

<u>SUBJECT</u>		<u>DATE</u>
1394. RCRA Empty vs. DOT Empty	ENCORE	JUL 30, 2020
1395. RCRA Empty vs. DOT Empty II	ENCORE	AUG 6, 2020
1396. Empty Containers and the "Empty" Label	ENCORE	AUG 13, 2020
1397. Exceptions to Free Liquids in Landfills Prohibition	ENCORE	AUG 20, 2020
1398. Dust Suppression in Landfills with Nonhazardous Liquids	ENCORE	AUG 27, 2020
1399. Treated Hazardous Wastes Used as Dust Suppressant	ENCORE	SEP 3, 2020
1400. Regulatory Status of Used Oil Mixed with Diesel Fuel	ENCORE	SEP 10, 2020
1401. RCRA Liquids, Free Liquids, and Releasable Liquids	ENCORE	SEP 17, 2020
1402. Available Regulatory Relief from Underlying Hazardous Constituent (UHC) Requirements	ENCORE	SEP 24, 2020
1403. Smoke Detector Disposal and the NRC	ENCORE	OCT 1, 2020

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TWO MINUTE TRAINING

TO: CH2M HILL PLATEAU REMEDIATION COMPANY

FROM: PAUL W. MARTIN, RCRA Subject Matter Expert
CHPRC Environmental Protection, Hanford, WA

SUBJECT: SMOKE DETECTOR DISPOSAL AND THE NRC

DATE: OCTOBER 1, 2020

<u>CHPRC Projects</u>	<u>CH PRC - Env. Protection</u>	<u>MSA</u>	<u>Hanford Laboratories</u>	<u>Other Hanford Contractors</u>	<u>Other Hanford Contractors</u>
Richard Austin Tania Bates Rene Catlow Richard Clinton Larry Cole Laura Cusack Stuart Hildreth Stephanie Johansen Sasa Kosjerina Richard Lipinski Stuart Mortensen Dave Richards Dave Shea Phil Sheely Connie Simiele Jeff Westcott	Jeff Bramson Bob Bullock Frank Carleo Danielle Collins Bill Cox Jeanne Elkins Ryan Fisher Jonathan Fullmer Barry Lawrence Diane Leist Mitch Marrott Stewart McMahand Brian Mitcheltree Anthony Nagel Linda Petersen Sean Sexton Kat Thompson Wayne Toebe Daniel Turlington	Brett Barnes Michael Carlson Mike Demiter Kip George Jerry Cammann Jeff Ehlis Garin Erickson Panfilo Gonzalez Jr. Dashia Huff Mark Kamberg Jon McKibben Saul Martinez Matt Mills Carly Nelson Michelle Oates Eric Pennala Jon Perry Christina Robison Christian Seavoy David Shaw John Skoglie Lana Strickling Greg Sullivan	(TBD) <u>DOE RL, ORP, WIPP</u> Mary Beth Burandt Duane Carter Al Farabee Tony McKarns	Bill Bachmann Dean Baker Scott Baker Lucinda Borneman Paul Crane Tina Crane Ron Del Mar John Dorian Mark Ellefson Darrin Faulk Rob Gregory James Hamilton Andy Hobbs Ryan Johnson Megan Lerchen Mike Lowery Michael Madison Terri Mars Cary Martin Grant McCalmant Steve Metzger Tony Miskho Tom Moon Chuck Mulkey Kirk Peterson	Dan Saueressig Joelle Moss Glen Triner Greg Varljen Julie Waddoups Jay Warwick Ted Wooley

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TWO MINUTE TRAINING

SUBJECT: Smoke Detector Disposal and the NRC

Q: A customer has assorted aging American-made (domestic) smoke detectors that are destined for replacement. What disposal options are available to the customer for smoke detectors that contain a radioactive source such as americium?

A: Per a Nuclear Regulatory Commission (NRC) letter, domestically manufactured smoke detectors do not require an NRC license and are considered exempt items as described at [10 CFR 30.20](#). These exempt items may be disposed of as ordinary trash. The letter also discusses imported smoke detectors and states that owner must return these smoke detectors to the manufacturer.

Owners should note that even though disposal as ordinary trash is a compliant disposal option for domestically manufactured smoke detectors - it still might not be a viable disposal option. A facility's waste destined for a municipal landfill as ordinary trash, could be radioactively screened for prohibited items. If the landfill identified any waste items as "radioactive", the public reaction and the political "fallout" could be significant.

Therefore, the customer has three options for disposal of domestic smoke detectors:

- Return discarded smoke detectors to the manufacturer, or
- Dispose in a permitted low level radioactive landfill, or
- Dispose as ordinary trash.

SUMMARY:

- Discarded smoke detectors (American) are NRC exempt and should be disposed:
 - ▶ By returning to the manufacturer, or
 - ▶ As low level radioactive waste, or
 - ▶ As ordinary trash.

The NRC memo, 10 CFR 30.20, and a list of manufacturer take-back programs are attached to the e-mail. If you have any questions, please contact me at [Paul W Martin@rl.gov](mailto:Paul_W_Martin@rl.gov) or at (509) 376-6620.

FROM: Paul W. Martin

DATE: 10/1/2020

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TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: Smoke Detector Disposal and the NRC

Disposal Requirements for Specific and Exempt Licensed Smoke Detectors

[HPPOS-150](#)

PDR-9111220094

October 16, 2017

Title: Disposal Requirements for Specific and Exempt Licensed Smoke Detectors

See letter ([Record #150](#)) from J. W. N. Hickey to D. L. Tremblay (Simplex Time Recorder Company), 10/5/81.

Imported smoke detectors possessed under a specific license must be returned to the manufacturer. A licensee who possesses detectors distributed as exempt items is exempt from regulatory requirements regarding the smoke detectors, and they may be disposed of as ordinary trash.

Your letter to General Counsel dated September 8, 1981 has been referred to the Division of Fuel Cycle and Material Safety. In our telephone conversation, you explained that your company possesses two types of smoke detectors: those imported, possessed, and distributed in accordance with NRC License Nos. 20-17584-01 and 20-17584-02E, and those obtained from an American manufacturer as exempt units.

We agreed that the imported detectors must be returned to the manufacturer in accordance with your licenses, and that your letter concerns the domestic units. To the extent that you possess domestic smoke detectors distributed as exempt units, you are exempt from any regulatory requirements. Therefore, you may dispose of these units as ordinary trash.

Regulatory references: 10 CFR 30.20, 10 CFR 32.26

Subject codes: 3.3, 9.0

10 CFR 30.20 Gas and aerosol detectors containing byproduct material.

(a) Except for persons who manufacture, process, produce, or initially transfer for sale or distribution gas and aerosol detectors containing byproduct material, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 19, 20, 21, and 30 through 36 and 39 of this chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires byproduct material in gas and aerosol detectors designed to protect health, safety, or property, and manufactured, processed, produced, or initially transferred in accordance with a specific license issued under § 32.26 of this chapter, which license authorizes the initial transfer of the product for use under this section. This exemption also covers gas and aerosol detectors manufactured or distributed before November 30, 2007, in accordance with a specific license issued by a State under comparable provisions to § 32.26 of this chapter authorizing distribution to persons exempt from regulatory requirements.

(b) Any person who desires to manufacture, process, or produce gas and aerosol detectors containing byproduct material, or to initially transfer such products for use under paragraph (a) of this section, should apply for a license under § 32.26 of this chapter and for a certificate of registration in accordance with § 32.210 of this chapter.

[77 FR 43689, July 25, 2012]

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TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: Smoke Detector Disposal and the NRC

[Benton County, Washington - Smoke Detectors](#)

There are two common types of smoke detector: ionization and photoelectric.* Photoelectric smoke detectors contain no radioactive components and can be disposed of in regular household waste without condition. Ionization smoke detectors operate by using a very minute amount of the radioactive isotope americium-241 (Am-241) to detect particles in the air.** While the Nuclear Regulatory Commission permits the disposal of these smoke detectors in regular household waste, there are take-back programs offered by manufacturers. Please see the listings below for more information on the various take-back programs.

<p><u>American Sensors/Dicon Global</u> 800-387-4219 Call to receive a number and return information. Accepts American Sensors/Dicon Global brands only.</p>	<p><u>Kidde</u> 800-880-6788 x1 1016 Corporate Park Dr Mebane, NC 27302 Accepts Kidde brand only.</p>
<p><u>Firex</u> 800-445-8299 Firex c/o Disposal 28C Leigh Fisher Blvd El Paso, TX 79906 http://www.firexsafety.com</p>	<p><u>Sears</u> 509-736-5630 Call Sears for take-back information.</p>
<p><u>First Alert/BRK</u> 800-323-9005 x2 Customer Service Department 3920 Enterprise Ct Aurora, IL 60504 Accepts up to four (4) devices of the First Alert/BRK brand at a time. Call ahead for mailing instructions.</p>	<p><u>System Sensors</u> 800-736-7672 x1 Call to receive a reference # and return information. Accepts System Sensor brand only. Asking for payment of \$3.00 per unit for recycling costs.</p>
<p><u>GE Security/ESL</u> 888-437-3287 12345 SW Levetan Dr Tualatin, OR 97062 Accepts GE Security/ESL brands only</p>	<p><u>USI Electric/Universal</u> 800-390-4321 x1 Attn: Disposal Department 7A Gwynns Mill Ct Owings Mills, MD 21117</p>
<p><u>Honeywell Inc.</u> 800-328-5111 Returned Goods Dock 4-MN10-3860 1985 Douglas Dr N Golden Valley, MN 55422 http://www.eccustomercaare.com Honeywell brands only.</p>	<p>Return only detectors that say "ionization" on the back. Enclose a note stating that the detector is being returned for recycling. Accepts USI Electric/Universal brands only.</p>

*By law, smoke detectors with Am-241 are required to have warning labels on them. This label is usually located on the back of the unit, on the mounting surface. The label will either be a printed warning or have the universal radiation symbol. If there is evidence that a label has been damaged or removed from the back of a unit, manage the unit as an ionization smoke detector.

**Please note that the amount of Am-241 is very small (one gram can be used to produce over three million smoke detectors) and that the radiation emitted is much lower than the background radiation you are exposed to every day. The risk posed by fire is much greater than the risk posed by the smoke detector. In order to provide further protection, however, it is recommended that you do not disassemble an ionization smoke detector.

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