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HOSPITAL WASTE MANAGEMENT

P. W. GROSSER CONSULTING, Inc.

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Special points of interest:

- **King County's Program to Deal with Household Pharmaceutical Waste**
- **Reporting Greenhouse Gas Emissions: You May be Subject**

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Hospital Waste

King County's Secure Medicine Return Program

For years various healthcare parties have struggled to identify a useful, protected, secure and legally-defensible program to accept unwanted pharmaceuticals from the public. There has been unrelenting pressure from the public for such a program, but the liability for the host party has always been a frightening concern.

King County has developed a program—Secure Medicine Return—to address these concerns. The program has been blessed by Washington Ecology and only King County has such a program in place.

A number of businesses including QFC, UW Medicine, Kaiser Permanente, Costco and some smaller pharmacies have adopted the program. There is no cost to the public. The lockboxes will accept most prescription and over-the-counter medicines.

Dr. Jeff Duchin, King County Public Health - *Photo used with permission*

What is accepted includes medicines sold in any form, prescription (legacy) medicine, OTC, controlled substances and pet medications. They should be in their original containers or in a ZipLok bag.

What is not accepted includes herbal remedies, vitamins, cosmetics, personal care products, compressed cylinders, aerosols, inhalers, medical devices, pet pesticide products, sharps, illicit drugs, any iodine-containing products, and medicines from businesses.

There are mail-back envelopes available for the disabled to return their unwanted medicines.

Lockboxes must be available to the public, but under the supervision of the host business. Third party vendors handle the disposal of the waste and the business never at any time assumes ownership of the waste.

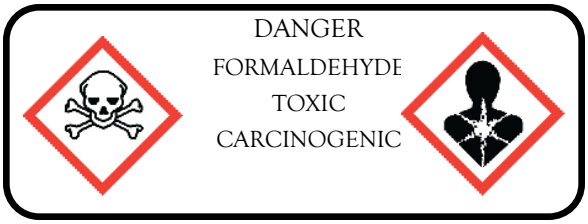
Pharmaceutical waste from the public, when managed under this program, is household hazardous waste (HHW). The Secure Medicine Return program is overseen by Public Health—Seattle & King County and the Local Hazardous Waste Management Program in King County.

More information is available at https://kingcountysecuremedicinereturn.org.

Managing Formalin: What You Need to Know

Formalin is a toxic carcinogen and managing its use means more than simply alerting your staff to that fact. Washington Labor & Industries has an entire rule on just formaldehyde solutions—WAC 296-856.

Wherever you store formalin you should have a sign on the door or cabinet similar to that shown here.



The adoption of the Globally Harmonized System (GHS) resulted in signage changes, including formaldehyde. Not only language, but GHS pictograms must be displayed.

L&I also requires that the employer conduct baseline exposure monitoring for formaldehyde fumes. L&I inspectors use real-time instruments to check exposure levels where formalin is used.

Employees must be trained initially and annually in the hazards presented by formalin if it might result in exposures greater than 0.1 ppm. Training should discuss hazards, symptoms of exposure, the purpose of medical evaluations, safe work practices, PPE and managing spills. This training is typically 1 hour.

Formalin is one of the most commonly spilled hazardous materials in healthcare. L&I regards spills of less than 8 ounces of 10% buffered formalin as *incidental spills*. Persons with knowledge of the hazardous presented by formaldehyde who have access to appropriate PPE can clean up these spills. Spills of formalin larger than 8 ounces should only be cleaned up by persons with 8-hour First Responder / Operations Level (FR/OL) training to the competencies described in L&I's *Emergency Response Standard* (WAC 296-824).

If your caregiver staff need formaldehyde hazard training or your Code Orange team members need FR/OL training to comply with Washington State law, contact us at P.W. Grosser Consulting: Alan Jones at (425) 883-0405 or ajones@pwgrosser.com/

What is an SPCC Plan and Do You Need One?

A Spill Prevention, Control & Countermeasure (SPCC) Plan is required by state and federal law if:

1. Your facility stores more than 42,000 gallons of diesel (10,000 lbs) in USTs or more than 1,320 gallons of diesel in ASTs, and

2. There is any possibility that a leak, overfill, rupture or tank failure could result in that fuel contaminating any nearby surface waters (a storm drain that daylights onto a creek or river would qualify).

The applicable federal guideline is 40 CFR §112.7. EPA Region X inspectors do randomly monitor facilities for SPCC plans and failure to have one could result in a fine.

An SPCC Plan provides protocols for your staff to observe tank filling, sump maintenance and leak alarm systems and to respond to and clean up petroleum releases.

All heating oil tanks, whether commercial or residential, are exempt (owners must have spill insurance and regularly test and monitor for releases). Only Emergency Power Generator tank owners must prepare an SPCC if they qualify. Call us if you need assistance in preparing an SPCC Plan!

Is Your Facility Subject to Reporting Greenhouse Gas Emissions?

The federal greenhouse gas (GHG) reporting rule, 40 CFR 98, is often overlooked by facilities that are not categorically subject (i.e. petroleum refineries, cement production facilities, etc). GHG emissions result from various industrial and chemical processes. Carbon dioxide (CO_2), methane (CH_4), and nitrogen oxide (N_2O) are GHGs released during the burning of fuel.

For healthcare facilities, GHG emission sources subject to the rule will include but are not limited to boilers, process heaters and combined heat power units. [Note: emergency generators as defined by 40 CFR 98.6 are excluded: *Emergency generator means a stationary combustion device, such as a reciprocating internal combustion engine or turbine that serves solely as a secondary source of mechanical or electrical power whenever the primary energy supply is disrupted or discontinued during power outages or natural disasters that are beyond the control of the owner or operator of a facility. An emergency generator operates only during emergency situations, for training of personnel under simulated emergency conditions, as part of emergency demand response procedures, or for standard performance testing procedures as required by law or by the generator manufacturer. A generator that serves as a back-up power source under conditions of load shedding, peak shaving, power interruptions pursuant to an interruptible power service agreement, or scheduled facility maintenance shall not be considered an emergency generator.*]

Subpart C under 40 CFR 98 covers general stationary combustion sources such as boilers and generators. The rule states that for subject stationary sources having an aggregate maximum heat input capacity of 30 mmBTU/hr or more, the facility is required to evaluate if GHG emissions exceed 25 metric tons of carbon dioxide equivalents (CO_{2e}). If this threshold is exceeded, reporting to the EPA is required. Note that each greenhouse gas is measured in units of mass and then converted to CO_{2e} by multiplying by the gas's global warming potential (GWP).

The WA Department of Ecology (DOE) promulgated more stringent regulations and requires facilities that emit greater than 10,000 metric tons to report. The first reporting period was conducted in 2013 for 2012 calendar year emissions. Should a facility in WA State be subject to federal reporting, (i.e., greater than 25 metric tons of CO_{2e}) the facility must report to the EPA also as well as DOE. A facility that emits between 10,000 and 25,000 metric tons need only to report to DOE. Calculating thresholds must be performed per WAC173-441-120.

As a point of reference, should a facility have boilers that in aggregate have a design heat capacity over 30mmBTU/hr and burn over the course of the year approximately 185,000,000 scf, of gas then the facility would need to report to the DOE only as emissions would exceed 10,000 metric tons of CO_{2e} but be below 25,000 metric tons CO_{2e}. This equates to approximately 506,849 scf or ~ 5,000 therms a day.

Should a larger facility annually burn 455,000,000 scf and 50,000 gallons of fuel oil then the facility would report to EPA and DOE as the GHG emissions would exceed 25,000 metric tons CO_{2e}.

Voluntary reporting (GHG emissions below 10,000 metric tons CO_{2e}) may also be performed per WAC 173-441-030(4).

If you need help, call us!

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Hazardous Materials Are Not Hazardous Waste

To many persons the terms *hazardous materials* and *hazardous waste* are synonymous. They are not.

Hazardous materials are raw materials or products that you may use at your facility which pose hazards to worker safety. Nationally, OSHA oversees the rules that govern the management of hazardous materials. In Washington the Department of Labor & Industries does the same. Healthcare hazardous materials include alcohol wipes, aerosol solvents, formalin, hand sanitizer and iodine disinfectants.

Hazardous waste is reserved for materials with very specific criteria spelled out in the federal Resource, Conservation & Recovery Act (RCRA). Hazardous waste rules are developed and overseen nationally by the U.S. Environmental Protection Agency and in Washington by the Department of Ecology. Healthcare hazardous waste includes some unwanted pharmaceuticals, waste lab acids and waste lead aprons.

In Washington, *dangerous waste* includes all of hazardous waste and additional toxic and persistent (in the environment) waste. Healthcare dangerous waste includes nearly all unwanted pharmaceuticals, spent OPA sterilant, and unwanted anesthesia gases.