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**Title 40 —Protection of Environment**  
**Chapter I —Environmental Protection Agency**  
**Subchapter I —Solid Wastes**

**Part 278** Criteria for the Management of Granular Mine Tailings (Chat) in Asphalt Concrete and Portland Cement Concrete in Transportation Construction Projects Funded in Whole or in Part by Federal Funds

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**PART 278—CRITERIA FOR THE MANAGEMENT OF GRANULAR MINE TAILINGS (CHAT) IN ASPHALT CONCRETE AND PORTLAND CEMENT CONCRETE IN TRANSPORTATION CONSTRUCTION PROJECTS FUNDED IN WHOLE OR IN PART BY FEDERAL FUNDS**

**Authority:** 42 U.S.C. 6961 et seq.

**Source:** 72 FR 39352, July 18, 2007, unless otherwise noted.

**§ 278.1 Definitions.**

- (a) **Asphalt concrete** —a layer, or combination of layers, composed of a compacted mixture of an asphalt binder and mineral aggregate.
- (b) **Chat** —waste material that was formed in the course of milling operations employed to recover lead and zinc from metal-bearing ore minerals in the Tri-State Mining District of Southwest Missouri, Southeast Kansas and Northeast Oklahoma.
- (c) **Chip seal** —a material composed of aggregate placed on top of a layer of an asphalt or asphaltic liquid binder. The aggregate may be rolled into the binder.
- (d) **Cold mix asphalt** —refers to an asphalt and aggregate mixture composed of binders, soaps, or other chemicals which allow its use when cold
- (e) **Epoxy seal** —refers to the mixture of aggregate in epoxy binders. Epoxy seals are typically used as an anti-skid surface on bridge decking
- (f) **Federal or State response action** —State or Federal response action undertaken pursuant to applicable Federal or State environmental laws and with consideration of site-specific risk assessments.

- (g) **Flowable fill** —a cementitious slurry consisting of a mixture of fine aggregate or filler, water, and cementitious materials which is used primarily as a backfill in lieu of compacted earth.
- (h) **Granular road base** —road base typically constructed by spreading aggregates in thin layers of 150 mm (6 inches) to 200 mm (8 inches) and compacting each layer by rolling over it with heavy compaction equipment. The aggregate base layers serve a variety of purposes, including reducing the stress applied to the sub grade layer and providing drainage for the pavement structure. The granular sub base forms the lowest (bottom) layer of the pavement structure and acts as the principal foundation for the subsequent road profile.
- (i) **Hot Mix Asphalt** —a hot mixture of asphalt binder and size-graded aggregate, which can be compacted into a uniform dense mass. Hot mix asphalt also includes hot mix asphalt sub bases and hot mix asphalt bases.
- (j) **Microsurfacing** —polymer-modified slurry seal.
- (k) **Portland cement concrete (PCC)** —pavements consisting of a PCC slab that is usually supported by a granular (made of compacted aggregate) base or sub base.
- (l) **Pozzolan** —a siliceous material which when combined with calcium hydroxide in the presence of moisture exhibits cementitious properties.
- (m) **Slurry seal** —refers to a material composed of emulsified asphalt, aggregate, and mineral fillers, such as Portland cement or lime which is applied as a thin coating on top of asphalt concrete or Portland cement concrete road surfaces.
- (n) **Stabilized base** —a non-asphaltic road base composed of aggregate mixed with a pozzolan material which increases the bearing strength of the material.
- (o) **Transportation construction projects** —these activities relate to the construction of roads and highways and include bases, sub bases, road surfaces, bridges, abutments, shoulders, and embankments. They are not related to any residential use.
- (p) **Tri-State Mining District** —the lead-zinc mining areas of Ottawa County, Oklahoma, Cherokee County of southeast Kansas and Jasper, Newton, Lawrence, and Barry Counties of southwest Missouri.
- (q) **Warm mix asphalt** —refers to a mixture of an asphalt binder with aggregate, paraffin or esterified wax, and mineral additives that allow its use at temperatures much lower than hot mix asphalt.

## § 278.2 Applicability.

These requirements apply to chat from the Tri-State Mining District used in transportation construction projects carried out, in whole or in part, using Federal funds.

## § 278.3 Criteria for use of chat in Federally funded transportation projects.

Chat can be used in transportation construction projects carried out, in whole or in part, using Federal funds if:

- (a) The chat is used in hot, warm or cold mix asphalt, in slurry seal, microsurfacing, or in epoxy seal; or
- (b) The chat is used in Portland cement concrete, granular road base, flowable fill, stabilized road base or chip seal if, on a case by case basis either:

- (1) Synthetic Precipitation Leaching Procedure (SPLP) tests are conducted on the proposed material using EPA SW-846 Method 1312, and the leachate testing results show that concentrations in the leachate do not exceed the National Primary Drinking Water Standards for lead and cadmium and the fresh water chronic National Recommended Water Quality Criterion for zinc of 120 µg/l; or
  - (2) EPA (or a State environmental Agency, if it chooses to do so) has determined, based on a site-specific risk assessment and after notice and opportunity for public comment, that the releases from the chat mixture in its proposed use will not cause an exceedance of the National Primary Drinking Water Standards for lead and cadmium in potential drinking water sources and the fresh water chronic National Recommended Water Quality Criterion for zinc of 120 µg/l in surface water; or
- (c) The use of chat has been authorized pursuant to a State or Federal response action.
- (d) EPA SW-846 Method 1312, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," Third Edition, September 1994, is incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. It is available at [www.epa.gov/hw-sw846/](http://www.epa.gov/hw-sw846/). All approved material is available for inspection at the OLEM Docket in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton Bldg., Rm. 3334, 1301 Constitution Ave. NW, Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading room is (202) 566-1744, and the telephone number for the OLEM Docket is (202) 566-0270. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov) or go to [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

[72 FR 39352, July 18, 2007, as amended at 85 FR 40608, July 7, 2020]

## § 278.4 Certification and recordkeeping requirements.

- (a) **Certification.** For chat used under the jurisdiction of the U.S. Department of Interior, Bureau of Indian Affairs, the EPA certification below is not applicable. In other jurisdictions, the acquirer shall:
- (1) Submit a signed, written certification to the environmental regulatory agency in the State where the chat is to be used within 30 days of the date of acquisition. The certification shall contain the following:
    - (i) Location of origin of the chat;
    - (ii) Amount of chat acquired; and
    - (iii) Certification Statement: I certify under penalty of law that the chat used in this transportation project will meet EPA criteria found in § 278.3.
  - (2) **Transfer.** If the chat is sold or otherwise transferred to another party, the acquirer shall provide a copy of the certification to the new owner of the chat. The new owner shall submit a certification according to paragraph (a)(1) of this section. The new certification supersedes all previous certifications.

- (3) **Recordkeeping.** The acquirer of chat, and any other person that receives the chat, will maintain copies of all of the following for three years; a copy of the certification following transmittal to the State department(s) of the environment, and, as appropriate; any SPLP testing results; or any site-specific risk assessments.

(b) [Reserved]