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Fire Damaged Debris Disposal

This guidance document has been prepared by the Nebraska Department of Environment and Energy (NDEE) to outline the requirements for disposing of materials generated by exposure to fire. This will cover the major types of debris and how the disposal process differs between them. The regulations applying to these waste can be found in Nebraska [Title 128 – Nebraska Hazardous Waste Regulations](#), and Nebraska [Title 132 – Integrated Solid Waste Management Regulations](#).

All non-hazardous, burned or charred materials must be disposed at a Municipal Solid Waste (MSW) landfill. This includes fire damaged buildings, its contents, and any other burned or charred material. Hazardous materials must be disposed at a permitted hazardous waste treatment, storage, and disposal facility. Any completely unburned and uncharred debris can be sent to a Construction and Demolition (C&D) landfill.

A Permitted MSW landfill has engineered structures designed to capture and control leachate as well as divert stormwater runoff. This prevents contamination from burned wood and other materials from entering the environment. Disposal of burned and charred materials at any site other than a MSW landfill has the potential to cause groundwater issues and damage to the environment. Only completely unburned and uncharred debris can be sent to a Construction and Demolition (C&D) landfill.

The key point to understand about fire damaged materials is that fire is a chemical process that not only alters what it burns, but it also affects all nearby materials exposed to the heat and/or the fumes/smoke from the fire. Exposure to fire and smoke can dramatically alter the chemical composition of materials and release potentially dangerous compounds for fast transport by water and air. For example, pressure treated lumber is often impregnated with arsenic, cyanide, and other compounds that inhibit rot and pest infestation. In its normal state these chemicals are fixed to the lumber and release to the environment very slowly or not at all. When exposed to extreme heat these compounds can be freed by fire and allow them to quickly travel through the soil. If the burned lumber is then buried, the compounds in it can quickly descend to the water table causing groundwater contamination. This is why the NDEE prohibits the burial of burned structures on a farm, where the burial of unburned buildings is allowed in some circumstances. See our guidance "[ABC's of Demolition](#)" for more details on burning or burying.

Fire can also weaken containers that hold other materials, such as paint cans, pesticide jugs, and household chemical containers. Containers weakened or compromised by fire and can rupture causing a spill of their contents. It is extremely important that fire damaged products are handled very carefully to avoid spills and exposure. Most labels and markings burn off during a fire, making identification of the contents very difficult. The NDEE therefore recommends that commercial facilities maintain a good inventory of chemicals onsite, including container size, material, shape, and location within the facility. Knowing what chemicals are onsite and their physical location within the facility can also assist with

clean-up efforts. In the case of fires affecting a storage area for hazardous chemicals, it may be necessary to hire a professional disposal service to safely handle and remove of the materials.

Please keep in mind that any material that qualifies as hazardous material before exposure to a fire is likely still hazardous after fire exposure and will require a waste determination before disposal. Furthermore, non-hazardous commercial chemical products that have been altered by fire and heat may now qualify as hazardous waste. Hazardous waste cannot be sent to a MSW and requires special handling and disposal at a RCRA treatment, storage, and disposal facility.

When dealing with partial structural fires it is important to seek guidance from the State Fire Marshal's Office on the structural stability before entering any damaged structure. If the structure is completely consumed, or compromised to such a degree as to be unsafe to enter, the entire building, and it's contents, may have to be demolished for disposal. If the building is safe to enter it may be possible to recover unburned property and segregate out other wastes from the building itself. In either case the structure should be checked by a licensed asbestos inspector prior to disposal activities, if possible. Contact the Nebraska Department of Health and Human Services, Asbestos program for more information.

Scorched brick, mortar, and concrete are generally unaffected by all but the most intense fires. As such, those items still meet the definition of Fill and may be used as such unless otherwise contaminated.

WEBSITES, CONTACTS, AND RESOURCES:

- DHHS Asbestos Page: <https://dhhs.ne.gov/Pages/Asbestos.aspx>
- NDEE Home Page <http://dee.ne.gov/>

Contacts:

- DHHS Asbestos Program (402) 471-0386
- For general questions call the NDEE Toll Free Number (877) 253-2603
- For engineering and permit related questions call the NDEE Waste Permits Section (402) 471-2186
- For disposal and compliance questions call the NDEE Hazardous Waste Compliance Section (402) 471-8308
- Email questions to: NDEE.moreinfo@nebraska.gov

NDEE Publications:

- Environmental Guidance Document – "[Waste Determinations & Hazardous Waste Testing](#)"
- Environmental Guidance Document – "[ABC's of Demolition](#)"
Guidance is available on the NDEE Home Page under "Publications & Forms".
- [Title 128 – Nebraska Hazardous Waste Regulations](#)
- [Title 132 – Integrated Solid Waste Management Regulations](#)
Titles are available on the NDEE Home Page under "Laws/Regs & EQC", "Rules & Regulations"