Illinois Environmental Protection Agency
www.epa.state.il.us
Pat Quinn, Governor
Bureau of Land

# Regulations for Clean Construction or Demolition Debris (CCDD)

***(Last Updated August 30, 2012)***

Clean construction or demolition debris (CCDD) is uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, or reclaimed asphalt pavement generated from construction or demolition activities. When uncontaminated soil is mixed with any of these materials, the uncontaminated soil is also considered CCDD. Uncontaminated soil that is not mixed with other CCDD materials is not CCDD. What constitutes "uncontaminated soil" for purposes of CCDD and uncontaminated soil fill operations is defined in 35 Ill. Adm. Code 1100. 35 Ill. Adm. Code 1100 was last amended by the Illinois Pollution Control Board in its Final Opinion and Order dated August 23, 2012. These changes, which begin on page 6 of the Final Opinion and Order, became effective August 27, 2012.

## CCDD Fill Operations and Uncontaminated Soil Fill Operations

When CCDD is used as fill below grade it is not considered to be a waste as long as: 1) the filled area is not within the setback zone of a drinking water well and 2) within 30 days after filling is complete, the CCDD is covered with uncontaminated soil, pavement, or some type of structure. A current or former quarry, mine, or other excavation where CCDD or uncontaminated soil is used as fill is a "CCDD fill operation". A current or former quarry, mine, or other excavation where uncontaminated soil, but not CCDD, is used as fill is an "uncontaminated soil fill operation". Both of these types of fill operations are regulated under 35 Ill. Adm. Code 1100.

## CCDD Fill Operation Fees

Owners and operators of CCDD fill operations must pay fees based on the volume of CCDD and uncontaminated soil accepted for use as fill. The CCDD fee rules are located in 35 Ill. Adm. Code 1150. These rules set forth the procedures for the collection of fees, and include recordkeeping requirements, the submittal of quarterly reports to the Illinois EPA, and the time and manner of fee payment.

Questions regarding CCDD fill operation fees should be directed to the Illinois EPA, Bureau of Land, Waste Reduction and Compliance Section, at 217-785-8604.

## MAC Table, Facility Information and Forms

Maximum Allowable Concentrations (MAC) Table for Chemical Constituents in Uncontaminated Soil [new]
CCDD fill sites currently permitted by Illinois EPA
Uncontaminated Soil Fill Operations (USFOs) currently registered with Illinois EPA
Source Site Certification by Owner or Operator LPC-662 [new]
Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist LPC-663 [new]
Uncontaminated Soil Fill Operation Registration Form by Owner and/or Operator LPC-665 [new]
Painted CCDD Certification LPC-667 [new]
CCDD Fee Form
CCDD Monthly Tons Record
Rejection Notice [new]
CCDD Inspection Checklist

## Illinois Pollution Control Board Opens Subdocket R2012-009(B) to consider Groundwater Monitoring

Illinois Pollution Control Board Subdocket R2012-009(B)

## FAQs

### A. CCDD Fee

**QA1**. What options do CCDD fill operators have in assessing the fee?

**AA1**. CCDD fill operators may measure the quantity of material received at their sites by either 1) weight, in tons, where the operator has weighed the CCDD or uncontaminated soil received with a device for which certification has been obtained under the Weights and Measures Act [225 ILCS 470], or 2) volume, in cubic yards, based on the known capacity of the hauling vehicle.

**QA2**. Does the CCDD fee apply to government or tax-exempt entities, such as municipalities?

**AA2**. Yes. The fee applies to CCDD or uncontaminated soil if 1) the CCDD fill operation is located off the site where the CCDD or uncontaminated soil was generated, and 2) the CCDD fill operation is owned, controlled, and operated by a person other than the source site owner or operator of the CCDD or uncontaminated soil. It doesn't matter whether the source site owner or operator is a tax-exempt entity.

**B. Uncontaminated Soil and Painted CCDD Certifications**

**QB1**. What laboratory methods and soil sampling protocol should be used for purposes of demonstrating that the soil is uncontaminated?

**AB1**. Chemical analyses must be conducted in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" U.S. EPA Publication No. SW-846 as amended.

The appropriate sampling protocol will depend on the site and the suspected contaminants; this decision should be made by the licensed Professional Engineer or Professional Geologist who is responsible for certifying that the soil is uncontaminated.

**QB2**. Does each load need a certification form, or is one certification form per job site acceptable?

**AB2**. The source site owner or operator or professional engineer should coordinate with the receiving facility in advance to make sure all soil received is properly certified. In many cases, one certification form per job site may be sufficient.

**QB3**. If consolidating soil from different areas for stockpiling until ready to send a full truckload to a CCDD facility or soil only fill operation, what address should be used for the certification form? (e.g., a municipal public works department consolidating soil from multiple water line breaks.)

**AB3**. If using a source site certification form, the addresses where the soil originated should be listed. If using a professional engineer/professional geologist certification form, the address of the location of the stockpiled soil should be listed (e.g., a municipal public works yard). In both instances, the source site owner or operator or professional engineer/professional geologist should coordinate with the receiving facility.

**QB4**. Who must sign the source site certification from LPC-662?

**AB4**. LPC-662 must be signed by either the source site owner or operator. This form is used when the soil does not come from a "potentially impacted property." In cases where a load contains soil from multiple sites, the owner or operator of each source site must sign a LPC-662.

**QB5**. How do I determine if the source site is a "potentially impacted property"?

**AB5**. Part 1100 defines a "potentially impacted property" as "property on which a historical or current use, or contaminant migration from a proximate (nearby or adjoining) site, increases the presence or potential presence of contamination." The definition is "intended to identify soil that is more likely to be contaminated and in need of professional evaluation and certification" before it is placed in a fill site. Referenced in the definition are six different environmental site assessment standards or policies that may be used to help determine whether a property is potentially impacted.

If a property is determined to be "potentially impacted property", then any soil from that property must be evaluated, sampled and certified by either a professional engineer or a professional geologist using the LPC-663 form before it can be placed in a fill site.

The six documents incorporated by reference at 35 IAC 1100.104 are presented below. Please note that the use of any of these documents is optional and that the ASTM standards are not publicly available, but may be purchased from ASTM.

ASTM International (formerly known as the American Society for Testing and Materials). 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. (610) 832-9585 www.astm.org

> ASTM E 1527-05 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, approved November 1, 2005.
>
> ASTM E 1528-06 Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process, approved February 1, 2006.

Illinois Department of Transportation, 2300 S. Dirksen Parkway Springfield, IL 62764. (217)782-7820

Bureau of Design and Environment Manual, Part III Environmental Procedures, Chapter 27 Environmental Surveys, September 2010. (Available online at http://www.dot.il.gov/desenv/Illinois%20BDE%20Manual.pdf)

Bureau of Local Roads and Street Manual, Chapter 20. Fifth Edition. (Available online at http://www.dot.il.gov/blr/manuals/Cover.pdf)

"A Manual for Conducting Preliminary Environmental Site Assessments for Illinois Department of Transportation Infrastructure Projects" Second Edition, 2012.

Illinois State Toll Highway Authority, 2700 Ogden Avenue Downers Grove, IL 60515. (630) 241-6800.

"Environmental Studies Manual", Chapter VI, Section F, July 2001. (Available online at http://www.illinoistollway.com/documents/10157/30214/PPM_ENVIRONMENTAL+MANUAL_07012001.PDF)

**QB6**. Which certification form should be used if the professional engineer or professional geologist concludes that the soil is not from a "potentially impacted property"?

**AB6**. If the professional engineer or professional geologist determines that the soil is not from a "potentially impacted property," then form LPC-662, the uncontaminated soil certification form for source site owners and operators, should be used. In this scenario, the source site owner or operator would sign the form and could attach supporting documentation prepared by the professional engineer or professional geologist affirming that the property is not potentially impacted and, consequently, does not require analytical testing for comparison to the MAC table.

Please note: all soil brought to fill operations for disposal, including soil mixed with CCDD, must have been pH-tested and must be certified on LPC-662 or LPC-663 forms, as applicable, to comply with the pH standard range of 6.25 to 9.0. In all cases, source site owners and operators are advised to coordinate with the receiving facility.

**QB7**. Is pH testing required for all soil disposed of at CCDD fill operations and uncontaminated soil fill operations?

**AB7**. Yes. CCDD and uncontaminated soil fill operations are prohibited from accepting soil for disposal unless it is within the pH range of 6.25 to 9.0. All soil brought to fill operations for disposal, including soil mixed with CCDD, must have been pH-tested and must be certified on LPC-662 or LPC-663 forms, as applicable, to comply with the pH standard. The pH standard applies only to the soil component of CCDD or to uncontaminated soil. See QB8/AB8 and consult with the receiving facility for methods for soil pH testing.

**QB8**. What method of pH testing is required for source site owners and operators?

**AB8**. The rule does not specify a method for soil pH testing. Therefore, any reproducible method generally regarded as accurate is acceptable. Bench-top methods are available from two organizations mentioned in the CCDD rule (Section 1100.104, Incorporations by Reference). Both the U.S.EPA and ASTM International provide procedures for determining pH in soil, SW-846 Method 9045D and Method D4972-01 2007, respectively. Also, numerous field kits and direct-read instruments are commercially available. These kits and instruments can provide reproducible and accurate results provided that the manufacturer's operating procedures are closely followed.

Soil pH is an important indicator for the nutritional maintenance of agricultural fields, golf courses, gardens, and commercial and personal lawns. Guidance is available from farm service organizations and landscapers regarding the number and acquisition of soil pH data to assure representative results. pH equipment manuals are also a good source for guidance. However, landscapers are generally only concerned with surface soil pH where source site owners must be concerned with varying depths of soil and fill operators are responsible for all soils that they receive.

The source site owner/operator, professional engineer, or professional geologist should coordinate with the receiving facility in advance to make sure the pH testing method selected is acceptable.

**QB9**. Which MAC (maximum allowable concentrations) standards apply to which fill sites?

**AB9**. There is a single MAC Table provided by Illinois EPA. The same table applies to both CCDD fill operations and uncontaminated soil fill operations. In some cases an individual contaminant in the table may have more than one MAC. This occurs where the rules allow the background concentration of a contaminant to be used as the MAC in place of a more stringent value. MACs based on background are designated in the MAC table on the Agency's website using footnotes (e) and (f).

Tables G and H of 35 Ill. Adm. Code 742.Appendix A contain multiple background concentrations for each contaminant. The applicable background concentration is based on the location of the CCDD fill operation or uncontaminated soil fill operation where soil is placed. Therefore, soil accepted at a fill operation can contain concentrations of a contaminant up to the background concentration that applies to the fill operation's location. Because background concentrations differ based on location, Illinois EPA recommends coordination with the receiving facility to ensure that the proper background concentrations for that facility are being met.

**QB10**. Can compliance with the alternative, extraction-based TCLP/SPLP results, reverse non-compliance with MACs based on other endpoints?

**AB10**. Yes. However, only inorganic chemicals are eligible and not all of them qualify. Twenty-one inorganic chemicals presently qualify for this alternative compliance method. They are identified in the Agency MAC table by the footnote "m". While the Agency endorses all the TACO-based MAC criteria, the alternative, extraction-based results reflect the most trustworthy estimation of a soil's potential to contaminate groundwater.

**QB11**. Is soil sample averaging or compositing allowed to show compliance with the MACs?

**AB11**. No. Analytical results cannot be averaged. Samples from potentially impacted property cannot be composited. Samples from a site that is not potentially impacted property can be composited if they are composited in accordance with 35 Ill. Adm. Code 1100.610(d). Samples for volatile chemicals can never be composited.

**QB12**. What are the certification requirements to allow painted CCDD for use as fill material?

**AB12**. In order to be used as fill in a CCDD fill operation, painted CCDD must be certified by a professional engineer or a professional geologist utilizing the LPC-667 Form developed by the Agency. Except in the circumstances involving pavement markings discussed in answer AB13 below, sampling and analyzing the paint on the CCDD is an integral part of the certification process.

**QB13**. Is certification necessary if the paint is limited to pavement markings?

**AB13**. Yes, certification is always necessary for painted CCDD to be used as fill in a CCDD fill operation. However, if the CCDD is limited to broken concrete, asphalt pavement or other roadway CCDD and the paint on it is limited to pavement markings that comply with IDOT specifications for pavement markings, a professional engineer or professional geologist may attach the information used to determine that all these conditions have been met as provided for in Item d of Part 3 of the LPC-667 Form. In such cases, the paint does not need to be sampled and analyzed unless the professional engineer or professional geologist determines they are necessary to confirm compliance with IDOT specifications.

**QB14**. Is the Intergovernmental Agreement between Illinois EPA and IDOT regarding uncontaminated soil certifications still in effect?

**AB14**. No. The Intergovernmental Agreement expired on August 27, 2012, the date the most recent amendments to the CCDD rules took effect.

### C. Load Checking/Rejected Loads

**QC1**. What are the requirements regarding the use of PIDs (photo ionization detectors) by CCDD facilities and soil only fill operations?

**AC1**. An inspector designated by the facility must inspect every load before its acceptance at the facility utilizing an elevated structure, a designated ground level inspection area, or another acceptable method as specified in the Agency permit. In addition to a visual inspection, the inspector must use an instrument with a photo ionization detector utilizing a lamp of 10.6 eV or greater or an instrument with a flame ionization detector, or other monitoring devices approved by the Agency, to inspect each load. All instruments shall be interpreted based on the manufacturer's margin of error. Any reading in excess of background levels using any of these instruments must result in the rejection of the inspected load. In addition, any reading in excess of background levels on any monitoring device used by the Agency during an Agency inspection must result in the rejection of the inspected load.

**QC2**. What happens if the PID instrument at the CCDD facility or soil only fill operation detects volatile contaminants in soil that has been certified by a professional engineer/professional geologist? Would the certification take precedence over the PID reading?

**AC2**. No. CCDD facilities and uncontaminated soil fill operations are required by the regulations to reject any load that results in a PID reading above background level.

**QC3**. My CCDD materials and/or soil were rejected at the CCDD facility or soil-only fill operation. What happens next?

**AC3**. When a load is rejected the fill operation must provide the driver with a written notice containing certain information, including the reasons the load was rejected. The fill operation must also record information about the load and make the information available to the Agency. Rejected loads must be disposed of at a permitted landfill unless the requirements of 35 Ill. Adm. Code 1100.205(a)(5) are satisfied, in which case the load can be taken to a fill operation. Those requirements include correcting the reasons for rejection, and re-testing and re-certifying any soil.

Please note: The CCDD facility or soil only fill operation may reject any load at their own discretion. The responsibility falls to them to make sure only CCDD and uncontaminated soil are accepted for fill.

### D. Definitions/Applicability

**QD1**. What fill sites are subject to the CCDD rules (35 Ill. Adm. Code 1100)?

**AD1**. The CCDD rules apply to current or former mines, quarries, other excavations.

**QD2**. What is an "other excavation"?

**AD2**. An "other excavation" is a "pit other than a quarry or mine created primarily for the purpose of extracting resources, including but not limited to, clay or other soil and does not includes holes, trenches, or similar earth removal created as part of normal construction, removal, or maintenance of a structure, utility, or transportation infrastructure."

**QD3**. What does the definition of "uncontaminated soil" apply to?

**AD3**. For purposes of the CCDD rules, this definition applies only to soil that is generated from construction or demolition activities and used as fill material at CCDD facilities and uncontaminated soil fill operations.

**QD4**. Is dredged material considered to be "soil generated from construction or demolition activities"?

**AD4**. In many cases the answer is yes. Sediments composed of naturally occurring materials are considered to be types of soil and dredging is considered to be a construction activity. Therefore, dredged sediments composed of naturally occurring materials, that have been properly certified to be uncontaminated soil, may be used as fill in CCDD fill operations and uncontaminated soil fill operations.

**QD5**. May fill operators accept CCDD materials or uncontaminated soil from sites where remediation has been or is being conducted, such as those regulated by the Leaking Underground Storage Tank Section or the Site Remediation Program?

**AD5**. Yes, if the material is not removed as part of a cleanup or removal of contaminants (e.g., fill operators may accept clean overburden or other on-site soil or material that is not contaminated and is not being removed or treated as part of the remediation activities).

In such instances, the source site would be a potentially impacted property, requiring use of the LPC-663 uncontaminated soil certification form.

**QD6**. Do the CCDD rules ban the placement of uncontaminated soil in farm fields or other areas?

**AD6**. No. The CCDD rules only regulate the placement of soil in mines, quarries, and "other excavations". Outside of these areas uncontaminated soil may be used as set forth in Section 3.160(b) of the Environmental Protection Act. (415 ILCS 5/3.160(b)). No soil certification forms are required for uncontaminated soil placed outside of CCDD facilities and uncontaminated soil fill operations.

There is no numeric standard that provides an easy reference for when soil used outside of CCDD facilities and uncontaminated soil fill operations is considered uncontaminated. The MAC table applies ONLY to soil placed for disposal at CCDD facilities or uncontaminated soil fill operations.

**QD7**. Will public works projects already in progress or already bid prior to the effective date of the recent CCDD rule amendments be allowed an exemption from the new soil certification requirements?

**AD7**. No. The regulations do not provide a grandfathering clause for any projects or entities for any reason.

For More Information
Bureau of Land Permit Section
217-524-3300