

Coal Combustion By-Product (CCB) – Fact Sheet

CCBs – Background, Constituents of Concern:

- Texas with 17 coal-fired utilities is the largest consumer of coal in the United States and consequently is the largest producer of coal ash producing more than 15 million tons of CCBs per year.
- Generally, > 95% of CCBs is made up of common soil elements; however, constituents of concern in CCBs include arsenic, beryllium, boron, cadmium, chromium, chromium VI, cobalt, lead, manganese, mercury, molybdenum, selenium, strontium, thallium, and vanadium, along with dioxins and polyaromatic hydrocarbon compounds.
- Major environmental concern is the potential for migration or leaching of these heavy metals into groundwater or surface water.

Current Regulation of Coal Combustion Waste (CCB) in Texas:

- CCBs are excluded from the definition of hazardous waste as provided by Title 40 Code of Federal Regulation (CFR) § 261.4(b)(4). In line with this EPA exclusion, CCBs are not considered as hazardous waste under Texas regulations.
- CCBs in Texas are regulated as nonhazardous industrial solid waste under Title 30 Texas Administrative Code (TAC) Chapter 335. Texas requires further classification of nonhazardous waste as Class 1, 2, or 3. This self implementing 3 tiered system requires industrial generator to evaluate the waste based on its properties and/or chemical composition and arrive at the correct classification. Class 1 triggers the most stringent regulation and Class 3 the least. CCBs in almost every instance qualify as Class 2 or Class 3 nonhazardous industrial solid waste.
- As nonhazardous industrial solid waste, permits are not required for on-site management and disposal of CCBs.
- If CCBs are beneficially reused (example: road base, construction material, etc). they are also exempt from solid waste regulations (by virtue of an exemption under 30 TAC §335.1(138)(H); beneficially reused CCBs are not solid waste).
- Although permits are not required for these on-site disposal, §335.6 requires detailed notification of CCB disposal and management activities. CCBs also remain subject to the General Prohibitions of §335.4 to prevent unauthorized discharge to the waters of the state, creation and maintenance of a nuisance, or endangerment of the public health and welfare.
- TCEQ has Technical Guidelines for units which that manage CCBs on-site.

CCB Characterization:

- Texas generators of CCBs are required by our regulations to classify these wastes using analytical data, process knowledge, or a combination of the two at the waste's point of generation.
- CCB generators are required to use the Toxicity Characteristic Leaching Procedure, or TCLP (the same preparatory technique prescribed for hazardous waste determination) to determine hazardous concentrations and assign the appropriate classification as Class 1, 2, or 3 nonhazardous waste.
- Classification conducted by CCB generators is subject to TCEQ staff review to determine if the CCBs were appropriately classified. CCB generators have an

ongoing regulatory obligation to provide immediate notification of any changes concerning waste composition or management methods.

Notification Requirements for on-site disposal of CCBs and General Prohibitions:

- Although permits are not required for on-site disposal of CCBs, TCEQ requires detailed notification of CCB disposal and management activities per § 335.6. These notifications must include, at the minimum, information concerning waste composition, waste management methods, facility engineering plans and specifications, and geology of the area where the disposal site is located.
- CCBs also remain subject to the General Prohibitions of §335.4 which are designed to prevent unauthorized discharge to the waters of the state, creation and maintenance of a nuisance, or endangerment of the public health and welfare.
- Post-closure requirements – A facility is required to submit closure and post-closure plans as part of its § 335.6 notification. TCEQ technical guidelines specify interim and final landfill closure procedures to assure long-term waste containment and post-closure maintenance. Plans for post-closure care should include such activities as ground-water monitoring, leachate collection systems management and maintenance of cover by periodic regrading, reseeding, fertilizing, and mowing, prevention of erosion of the final cover, and regular inspections of the final cover.

CCB Management in Texas:

- The recycling rate of CCB is relatively high in Texas. EPA has acknowledged Texas as a model state in the development of CCB beneficial use policies and identification of authorized uses.
- A total of 32 on-site landfills, 37 on-site impoundments, and 5 on-site waste piles were reported by the 17 coal utilities in Texas. None of the facilities report sending CCBs off-site for landfiling.
- All 17 coal plants in Texas generate Class 2 nonhazardous CCBs, and 7 of these 17 utilities also generate Class 3 nonhazardous CCBs.
- There have been no CCB discharges to surface waters in Texas except for one incident in Northeast Texas in the late 1970s (Martin Creek Lake).

EPA's Proposal to Regulate CCBs under Subtitle C and Impacts:

- EPA is considering options to regulate CCBs under RCRA Subtitle C and is also reportedly considering a hybrid option of RCRA Subtitle C and D standards.
- TCEQ's Executive Director has written to the EPA Administrator opposing regulation of CCBs under RCRA Subtitle C. He has proposed that it be regulated under Subtitle D if EPA determined the need for federal regulations.
- Regulation of CCBs under Subtitle C will:
 - Discourage the beneficial use of CCB – a recycled material, and cause the disposal of a valuable resource in landfills and surface impoundments
 - Require additional landfill capacity to handle increased disposal volumes
 - Increase operating costs for CCB management.
 - Negatively impact sustainable development initiatives and increase use of other natural resources as a substitute for CCBs.
 - Require additional TCEQ staff resources to ensure compliance with the stringent regulations.