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Closure Documents Going Electronic

by Jeremy Carroll, Supervisor, Engineering Unit

Ohio EPA's Division of Hazardous Waste Management (DHWM) has historically asked facilities to submit two copies of closure plans to DHWM's Central Office and one copy to the appropriate district office, as outlined on pages three and four of the 1999 *Closure Plan Review Guidance*. The guidance also requests that a second copy be submitted to the district office if the closure plan includes a ground water component.

Over time, however, the review of closure plans has become decentralized. Now district office staff are the principal closure plan reviewers. Even though this is now the case, Central Office still requests copies to ensure a complete administrative record is maintained there.

DHWM recently concluded that electronic copies of closure documents are appropriate for Central Office for the purpose of record completeness and public review. DHWM is defining electronic copies in this situation as those submitted on compact disk (CD) with PDF file extensions. Submitting duplicate copies to Central Office is no longer necessary (even with paper documents). Therefore, DHWM is encouraging facilities to submit closure documents to Central Office in electronic form. The guidance document (which is currently in the final stages of being updated) is being revised to reflect this preference.

Please continue to provide paper versions of closure plans to district offices.

For permitted facilities, since closure plans are part of the Part B permit application, you should continue to submit all application information, including the closure plan, in paper form. Eventually, the division would like to be able to receive permit applications electronically, but an advanced electronic information management infrastructure must be developed before this can happen. If you have questions about submitting electronic closure plans, please contact Jeremy Carroll, Supervisor, Engineering Unit at (614) 644-2944 or jeremy.carroll@epa.state.oh.us.

Minimizing Aerosol Can Waste

by Helen Miller, Inspections Support Unit

Does your business use cleaners, paints, lubricants or other products that are packaged in aerosol cans?

If your company uses aerosol cans, there are several waste minimization options you can implement to save your company money. Because these cans may contain products or propellants such as butane and propane, they may need to be managed and disposed of as a hazardous waste.

Why would the contents cause these cans to be managed as hazardous waste?

The remaining contents could be hazardous waste. Please refer to an article on pages six and seven of our *Winter 2002 Notifier* called "Regulatory Status of Aerosol Cans: a little can, a lot to think about". It describes five scenarios for managing aerosol cans and explains how the contents could be hazardous.

Do you completely empty your aerosol cans?

A good waste minimization practice is to use the contents of the entire can before opening another, thus minimizing the number of partially empty cans generated. If a nozzle malfunctions or breaks off, try to return the can to the supplier or manufacturer for a replacement. Another good waste minimization practice is to apply the aerosol product directly to a rag, rather than spray it on a piece of equipment. Studies have shown that employees use less aerosol cleaner when employing this method.

Do you generate a significant number of cans per month?

If you generate a significant number of similar waste aerosol cans, you may want to consider purchasing a puncturing unit. This will enable you to separate the liquid contents from the metal can for recycling or disposal. This equipment ranges from approximately $495 to $775 for a manually operated unit, to thousands of dollars for an automated unit. Processing capacity for these units ranges from 120 to 2,000 cans per hour. This investment can be recovered over time by reducing start time spent on puncturing.

How do puncturing units work?

Some units attach to a 55-gallon drum and are designed to puncture the aerosol can, filter the propellant and drain the liquid into the drum. More complex units have closed systems that crush the can into half-inch wafers. If your facility uses different products in aerosol cans, you must segregate your waste when puncturing and crushing. For example, you must puncture and crush paint cans in one batch and do the same with lubricants in the next batch. Types of cans also must be segregated, i.e., separating aluminum from steel for recycling.

Aerosol Can Puncturer

What are the cost savings and payback of a puncturing unit?

Several U.S. Navy installations have successfully implemented use of these units. In a cost analysis completed by the Navy, assuming an equipment cost of $775, a payback of less than two years was calcu-

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lated. A fact sheet from the Navy includes a link to a spreadsheet that will allow you to view an active spreadsheet and enter your own data to calculate your payback. You can find it at: *http://p2library.nfesc.navy.mil/P2_Opportunity_Handbook/7_III_3.html*

Have you considered switching to refillable bottles?

Spray-on products sold in aerosol cans generally cost twice as much as bulk products. Several types of bottles are available, including metal bottles that use compressed air or plastic bottles that use a hand spray pump. Refillable metal bottles are similar to aerosol cans in their design and performance. For example, brake cleaner from a bulk container placed in these bottles is pressurized with 80 to 200 psi using a compressed air hose. Plastic bottles are operated by pumping a trigger to create a mist or stream of product.

What are the cost savings and payback of refillable bottles?

Air pressurized, refillable bottles cost from $25 to $60 each, depending on the type of material used to make the bottle. These bottles are available in 8-, 16- or 32-ounce capacities and are available in aluminum, stainless steel, brass and steel. Chemically resistant plastic bottles cost anywhere from $1 to $6 each. Various nozzle types are available, along with nozzle extensions of up to 12 inches for areas that are difficult to reach. Many common spray-on products are available in containers ranging from one to 55 gallons. Check with your vendor to see whether they offer free refillable bottles with their product.

You might wonder how much money your business could save by switching to refillable bottles. A U.S. EPA Region 9 *Refillable Spray Bottles* fact sheet contains a worksheet that you can use to help calculate your cost savings by switching to refillable bottles. This fact sheet is available at *www.epa.gov/region09/cross_pr/p2/autofleet/spray.pdf*.

According to the fact sheet, if you use more than 20 cans of brake cleaner or carburetor cleaner per month, you can purchase five refillable bottles at $50 each with a payback of less than one year.

As shown on page four, the fact sheet also highlights three auto repair shops in California that switched to refillable bottles and noted the following advantages:

- ***Cost Savings***: Reduced aerosol product costs by 84 percent for the same brake cleaner.

- ***Preferred by Technicians***: They said refillable bottles worked as well or better than aerosol cans.

- ***Ease of Use***: Technicians found them easier to use because the bottles provided a more predictable shot of product.

If you decide to switch to refillable bottles, here are some tips:

- use funnels and pumps to minimize spills during refilling;
- stock replacement parts such as nozzle seals, filler caps, valves and nozzles;
- provide every employee a refillable bottle; they will use them if they are as convenient as an aerosol can; and
- if you use the steel refillable bottles, make sure your shop has a water removal device in the air line to prevent corrosion in the bottles.

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Minimizing Aerosol Can Waste
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		Nielsen Automotive	Glenmoor Auto Repair	Salem Boys Auto	City of Sunnyvale
	Technicians	9	2	10 to 12	10
	Service bays	6	8	20	12
Before	Aerosol cans per year	780 (brake cleaner)	192 (brake cleaner) 288 (carb cleaner) 36 (lubricant)	1,560 (brake cleaner) 540 (carb cleaner)	260 (brake cleaner)
Before	Aerosol can product cost per gallon	$15.95	$38.90 (brake cleaner) $24.32 (carb cleaner) $38.89 (lubricant)	$16.54 (brake cleaner) $15.45 (carb cleaner)	$32.96 (brake cleaner)
After	Pressurized, refillable spray bottles	4 (1-quart)	6 (1-quart) 3 (10-ounce)	30 (1-quart)	10 (1-quart)
After	Total cost for refillable bottles	$200	$450	$0 (free for purchasing bulk product)	$400
After	Refilling time	2 minutes	3 minutes	1 minute	1 minute
After	Bulk product cost per gallon	$9.89	$15.60 (brake cleaner) $18.20 (carb cleaner) $23.80 (lubricant)	$6.36 (brake cleaner) $7.54 (carb cleaner)	$14
	Annual savings	$484	$926 (brake cleaner) $490 (carb cleaner) $45 (lubricant)	$1,570 (brake cleaner) $465 (carb cleaner)	$1,654
	Payback period	5 months	4 months (overall)	immediate for both	3 months

Reprinted from U.S. EPA Region 9 fact sheet: Refillable Spray Bottles

To locate vendors of puncturing/crushing units and refillable bottles, see the U.S. EPA Region 9 fact sheet and the U.S. Navy Fact Sheet listed in the reference section on page 9. Also, the Iowa Waste Reduction Center (IWRC) has an online vendor database at: *www.iwrc.org/newvendor/Sub_class_list.cfm*

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Hazardous Waste from Laboratories

(HINT: Read our new **Laboratories Guidance** Document)

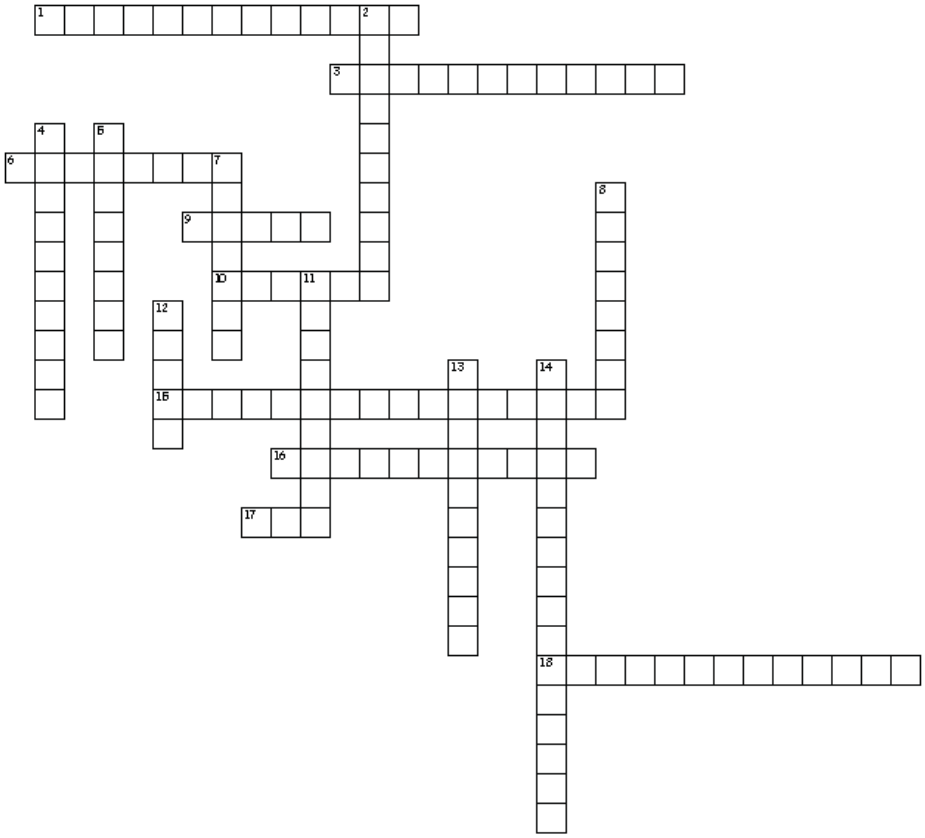
by Rose McLean, Regulatory Services Unit

Across

1. Material that you can no longer use must be evaluated pursuant to the hazardous waste rules.
3. Must be met in order for lab packs to be placed in a landfill or incinerated.
6. Different types of hazardous waste in small-volume containers that are placed into one large container for storage, transportation or treatment (two words).
9. This is when any size container is no longer subject to hazardous waste regulation.
10. The derived-from rule involves this type of hazardous waste.
15. Saves money for storing, packaging, transporting and disposing of unused lab chemicals (two words).
16. This can also save labs money.
17. Lab pack shipments must meet this acronym's specifications.
18. The act of combining hazardous waste streams.

Down

2. When a drum is packed with inside containers and sorbent material (two words).
4. This type of hazardous waste shipment may be stored for up to 10 days at a transfer facility.
5. Type of generator that changes generator category from month to month.
7. Don't count these wastes toward your generator status if they meet Ohio Administrative Code rule 3745-51-04(D).
8. This includes the release of hazardous waste to the air.
11. Combining hazardous waste may constitute this.
12. Pouring hazardous waste into this may either be excluded from hazardous waste regulation or considered impermissible dilution.
13. Pass off as vapor.
14. Transportation-related facility (two words).



Ask The Inspector

by Andy Kubalak, Regulatory Services Unit

If I am a large quantity generator (LQG), am I required to have a contingency plan?

Yes. If you are an LQG and are accumulating hazardous waste on-site, Ohio Administrative Code (OAC) rule *3745-52-34(A)(4)* requires that you have a contingency plan. The rules regarding contingency plans are in OAC rules *3745-65-50 through 3745-65-56*.

Why am I required to have a contingency plan?

Contingency plans are required to minimize hazards to human health or the environment from fires, explosions or any unplanned release of hazardous waste or hazardous waste constituents to air, soil or surface water.

How do I know what to include in my contingency plan?

The required contents of a contingency plan are found in OAC rule *3745-65-52*. These required contingency plan contents are as follows:

- a description of the actions facility personnel will take in response to fires, explosions or any unplanned release of hazardous waste or hazardous waste constituents to air, soil or surface water at the facility, pursuant to OAC rule *3745-65-52(A)*;
- a description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors, emergency response teams and Ohio EPA to coordinate emergency services, pursuant to OAC rule *3745-65-37*;
- a list with the name, address and phone number of each person qualified to act as emergency coordinator, updated as necessary. The emergency coordinator must be listed first with alternate coordinators following in the order in which they will assume responsibility;
- an updated list of emergency equipment, where required. Such equipment may include fire extinguishing systems, spill control equipment, communication and alarm systems and decontamination equipment. This list must include the location, a physical description and a brief outline of its capabilities; and
- an evacuation plan for facility personnel must be included when there is a possibility that evacuation could be necessary. When an evacuation plan is included, it must describe the signal to be used to begin evacuation and the primary and alternate evacuation routes.

DHWM's *Generator Handbook,* which is available *online*, contains a model contingency plan which may be a helpful reference when developing your own site-specific contingency plan.

Do I need to submit a copy of my contingency plan to Ohio EPA?

Yes. You are required to submit a copy of your plan and any revisions to Ohio EPA and all local police and fire departments, hospitals and local emergency response teams that may be requested to provide help during a hazardous waste-related emergency. Along with the plan, you also must maintain a copy of any revisions at the facility.

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Ask the Inspector
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How will I know when to amend my contingency plan?

You must immediately amend your contingency plan when:

- applicable rules are revised;
- your plan fails in an emergency;
- there are changes in the facility which may increase the potential for a fire, explosion or release; or
- there are personnel or equipment changes which affect the list of emergency coordinators or the list of emergency equipment pursuant to OAC rule *3745-65-54*.

What does the emergency coordinator do in an emergency?

An emergency coordinator must assume the responsibility of coordinating all internal emergency response measures. The emergency coordinator must be thoroughly familiar with:

- the contingency plan;
- the location and characteristics of the waste handled;
- the facility layout; and
- the location of all records within the facility.

Additionally, the emergency coordinator must be on the premises or on call at all times and have the authority to commit resources needed to implement the provisions of the contingency plan.

Do I have to train any of my employees on contingency plan implementation?

Yes. Employees must receive their training within six months of being hired and must not work in an unsupervised position until they have completed the training requirements described in OAC rule *3745-65-16(A)*. The employee training program must ensure that, at a minimum, employees are able to respond effectively to emergencies by familiarizing them with:

- procedures for using, inspecting, repairing and replacing emergency and monitoring equipment;
- key parameters for automatic waste feed cut-off systems;
- communications or alarm systems;
- response to fires or explosions;
- response to ground water contamination incidents; and
- shutdown of operations.

When must I implement my contingency plan?

OAC *3745-65-51(B)* requires that you implement your contingency plan immediately when there is a fire, explosion or release of hazardous waste or hazardous constituents which could threaten human health or the environment. LQGs must note in the operating record or facility hazardous waste files the time, date and details of any incident that requires implementation of the contingency plan. Within 15 days after the incident, the LQG must submit a written report regarding the incident to the director of Ohio EPA, providing the information required pursuant to OAC rule *3745-65-56(J)*.

For a list of example scenarios that the Division of Hazardous Waste Management presumes to have the potential to threaten human health and the environment and situations which require the implementation of a facility's contingency plan, refer to our guidance document, *Contingency Plan Implementation and Incident Reporting Under Ohio Hazardous Waste Rules*, June 2002.

Ask the Inspector

What are the most frequently found violations?

by Dan Sowry, Regulatory Services Unit

According to data collected from December 2002 to November 2004, the most frequently found Ohio Administrative Code (OAC) rule violations include requirements concerning annual reports, hazardous waste determination and used oil storage.

Annual Reports - OAC rule *3745-52-41*

Large quantity generators (LQG) are most commonly cited for failure to submit an annual report before the deadline. Annual reports are due by the close of business on March 1 each year. You are required to file an annual report if your business reaches LQG status at any time during the reporting calendar year.

Annual report data provides Ohio EPA and U.S. EPA with an understanding of hazardous waste generation, management and waste minimization activities in Ohio. The data also can be used for public education and compliance assurance efforts.

When completing your annual report, you should report only the hazardous wastes that count toward the determination of your generator status. This includes wastes that are generated, accumulated and subsequently managed onsite or shipped offsite. Ohio EPA's *annual report instructions and forms* are available on our *Web site*. If, after reading through the instructions, you have specific questions concerning the proper completion of your annual reports, please contact *Tammy Heffelfinger* at (614) 644-2954.

Hazardous Waste Determination-OAC rule *3745-52-11*

Generators are commonly cited for failure to properly evaluate their waste. Under Ohio EPA's regulations, all wastes generated by a business must be evaluated to determine whether they are hazardous before disposal. If you have a material that can no longer be used, it is considered a waste. OAC rule *3745-52-11* provides you with step-by-step instructions to properly evaluate your waste.

The first step is to determine whether your waste is excluded from regulation under OAC rule *3745-51-04*. If your waste is not excluded, it may be considered a listed hazardous waste if it appears on one of the three lists of hazardous wastes in OAC rules *3745-51-30 to 3745-51-33*. If your waste is not a listed hazardous waste, it still could be considered a hazardous waste if it displays any of these characteristics: ignitability, corrosivity, reactivity or toxicity, detailed in OAC rules *3745-51-20 to 3745-51-24*.

To learn more about how to properly evaluate your waste, see Ohio EPA's fact sheet, *Identifying Your Hazardous Waste* or search our division's online *written regulatory interpretations*.

Used Oil Storage-OAC rule *3745-279-22*

Used oil generators are most commonly cited for not properly labeling their containers, aboveground tanks and fill pipes with the words "Used Oil." Fill pipes are pipes used to transfer used oil into underground storage unit tanks. According to OAC rule *3745-279-22*, used oil generators must store their used oil in containers or tanks; ensure the containers and tanks are in good condition (no severe rusting) and are not leaking; label or clearly mark the containers, aboveground tanks and fill pipes with the words, "Used Oil"; and respond to releases of used oil.

To learn more about used oil requirements, see our three *guidance documents* on the subject.

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If you have additional questions regarding aerosol cans, please contact your district office hazardous waste inspector. Our inspectors offer technical assistance to businesses by helping them identify ways to generate less waste. If you would like to learn more about pollution prevention (P2), go to www.epa.state.oh.us/ocapp/ocapp.html

References:

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