



# UNIVERSAL WASTE RULES



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Noa Logan Klein, Planner  
Solid & Hazardous Waste Branch  
Hawaii Department of Health

# WHAT IS UNIVERSAL WASTE?

- ❖ A subset of hazardous waste with streamlined regulatory requirements
- ❖ Specific types of waste, when they are hazardous waste
  - Batteries
  - Recalled pesticides, unused pesticides managed as part of a waste pesticide collection program
  - Mercury-containing equipment
  - Lamps
  - Electronic items 🌱 state only
  - Aerosol cans ★★ new
  - Solar panels ★★ 🌱 new, state only

# GOALS OF THE NEW RULES

- ❖ Decrease the burden for managing HW solar panels and aerosol cans properly and ensure that hazardous waste is directed to proper management
- ❖ Decrease the burden of making HW determinations on a variety of types of aerosol cans/solar panels
- ❖ Decrease regulatory burden (SQG/LQG status) caused only by UW

# WHAT MAKE SOMETHING A GOOD CANDIDATE TO BECOME A UNIVERSAL WASTE?

- ❖ Generated by a wide variety and large number of generators, not exclusive to a certain industry, often generated by both businesses and homeowners
- ❖ Is a listed waste or a large portion of the wastestream is characteristic HW
- ❖ Relatively low risk during accumulation and transport
- ❖ Can help divert waste from the municipal solid waste stream to recycling or HW treatment/disposal

# STRUCTURE OF UW RULES

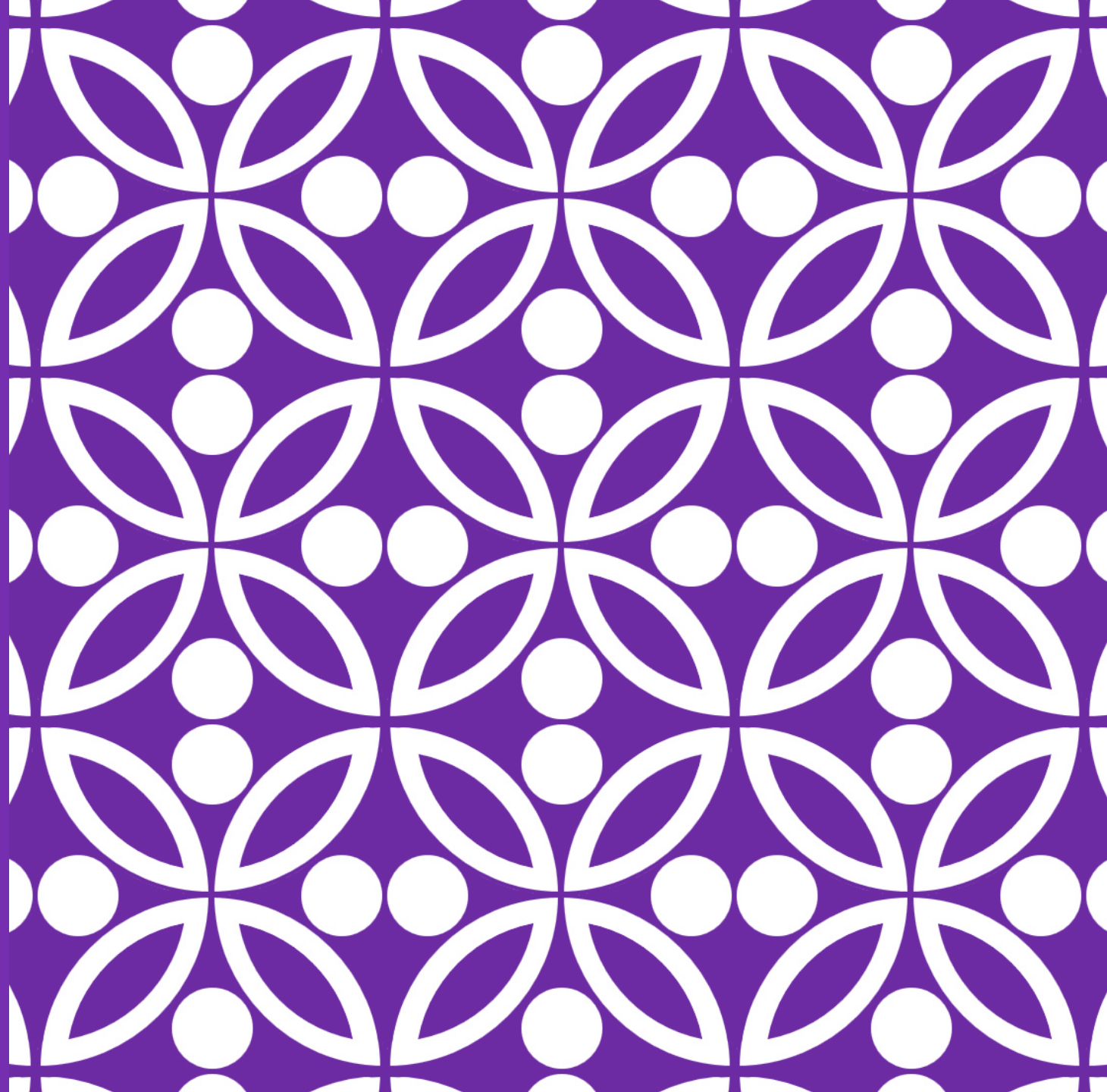
- ❖ Definition & applicability – types of UW
- ❖ Handlers
- ❖ Transporters
- ❖ Destination facilities
- ❖ Import/Export
- ❖ Eligibility factors & petition



# HANDLERS

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Including,  
but not limited to,  
generators



# STRUCTURE OF UW HANDLER RULES

## ❖ Specific to LQUWH

- Notification
- Shipment tracking/  
recordkeeping

## ❖ Specific to type of waste

- (Definition & applicability)
- Waste management
- Labeling

## ❖ Applies to all

- Accumulation time limit
- Employee training
- Release Response
- Shipment

# SMALL VS. LARGE QUANTITY UWH

## SMALL

- Accumulates < 5,000 kg of UW
- No notification requirement – but may need to notify based on HW generator status
- No shipment tracking/recordkeeping requirement

## LARGE

- Accumulates > 5,000 kg of UW at any time
- Notification required
- Shipment tracking and recordkeeping for 3 years



# TRACKING AND RECORDKEEPING (LQHUW)

- ❖ Keep records for 3 years
- ❖ For both shipments received and shipments sent
  - Name and address of the originating universal waste handler / (destination) universal waste handler, destination facility, or foreign destination;
  - Quantity of each type of universal waste received / sent
  - Date of receipt / shipment

# ACCUMULATION TIME LIMIT

## ❖ One year

- ASD label on individual item, container, or designated accumulation area
- Inventory system (ASD by item, group, or group of containers)
- Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

# EMPLOYEE TRAINING

## SQHUUW

Inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

## LQHUUW

Ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

# RELEASE RESPONSE

- ❖ Immediately contain all releases of universal wastes and other residues from universal wastes.
- ❖ Make a HW determination on any material resulting from the release and manage appropriately.

# SHIPMENT

- ❖ Only send to: another universal waste handler, a destination facility, or a foreign destination.
- ❖ DOT pre-transportation packaging/labeling/shipping papers for hazardous materials if applicable (49 CFR parts 171 to 180)
- ❖ Ensure that receiver agrees to receive the shipment before sending. If shipment is rejected by the receiver,
  - Receive the waste back, or
  - Agree with the receiver on a destination facility to send to.

# REJECTED/ILLEGAL SHIPMENTS

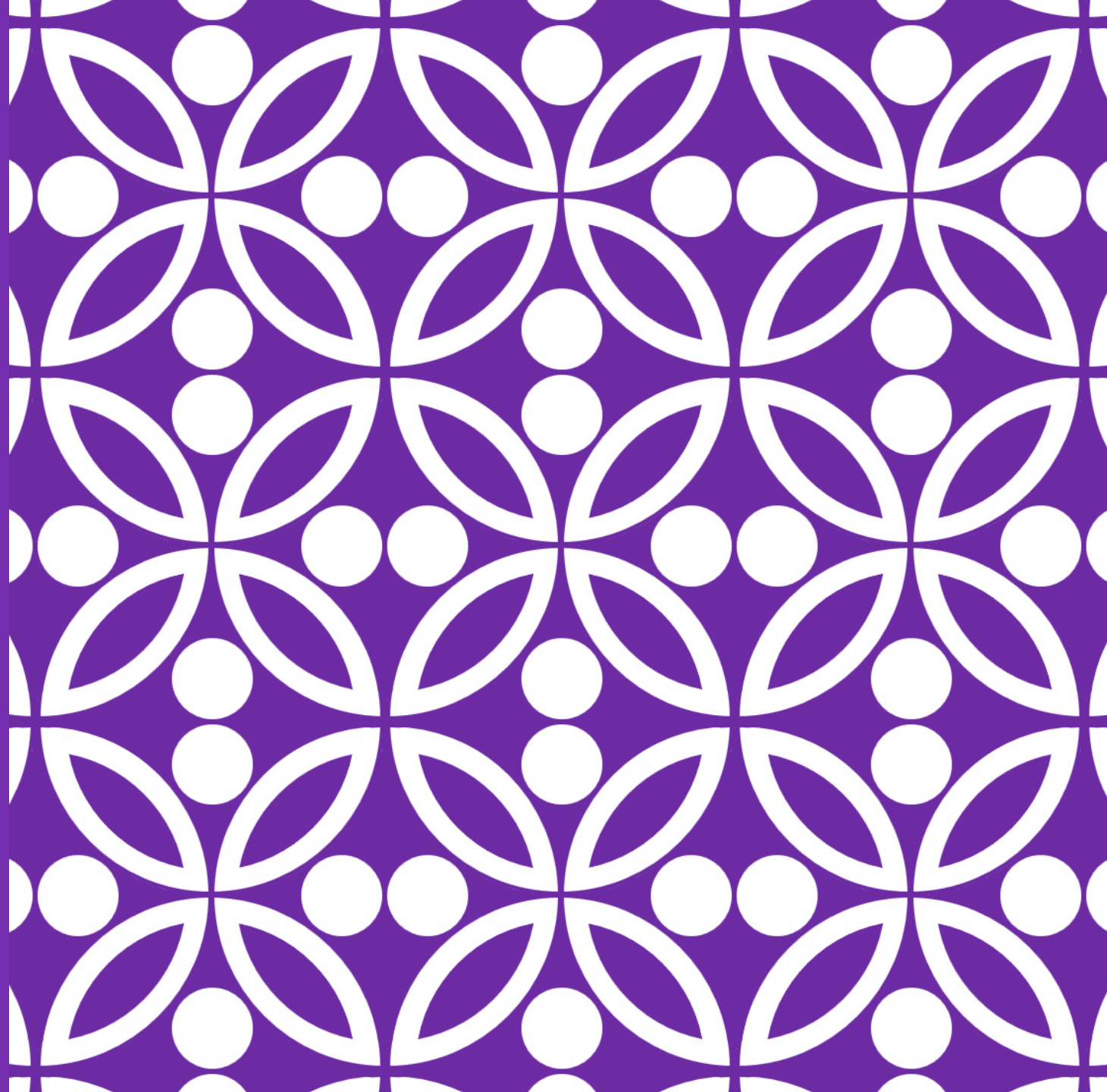
- ❖ Can reject a shipment containing universal waste. Contact the sender to notify of the rejection and to discuss reshipment of the load.
  - Send back to the originating handler, or
  - If agreed to by the originating handler, send to a destination facility.
- ❖ If you receive a shipment containing HW that is not UW, immediately notify the state department of health.

# WASTE MANAGEMENT

- ❖ Specific to each type of UW
- ❖ No other treatment is allowed

# TRANSPORTERS

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# RESTRICTIONS

- ❖ Deliver only to UW handler, destination facility, or foreign destination
- ❖ 10 day storage
  - If you store longer, you become a handler and must follow all handler rules.
- ❖ Prohibited from diluting or treating universal waste, except by responding to releases.
  - If you want to do any of the things allowed for handlers as treatment, you must follow all handler rules.

# DOT PACKAGING & LABELING

- ❖ DOT requirements (49 CFR part 171 to 180) for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8.
  - UW does not automatically meet this definition because it doesn't require the Uniform Hazardous Waste Manifest.
  - Cannot be described by the DOT proper shipping name "Hazardous waste, (L) or (S), n.o.s." nor by adding "waste" to the hazardous material's proper shipping name.
  - BUT some UW may meet the criteria for one or more hazard classes specified in 49 CFR 173.2.

# RELEASE RESPONSE

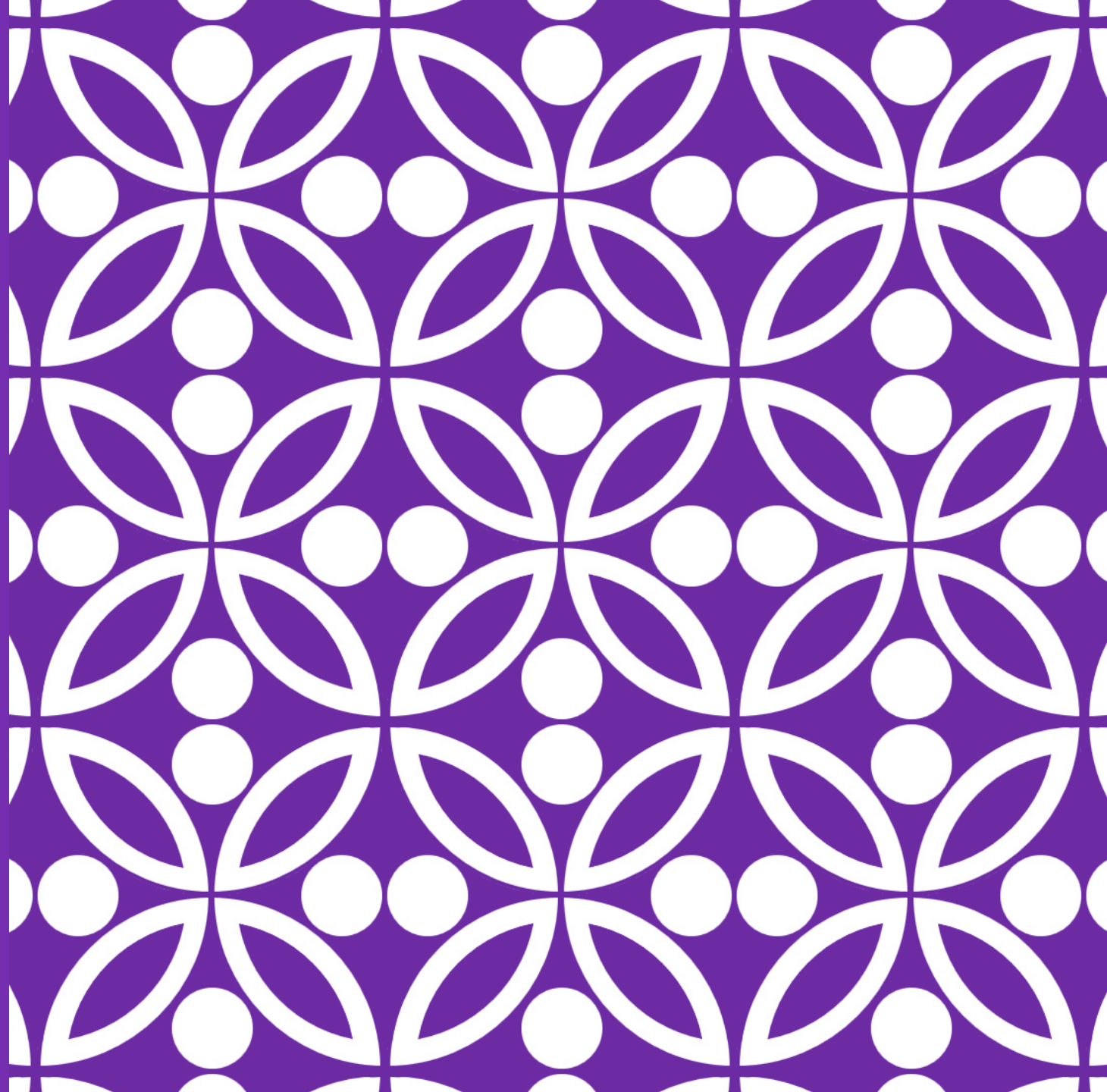
- ❖ Immediately contain all releases of universal wastes and other residues from universal wastes.
- ❖ Make a HW determination on any material resulting from the release and manage appropriately.

# TRACKING AND RECORDKEEPING

- ❖ Keep records for 3 years
- ❖ For both receipt and delivery of shipments
  - Name and address of the originating universal waste handler / (destination) universal waste handler, destination facility, or foreign destination;
  - Quantity of each type of universal waste received / delivered
  - Date of receipt / delivery

# DESTINATION FACILITIES

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# TSDF PERMIT REQUIRED

- ❖ A type of hazardous waste treatment, storage, and disposal facility (TSDF)
- ❖ Need a permit (chapter 11-270.1, HAR)
- ❖ Subject to TSDF requirements (11-264.1, HAR)

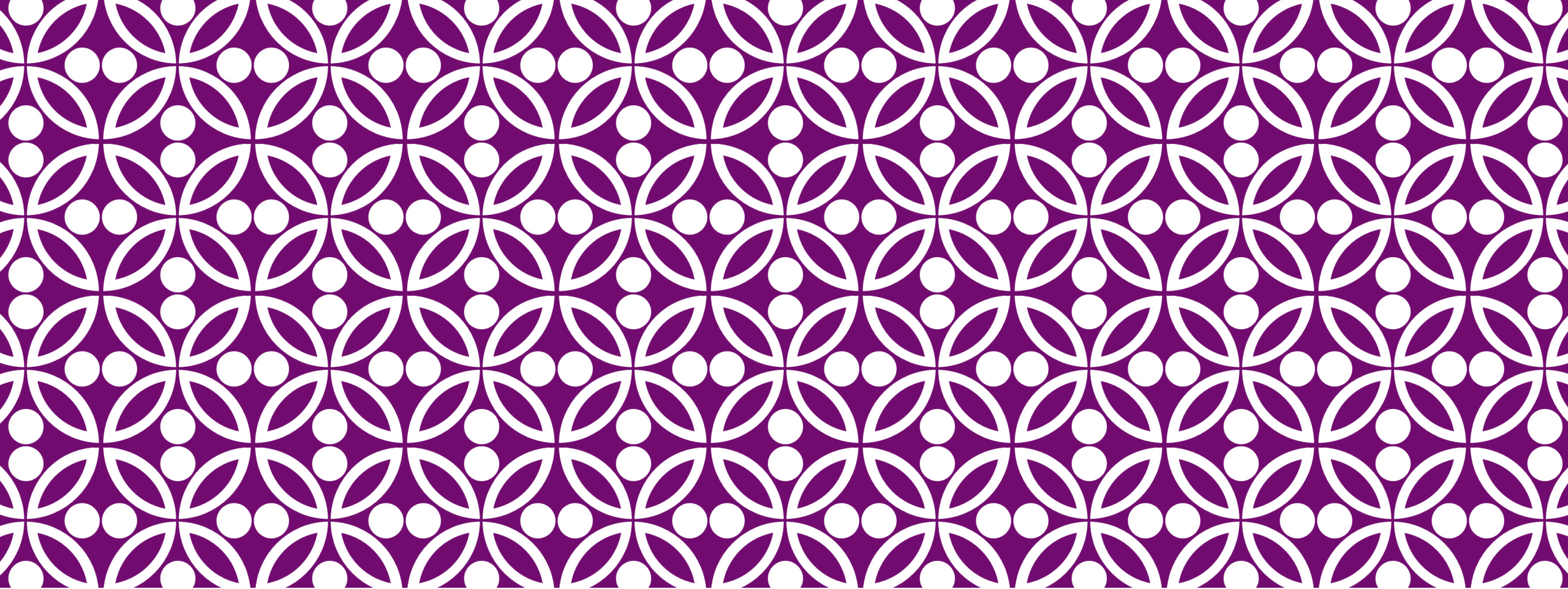
# TRACKING AND RECORDKEEPING

- ❖ Keep records for 3 years
- ❖ For receipt
  - Name and address of the originating universal waste handler
  - Quantity of each type of universal waste received
  - Date of receipt

# REJECTED/ILLEGAL SHIPMENTS

- ❖ Can reject a shipment containing universal waste. Contact the sender to notify of the rejection and to discuss reshipment of the load.
  - Send back to the originating handler, or
  - If agreed to by the originating handler, send to a destination facility.
- ❖ If you receive a shipment containing HW that is not UW, immediately notify the state department of health.





# AEROSOL CANS



# AEROSOL CAN DEFINITION

*Aerosol can* means a non-refillable receptacle containing a gas compressed, liquefied, or dissolved under pressure, the sole purpose of which is to expel a liquid, paste, or powder and fitted with a self-closing release device allowing the contents to be ejected by the gas.

# AEROSOL CAN APPLICABILITY

Aerosol cans not covered under this part.

- ❖ Aerosol cans that are not yet waste (under chapter 11-261.1, HAR).
- ❖ Aerosol cans that are not hazardous waste.
- ❖ Aerosol cans that meet the standard for empty containers under 40 CFR §261.7, as incorporated and amended in chapter 11-261.1.

# MANAGEMENT TO PREVENT RELEASES

- ❖ Accumulate in a container that is structurally sound, compatible with the contents of the aerosol cans, lacks evidence of leakage, spillage, or damage, and is protected from sources of heat.
- ❖ Aerosol cans that show evidence of leakage must be packaged in a separate closed container or overpacked with absorbents, or immediately punctured and drained.

# MANAGEMENT TO PREVENT RELEASES

- ❖ A handler may:
  - Sort aerosol cans by type
  - Mix intact cans in one container
  - Remove actuators to reduce the risk of accidental release
  - Puncture and drain, with conditions

# PUNCTURE & DRAIN TO PREVENT RELEASES

- ❖ Recycle the empty punctured aerosol cans
- ❖ Use a device designed to safely puncture aerosol cans and effectively contain the residual contents and any emissions.
- ❖ Have and follow written safe puncture & drain procedure; have a copy of manufacturer's specifications/instructions on site; train employees operating the device in proper procedures.
- ❖ Puncture in a manner designed to prevent fires/release to the environment. This includes locating the equipment on a solid, flat surface in a well-ventilated area.

# PUNCTURE & DRAIN TO PREVENT RELEASES

- ❖ Immediately transfer contents from the aerosol can or puncturing device to a container/tank that meets the requirements of 40 CFR §262.14, 262.15, 262.16, or 262.17, as incorporated and amended.
- ❖ Make a hazardous waste determination on the emptied contents per 40 CFR §262.11, as incorporated and amended. Manage HW in accordance with rules.
- ❖ Manage non-HW in accordance with solid waste rules.
- ❖ Have written procedure in the event of a spill/leak; have spill clean-up kit. Clean up spills/leaks promptly.

# LABELING OPTIONS

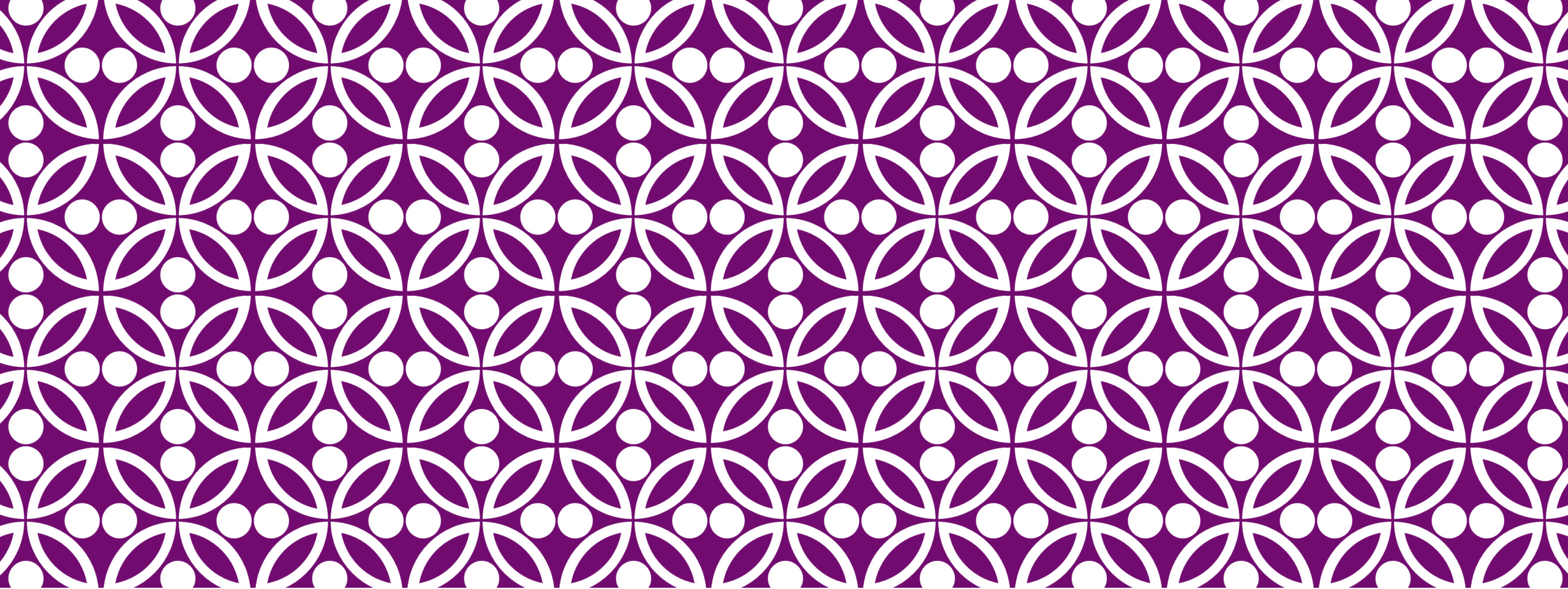
## LABEL EACH

- aerosol can
- container in which aerosol cans are contained

## LABEL LANGUAGE

- Universal waste—aerosol can(s)
- Waste aerosol can(s)
- Used aerosol can(s)





# SOLAR PANELS



# SOLAR PANEL DEFINITION

*Solar panel or solar photovoltaic panel* means a device consisting of one or more electrically connected photovoltaic cells that are designed to convert solar radiation into electrical energy.

Includes:

- Integrated components that cannot be separated without breaking the solar panel glass (e.g., protective glass, conductive metal contact, metal framing)
- Photovoltaic cells that are not electrically connected\*

Does not include:

- Solar thermal panels that do not contain photovoltaic cells

# PHOTOVOLTAIC CELL DEFINITION

*Photovoltaic cell* means a specialized semiconductor diode designed to convert solar radiation into electrical energy.

Photovoltaic cells may be composed of, but are not limited to:

monocrystalline silicon, polycrystalline silicon, amorphous silicon, cadmium telluride, copper indium gallium selenide, and gallium indium phosphide/gallium arsenide/gallium, and perovskite

# SOLAR PANEL APPLICABILITY

Solar panels not covered under chapter 11-273.1.

- ❖ Solar panels that are not yet wastes under chapter 11-261.1.
- ❖ Solar panels that were previously identified as wastes but are no longer identified as wastes (e.g., refurbished and returned to service).
- ❖ Solar panels that are not identified as hazardous waste pursuant to chapter 11-261.1.
- ❖ Solar panels that are integrated into the structure of an electronic item shall be managed as an electronic item.

# SOLAR PANEL APPLICABILITY

Solar panels not covered under chapter 11-273.1 that *must be managed as hazardous waste pursuant to chapters 11-260.1 to 11-270.1.*

- ❖ Solar panels that exhibit any characteristic of a hazardous waste other than the characteristic of toxicity.
- ❖ Solar panels that are recycled in a manner constituting disposal, as described in 40 C.F.R. section 261.2(c)(1), as incorporated and amended in chapter 11-261.1.

# MANAGEMENT TO PREVENT RELEASES

- ❖ Store in a manner that prevents breakage and release under reasonably foreseeable conditions. Intact solar panels need not be contained to meet this standard.
- ❖ Immediately clean up and place in a container any universal waste solar panel that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
  - Closed, structurally sound, compatible with the contents of the solar panel, and lacks evidence of leakage, spillage, or damage.

# MANAGEMENT TO PREVENT RELEASES

- ❖ A handler may:
  - Sort solar panels by type.
  - Mix solar panel types in one container, pallet, or demarcated storage area.
  - Remove ancillary components typically removed for replacement during normal operation and maintenance of a solar PV system.
    - Conduct removal as prescribed in the operating manual or in a manner that would otherwise reasonably be employed during normal operation/maintenance.
- ❖ Make a HW determination on new resulting waste. Manage appropriately.

# LABELING OPTIONS

## LABEL EACH

- Solar panel
- Container or pallet containing solar panels
- Designated universal waste solar panel storage area demarcated by boundaries

## LABEL LANGUAGE

- Universal waste—solar panel(s)
- Waste solar panel(s)
- Used solar panel(s)





[noa.klein@doh.hawaii.gov](mailto:noa.klein@doh.hawaii.gov)

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