



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

May 21, 2013

Docket No. 99990001

General Licensee

James A. Portley, P.E.
Town of Guilford
Engineering Department
50 Boston Street
Guilford, CT 06437

SUBJECT: NRC INSPECTION REPORT NO. 99990001/2013002, TOWN OF GUILFORD,
GUILFORD, CONNECTICUT SITE

Dear Mr. Portley:

On April 2, 2013, Steven Courtemanche and John Miller of this office conducted a safety inspection at the Town of Guilford Transfer Station located at 1900 Boston Post Road, Guilford, Connecticut of activities authorized by an NRC general license under 10 CFR 31.12(a)(2). On April 24 and 30, 2013, you provided additional information by telephone on your efforts to transfer licensed material to an authorized radioactive materials waste broker. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with you by telephone at the conclusion of the inspection. The enclosed report presents the results of this inspection.

Within the scope of this inspection, no violations were identified.

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 will 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.

J. Portley

2

No reply to this letter is required. Please contact Steven Courtemanche at (610) 337-5075 if you have any questions regarding this matter.

Your cooperation with us is appreciated.

Sincerely,

Original signed by Judith A. Joustra

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

Enclosure:
Inspection Report No. 99990001/2013-002

cc:
State of Connecticut

J. Portley

2

No reply to this letter is required. Please contact Steven Courtemanche at (610) 337-5075 if you have any questions regarding this matter.

Your cooperation with us is appreciated.

Sincerely,

Original signed by Judith A. Joustra

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

Enclosure:
Inspection Report No. 99990001/2013-002

cc:
State of Connecticut

DOCUMENT NAME: G:\WordDocs\Current\Insp Letter\GuilfordTSGL.docx

ML13142A056

SUNSI Review Complete: SCourtemanche

After declaring this document "An Official Agency Record" it will be released to the Public.

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI		DNMS/RI		
NAME	SCourtemanche/src		JMiller/jm		JJoustra/jj		
DATE	05/21/2013		05/21/2013		05/21/2013		

OFFICIAL RECORD COPY

EXECUTIVE SUMMARY

Town of Guilford
NRC Inspection Report No. 99990001/2013002

On March 2, 2013, a 70-cubic-yard metal shipping container filled with metal scrap from the Guilford, Connecticut (CT) Transfer Station triggered the radiation alarms of Sims Metal Management, North Haven, CT, a metal recycling operation. A representative of the CT Department of Energy & Environmental Protection (DEEP), a radiation control physicist, responded on March 4, 2013, and determined that the radioactive material was radium-226 (Ra-226) by analyzing the radiation spectrum of the radioisotope in the shipping container. The shipping container was returned to the Guilford Transfer Station and the scrap was segregated, under the direction of the radiation control physicist, from the radioactive waste. The radioactive waste consisted of 140 watches and watch parts containing Ra-226. The radiation control physicist identified the watches and watch parts containing Radium-226 (Ra-226) by using a Ludlum Model 3 radiation detection instrument fitted with a Model 44-2 sodium iodide (NaI) probe. The above radiation detection instrument was used by the radiation control physicist to determine that the inside of the shipping container was not contaminated with Ra-226. The radiation control physicist notified the Nuclear Regulatory Commission (NRC) Region I office by telephone of the event on March 4, 2013. On April 2, 2013, inspectors from the NRC visited the Guilford Transfer Station to obtain information on how radioactive material was being secured and how radioactive waste was to be transferred. The inspectors informed the town engineer, who represented the Guilford Transfer Station and the town of Guilford, CT, that upon agreeing to take possession of the watches and watch parts containing Ra-226 and agreeing to dispose of the watches and watch parts, Guilford Transfer Station and the town of Guilford became general licensees of the NRC in accordance with Title 10 of the *Code of Federal Regulations* (CFR) 31.12(a)(2). On April 29, 2013, the radioactive waste was transferred to Chase Environmental, Inc., a licensed radioactive materials waste broker, who packaged the radioactive waste for disposal in a radioactive materials landfill.

REPORT DETAILS

1. Event of March 2, 2013

On March 2, 2013, a shipment of metal scrap from the Guilford, CT Transfer Station contained in a 70-cubic-yard steel shipping container caused the radiation alarms at Sims Metal Management, North Haven, CT, a metal scrap dealer, to alarm. A radiation control physicist from the CT DEEP responded to the event on March 4, 2013, and determined that the radioactive material within the shipping container was radium-226 (Ra-226) by analyzing the radiation spectrum of the radioisotope in the shipping container. The shipping container was returned to the Guilford Transfer Station and the scrap was removed from the shipping container. The radiation control physicist surveyed the empty shipping container with a Ludlum Model 3 equipped with a Model 44-2 NaI probe for contamination. No contamination or scrap containing radioactive material was detected. The scrap was segregated and the radioactive material was identified using the Ludlum Model 3 as Ra-226 paint on watch dial faces and parts. The radiation control physicist identified 300 to 400 watches and watch parts of which 140 were determined to have Ra-226 paint. The watches and watch parts were placed in a container which personnel from the Guilford Transfer Station secured. A warning label was affixed to the container indicating that the container was filled with radioactive material. The radiation control physicist measured the radiation dose rate at the surface of the container and determined it to be 30 microrem per hour (uR/hr). The radiation control physicist called the NRC Region I office on March 4, 2013, to inform the NRC of the above event.

2. NRC Site Visit – April 2, 2013

On April 2, 2013, Steven Courtemanche and John Miller of the NRC Region I office inspected the Guilford Transfer Station and interviewed personnel about the March 2, 2013, event. The inspectors noted that a plastic bucket was used to store the watches and watch parts with Ra-226 paint in a building on the Guilford Transfer Station property. The bucket was sealed with duct tape and the package was labeled with a "Caution – Radioactive Materials" sign in accordance with 10 CFR 20.1904. Personnel from the Guilford Transfer Station stated to the inspectors that licensed material was secured during hours of operation by having personnel in or near the building during times the transfer station was open. They also stated that the building was locked when the transfer station was closed. The inspectors made radiation level measurements at the radioactive materials storage container's surface, at the chair where Guilford Transfer Station personnel would sit and in the adjacent lavatory with a Bicon Microrem meter, serial number 33431, calibrated December 17, 2012. The radiation levels at the package surface were determined to be 100 Microrem per hours (uR/hr) and the radiation levels at the chair and in the lavatory did not exceed background radiation levels of 5 uR/hr.

The inspectors interviewed personnel from the Guilford Transfer Station to attempt to identify the individual who had disposed of the watches and watch parts. The transfer station is not set up with radiation detection monitors nor do personnel have hand-held radiation detection instruments. Therefore, personnel would not be able to identify instances where radioactive material was placed in the station's scrap receptacles. The transfer station was also not set up with closed-circuit television so there was no record of vehicles entering the facility, leaving the facility, or of individuals placing recyclables in the various containers. The town engineer for the town of Guilford stated to the inspectors that personnel at the transfer station did not recall anyone placing watches and watch parts in the metal recyclable container. Based on the information provided by the licensee, the inspectors determined that it would not be possible to determine who placed the watches and watch parts in the scrap metal recyclables container.

The town engineer indicated to the inspectors that he had received a quote from one radioactive materials waste broker and wanted to know how he could obtain competitive bids. The inspectors suggested the town engineer contact the Health Physics Society local chapter and provided the names of some NRC licensees who were known to use radioactive materials waste brokers.

No safety concerns or violations of regulatory requirements were identified.

3. Status Updates of April 24 and 30, 2013

The town engineer called on April 24, 2013, and spoke with Mr. Courtemanche of the Region I office about the progress being made toward disposing of the watches and watch parts. The town engineer stated that the town of Guilford's Board of Selectmen chose Chase Environmental to package and dispose of the watches and watch parts containing Ra-226. A representative from Chase Environmental would be contacted and a date set up for them to perform the work.

The town engineer called on April 30, 2013, and spoke with Mr. Courtemanche about the licensee's disposal of the watches and watch parts. He stated that a representative of Chase Environmental had been on-site on April 29, 2013, had packaged the Ra-226 watches and watch parts for shipment, and had taken possession of them. The package containing the Ra-226 watches and watch parts is to be disposed of in a radioactive materials landfill. A copy of the shipping papers was provided by e-mail to Mr. Courtemanche, closing out the inspection.

No safety concerns or violations of regulatory requirements were identified.

4. Exit Meeting

On April 30, 2013, by telephone, the inspector informed the town engineer that, with the transfer of the Ra-226 watches and watch parts to an authorized waste broker, the inspection was closed. No safety concerns or violations of regulations were identified.

ATTACHMENT: SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

James Portley, P.E., Town Engineer
Francis Cole, Guilford Transfer Station
Daren Strickland, Radiation Control Physicist, CT DEEP

INSPECTION PROCEDURES USED

87103

LIST OF DOCUMENTS REVIEWED

Radioactive Waste Manifest Number TO-2013-128 dated April 29, 2013

LIST OF ACRONYMS USED

CFR – Code of Federal Regulations
CT – Connecticut
DEEP – Department of Energy & Environmental Protection
NaI – Sodium Iodide
No. – Number
NRC – Nuclear Regulatory Commission
R&D – Research and Development
Ra-226 – Radium-226
U.S. – United States
ur/hr – Microrem per hour