

Question	Answer
Fire safety	
What exhaust or smoke control specification do you recommend for the storage of chemicals as per the size of storage area?	Waste store staff are not in a position to make this recommendation, you should consult with your fire safety officer. However, in the presented example store has an automatic CO2 fire dampering system and LEV cabinet
How do you control any chemical fires in waste stores? You have not mentioned anything regarding ventilations to prevent/ control heat teperature that can be on set of fires?	Any ignition soures are removed from the store room, the waste store has ventilation and CO2 dampering system which is triggered by either temperature rise or smoke.
Is there any limits on storage quantity for different chemical? such as some chemical can cause explosion or fire due to oxidation	Yes, some regulations such as COSHH and DSEAR will provide guidance. For example, you should not store more than 50 L of flammables in one location.
Spillages	
The waste store has a drain - so do any spills go into the drain system?	The picture in the presentation featured store floor with what looked like a drain hole, however it is not a drain, but a historical sealed floor cavity. Ideally, waste store should not have drain hole in the floor or have is sealed. Other spill preventative measures such as secondary containers for liquid waste or bundling should be also introduced to minimise risk of spillages. Hazardous spill kit could be present and store staff should be trained in its use.
Are store staff trained to deal with spills?	It's a good practice to ensure that anyone handling liquid chemicals are trained in cleaning up of spills.
Can I use the sand as a containmnet for the spilled checmials	Yes, you can use sand as an absorbent for most chemicals, it is not suitable for HF spills though.
How do you recommend storing spill kit materials that have been used to control flammable chemical spills? Would you store these in an ordinary chemical waste storage bin or specific storage facility for flammable materials?	Most of the spill kits are made of fire retardant materials. However, if the absorbent has been used and is contaminated with flammable material it should be treated as the flammable material and stored and disposed of accordingly.
Chemical, bio and gas waste	
Is it ok to store more than one of waste in the same room? Any specific precautions.	All waste should come to the waste stores packed in primary containers according to their hazards. Yes, it is ok to store a range of waste in the same room, however you should pay attention on specific incompatibilities (e.g. do not store flammables and oxidisers close together).
You listed solid, liquid, powder etc - do you handle / dispose of gas	Empty/used gas cylinders are usually picked up by the supplier, alternatively some waste contractors are hapy to dispose of the gas lecture bottles as hazardous waste. 'Empty' ad pressurless gas catridges less than 250g capacity could be disposed of as metal recycling waste based on manufacturing instruction. Otherwise, consult with waste contractor.
Could you please explain about chemical waste management?	Researchers segregate and collect waste, waste store staff brings the waste to the store, waste contractor picks up the waste from the store.
How do you handle "empty" containers - with the residual traces of the contents	If we cannot guarantee that they are clean of any hazardous residues the containers are treated as hazardous waste. Empty and clean containers could be either returned to supplier, reused or disposed of as general waste/plastic or glass recycling.

What does the waste contractor do to prevent uncontrolled reactions between wastes?	Waste contractor receives a consignment note and makes specific arrangements based on the hazards of the waste they pick up. They use ADR book as a guidance for segregation and packaging. This is outside of waste store staff responsibility, but this is why the pre-contracts check of the waste contractor are so important.
What about lithium batteries or other Potential spontaneously combustibles?	They are collected separately and isolated from the rest of the waste in a metal, ideally fire-rated cabinet.
Whats are the prinples for segregation between wastes?	Flammables should be separated from hazardous waste, solid from liquid, waste which may be hazardous by inhalation should be stored under ventilation, oxidisers are isolated from flammables, researchers should notify store staff in amy waste has a particular incompatibility.
What are the parameters to decide if the waste is hazardous or not?	You should refer to SDS of each material in the waste. Also there is a WM3 guide which may help in this decisison. There will be a webinar on how to use the WM3 guide later in the year.
Do you have any experience in disposal of microbiological waste? What is the best way to dispose of large volumes?	These waste should be segregated into solid, liquid, sharp waste and treated before disposal (chemically or thermally), then appropriately disposed. There will be a webinar on 28th of July about different type of lab waste where this topic will be covered in more details.
My question is related to clinical and animal waste and regarding the colour of the bags used. Most labs used orange ones labelled "for incineration" but I have come across labs that are using yellow ones. Does the color matter and/or do they follow the same route of disposal regardless?	Yes, each type of waste has a specific colour assigned. Yellow means chemical contamination, but yellow with black stripes - offensive waste. See HTM 07-01 Safe Management of Healthcare Waste Memorandum p.20 for details .
Do you have a specific recommendations regarding animal waste?	They are securely packed and labelled and sent with the contractor for incineration
Other	
What PPE are needed for handling chemical waste?	PPE should be determined by Risk Assessment. However the waste should be collected in waste containers by the researchers in the laboratories. Therefore waste store staff handling waste containers has a reduced risk to be exposed to the content of waste containers. In the example from the presentation, thick rubber gloves were provided to the store staff for work where exposure to the waste chemicals could be likely and nitrile coated work gloves for activities requirind a good grip.
What storage containers are provided by the contractor ?	This should be agreed between the contractor and its client. Usually contractors could provide secondary containers to pack the waste containers for transporting. The primary waste containers are usually purchased by the waste producer and they must be UN approved.
What is required form a contractor to be awarded the contract to pick the waste ?	Before the contract is in place, the waste producing client conducts full investigation of the waste contractors, which includes seeing a variety of their waste permits and licenses, H&S documentation and insurances. Usually the decision of such contracting is outside of the waste store staff's responsibilities.
How long the consignment note need to be retained for?	3 years

Does the contractor recycle the waste?	This depends on your contractor and the type of waste. Some waste cannot be recycled.
What are the legal requirements that needs to be complied?	First of all you have Duty of Care, then there are The Environment Protection Act 1990, The Controlled Waste (England and Wales) Regulations 2012, The Hazardous Waste Directive, The Carriage of Dangerous Goods Regulations and COSHH 2002 reg,
How is your waste stream funded- is lab waste treated a central service or is it funded by each team who pay separately for each collection	Most waste will be paid by the department and some by the research group. This is an in-house arrangement. Usually the cost of chemical waste disposal will be covered by the research group producing the waste.
What health surveillance measures do you have in place to ensure no known or unknown exposures are occurring?	The risk of exposure to the waste in store is minimal. Waste are segregated and pre-packed in the labs. Most of waste will have secondary containers while are stored in the store room for collection. In this particluar store room there is an extract and a ventilated cupboard to prevent users from exposure to the waste potentially hazardous by inhalation. No health surveillance was identified to be required at the moment.
We have a very high quantity of polystyrene boxes from insulated chemicals - wha do you do with these? We are desperate to find a good way of reducing polystyrene	Usual practice is unfortunately to throw these away as general waste. However, University of Manchester has a machine which melts and condenses polystere in smaller managable blocks and then recycled.
Is an employee allowed to carry waste to the waste dump? How much and type of waste is an individual who is not a registered waste contractor allowed to carry to waste dump?	Usually, technical staff or lab user will pick up the waste from the laboratory and bring it down to waste store. Individuall arrangements may differ for different organisations, but manual handling risk assessment should be conducted along with training in handling of hazardous substances for waste store staff.
Are there any particular specifications for waste storage in a shared 'external' or outdoors space? i.e. cages/cupboards etc?	Probably so, for example ventilation arrangements and material they are made of, but we cannot provide any specific details.
How your contractor dispose the hazardouse waste if its not reusable and recyclable?	Non reusable, non-recyclable hazardous waste is incinerated.
Do you have any inert gas or system to reduce the saturation for any accidental leakage of gases?	No, nothing like this is in place as no accidental leakage of gases could happen in the waste store facility.
Is there any gas detector used to check the quality of air or presence of any chemical?	No, chemicals which are or may be hazardous by inhalation are stored in ventilated cupboard.
Is there anything related to food waste which may be treated as hazardous waste, for example used frying oil?	Possibly, however the talk was dedicated to lab waste and we cannot advise on food waste.
In your university, who completes the EWC codes?	Contractor fills them in on receipt of the consignment note.
Is there a current accurate record sheet of what is held in the store (any store not just the waste store) and what quantity to pass to fire and rescue if there is an incident so they know exactly what they are dealing with	Yes, there is an inventory system in place.
Do you have any environmental initiatives in place to reduce waste?	There is a laboratory plastic decontamination/recycling scheme in place.

<p>Are you registered with any government authority for import and export of chemical? Is your facility in residential area or industrial area?</p>	<p>The facility is not in industrial area. We are considering ourselves as downstream users according to UK REACH regulation.</p>
<p>How do you classify and treat waste oil from vehicles ? Are they classified as hazardous waste?</p>	<p>Yes, it is hazardous waste and should be collected separately.</p>
<p>There are certain chemicals and substances that should be kept separately (e.g. phosphorous will explode if exposed to water). So is there a process to review what is being deposited in the store against what is in there so it can be separated from anything it should not be located near?</p>	<p>This is normally treated on a case by case base as the content of the store has a very turnover rate. Reactive substances to water or air are best stored in a secondary container and sealed to prevent unintended contact. Waste store do keep a list about its content.</p>