2000 in Building 10 or from the Building 10 demolition in 2004. The licensee contracted with a health physics consultant company to develop the survey plan and to perform the decommissioning surveys. The survey plan was submitted to the NRC for review in July 2012 as a license amendment request. The surveys took place over a two-week period at the end of July through the beginning of August in 2012.

The planned schedule for the various surveys altered during implementation, because rain and excessive heat limited when surveys could be performed. In accordance with the survey plan, the licensee intended to demonstrate that the concrete pad met the criteria in Subpart E of 10 CFR Part 20 for release for unrestricted use, using the NRC screening value for thorium and the Multi-Agency Survey and Site Investigation Manual (MARSSIM) methodology. The licensee designed a scoping survey that would meet the requirements of a final status survey unless unexpected radioactive contamination levels were identified.

The inspector visited the site on August 8, 2012. The inspector walked over the concrete pad and observed that the survey units were as described in the survey plan. Consultant representatives described the implementation of the selection of survey points as described in the plan and showed where the sampling locations were marked on the concrete pad and how they were reported in records. The inspector observed health physicists perform static surveys of the concrete pad to assess total residual contamination. The instrumentation used was as described in the licensee's survey plan. The inspector observed health physicists perform operational checks of the instruments before and after use, perform static surveys, and record data during the inspection. The inspector reviewed daily records of instrument checks performed by the health physicists, and instrument calibration records including the health physicists' calculation of the minimum detectable activity for each survey instrument used and the actual count time required for surveys using each instrument. The inspector observed the materials used for performing surveys of removable residual contamination, although those surveys were not performed on the day of the site inspection.

Preliminary results of the surveys were provided to the inspector on December 17, 2012, for review. The preliminary results were discussed during a telephone conference call on January 7, 2012, with licensee and consultant representatives. The evaluation of these survey results indicated that no residual contamination remained from licensed activities. The final report of the decommissioning surveys of the Building 10 concrete pad was submitted in February 2013 with a letter requesting release of the Building 10 concrete pad for unrestricted use and removal of the Middletown site from the license.

c. Conclusions

The licensee implemented the plan for decommissioning surveys of the Building 10 concrete pad as described in the plan submitted as an amendment to the NRC license. No violations were identified.

IV. Exit Meeting

The inspector met with licensee representatives and consultant representatives at the

conclusion of the site inspection on August 8, 2012, to review the activities performed by

the inspector that day and reviewed the licensee's plans for completion of the survey and submission of survey results. At that time, the inspector also discussed the continuing review of the doses from the disposal of the Building 10 demolition debris containing residual thorium activity. On February 12, 2013, following review of the licensee's preliminary results and completion of NRC dose assessments related to Building 10, the inspector discussed the results of the inspection with licensee and consultant representatives during a telephone conversation.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

David J. Alberghini, Site Manager, Environment, Health & Safety, UTC Pratt & Whitney
Sandy Soucy, Radiation Safety Officer,
and Senior Environment, Health and Safety Specialist, UTC Pratt & Whitney
K. Paul Steinmeyer, Senior Health Physicist, Radiation Safety Associates, Inc.
Kurt Newton, Health Physicist, Radiation Safety Associates, Inc.

SUPPLEMENTAL INFORMATION

None.

INSPECTION PROCEDURES USED

87104, Decommissioning Inspection Procedure for Materials Licensees

ITEMS OPEN, CLOSED, AND DISCUSSED

Discussion – Potential violation of a requirement to complete decommissioning within 24 months, pursuant to 10 CFR 30.36(h) and (j). This item is still under review by the NRC.

Open - Apparent violation for the loss of material by disposal to a hazardous materials landfill, pursuant to 110 CFR 20.

Open - Apparent violation for the failure to demonstrate that residual contamination levels in Building 10 met the 10 CFR Part 20 Subpart E criteria for release for unrestricted use.

LIST OF DOCUMENTS REVIEWED

1. Final Radiological Status Report, Pratt & Whitney, Middletown Facilities Building 10” dated August 9, 2000 (RSA-2000) [ML12025A297]
2. Letter dated July 18, 2012 and the enclosed Decommissioning Plan for Building 10 [ML12213A111]
3. Response To Technical Assistance Request Dated August 28, 2012, For The Review Of A Dose Assessment For The Disposal Of Flooring Material From The Pratt & Whitney Site In Middletown, CT. [ML12305A144]

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
DWMEP	Division of Waste Management and Environmental Protection
NRC	Nuclear Regulatory Commission
PCB	polychlorinated biphenyl
UTC	United Technologies Corporation