



INTEROFFICE CORRESPONDENCE

DATE: January 4, 1995

TO: M. T. Vess, Facility Management, Bldg. T891B, X6540

FROM: *yoof* L. A. Gregory-Frost, Field Operations, Bldg. 080, X8570

SUBJECT: REGULATORY STATUS OF THE GRANULATED ACTIVATED CARBON FROM THE OPERABLE UNIT NO. 2 FIELD TREATMENT UNIT - LAG-001-95

DOE Order: 5480.4

Action: None

PURPOSE

This correspondence has been prepared to document the resolution of several issues associated with the regulatory status of the granulated activated carbon (GAC) from the Operable Unit No. 2 (OU-2) field treatment unit. The following provides a "walk-through" of the regulations and the rationale for the determinations. The specific questions which will be answered include:

1. Is the GAC a hazardous waste when recycled?
2. Do the Land Disposal Restrictions (LDR) apply to the GAC?
3. What are the management requirements for the GAC?

BACKGROUND

The Facility Management group within Environmental Operations Management provided the following information on which the regulatory interpretations were applied.

- The GAC was characterized by the generator as a F001-listed hazardous waste.
- GAC generated after April 1992 has received a Property Release Evaluation (PRE). The Phase 2 GAC met the process knowledge requirements for a PRE prior to the Department of Energy approval of the "No Rad Added" program on May 19, 1994. A PRE determination for the Phase 1 GAC (generated prior to April 1992) will be made after 10 CFR 834 is promulgated.
- The 16,000 pounds (lbs.) of GAC are currently managed as a RCRA-regulated hazardous waste and are being stored in Interim Status storage unit 18.03.
- Conversations with recycling companies indicated that the same transport trucks were used for transport of 1,000 lbs. as for 20,000 lbs.; therefore, the cost would be the same regardless of the weight of the GAC to be shipped.
- A sufficient quantity of GAC (16,000 lbs.) was generated in August 1994.
- Funding was requested and provided for regeneration of the GAC in Fiscal Year 1995.
- The GAC is scheduled for regeneration at an offsite recycling facility.
 - - A purchase requisition dated October 10, 1994 initiated the competitive bid process for the GAC regeneration contract.
 - - The contract was awarded in early December 1994.

ADMIN RECORD

- The regeneration of the 16,000 lbs. of GAC material will cost \$3200, and transport of up to 20,000 lbs. of GAC will cost \$7000.

REGULATORY RATIONALE

The following rationale is provided as a series of questions and answers which lead the reader through the applicable Colorado Hazardous Waste Regulations found in 6 CCR 1007-3.

1. Definitions

Solid Waste:

- "A solid waste is any discarded material that is not excluded by § 261.4(a) or that is not excluded by variance granted under § 261.30 and §261.31." [Section 261.2(a)(1)]
- "A discarded material is any material which is:
Recycled, as explained in paragraph (c) of this section," [Section 261.2(a)(2) and (a)(2)(ii)]
- "Materials are solid wastes if they are recycled -- or accumulated, stored, or treated before recycling -- as specified in paragraphs (c)(1) through (c)(4) of this section" [Section 261.2(c)]
- Spent materials when reclaimed are solid wastes according to Table 1, column 3 [Section 261.2]
- "Materials that are not solid wastes when recycled.
(1) Materials are not solid wastes when they can be shown to be recycled by being:
 - (i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or
 - (ii) Used or reused as effective substitutes for commercial products; or [6 CCR 1007-3 Section 261.2(e)(1)]
 - (iii) Returned to the original process from which they are generated, without first being reclaimed *or land disposed*. The material must be returned as a substitute for feedstock materials ~~raw material feedstock, and the process must use raw material as principal feedstocks~~. *In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land*" [40 CFR Section 261.2(e)(1)(iii), italics indicate revisions in the Universal Treatment Standard]

Reclaimed:

- "A material is 'reclaimed' if it is processed to recover a useable product, or if it is regenerated." [Section 261.1(d)(4)]
- "Reclaimed. Materials noted with a "*" in column 3 of Table 1 are solid wastes when reclaimed." [Section 261.2(c)(3)]

Spent Material:

- "A 'spent material' is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing". [Section 261.1(d)(1)]

Speculative Accumulation:

- “ A material is ‘accumulated speculatively’ if it is accumulated before recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable ... (Materials that are already defined as solid wastes also are not to be included in this calculation.) ...” [Section 261.1(d)(8)]

Hazardous Waste -- Derived-from Rule

- “Unless and until it meets the criteria of paragraph (d):
(1) A hazardous waste will remain a hazardous waste.
(2) (i) Except as otherwise provided in paragraph (c)(2)(ii) of this section, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste.” [Section 261.3(c)]

2. Is the GAC a hazardous waste when recycled? YES

A. Is the GAC a solid waste? Yes

- Even though the GAC is being recycled, it meets the definition of a solid waste.
- GAC meets the definition of spent material.
- The intended disposition of the GAC is reclamation.

B. Is the GAC excluded from being a solid waste? No

- The reclamation process for the GAC does not meet the criteria for exclusion as a solid waste. [Section 261.2(e)(1)]
- Speculative accumulation does not apply because spent materials which are defined as solid wastes, are not subject to speculative accumulation and cannot be included in the calculations.
- The GAC does not meet the criteria for exclusion identified in Sections 261.4(a) and (b).

C. Is the GAC a Resource Conservation and Recovery Act (RCRA) regulated hazardous waste?

Yes

- The GAC is a RCRA-regulated hazardous waste because it is a solid waste which is generated during the treatment of a listed RCRA-regulated hazardous waste (surface water “containing” hazardous constituents).
- In addition, the generator has declared the GAC to be a RCRA-regulated hazardous waste.

D. Is the GAC excluded as a hazardous waste? No

- The GAC does not meet the criteria identified in Section 261.3(c)(2)(ii) or 261.3(d).

3. Do the Land Disposal Restrictions (LDR) apply to the GAC? YES

- A. Is the generator required to make a LDR determination if the GAC is disposed? Yes
- The generator requirements clearly state that "A person who generates a solid waste, as defined in §261.2, must determine if that waste is a hazardous waste ..." and "If the waste is determined to be a hazardous, the generator must refer to Parts 264, 265, 266 and 268 of these regulations for possible exclusions or restrictions pertaining to management of his specific waste." [Section 262.11 and 262.11(d)]
 - Section 268.7(a) states "Except as specified in § 268.32 of this part, if a generator's waste is listed in Part 261, subpart D, the generator must test the waste, or test an extract using the test method described in Part 261, Appendix II, or use process knowledge of the waste, to determine if the waste is restricted from land disposal under this part. Except as specified in § 268.32 of this part, if a generator's waste exhibits one or more of the characteristics set out at Part 261, subpart C, the generator must test an extract using the test method described in Appendix IX of this part, or use knowledge of the waste to determine if the waste is restricted from land disposal under this part."
 - The GAC would not be excluded from the LDR regulations as described in Sections 268.1(c), (d), or (e), or 268.6.
- B. Does the GAC meet the LDR treatment standards for F001-listed hazardous waste? Unknown and not required for recycling which does not constitute disposal
- It is not necessary to determine if the GAC meets the treatment standards identified in 40 CFR Section 268.40(a) of the Universal Treatment Standards if the GAC is being recycled in a manner which does not constitute disposal. Table UTS -- Universal Treatment Standards found in 40 CFR Section 268.48 identifies the concentrations of associated hazardous constituents which may not be exceeded for allowable land disposal. Regeneration of the GAC according to the current contract does not constitute disposal. However, the residues from the process which recycles the GAC must meet the treatment standards for that constituent prior to disposal.
 - If disposal were planned or if documentation of meeting the treatment standards is required for compliance with the storage prohibition regulations, additional sampling and analysis is required. The analytical results provided to me for volatile organic compounds were obtained through the Toxicity Characteristic Leaching Procedure (TCLP). The TCLP analytical method provides the concentration of volatile organic compounds in a waste extract. The F001-listed hazardous wastes have treatment standards which are expressed as "total waste standards," and must be evaluated using analytical methods which evaluate the concentration of volatile organic compounds in the waste or waste residue not in an extract. [Table UTS, 40 CFR Section 268.48]
 - To meet the LDR certification requirements [i.e. for taking 261.3(e)(1)(ii)] a letter must be placed in the file in accordance with 40 CFR 268.7(a)(6). Documentation of this certification must be provided to the recycler if the GAC will be stored at the recycling facility prior to regeneration.
- C. Does the LDR one year storage prohibition apply to the GAC? Yes
- A facility has the responsibility to ship hazardous waste for recovery, treatment or disposal in a timely manner. In situations of potential non-compliance with the storage

prohibition, the burden of proof of a non-compliance with " a timely manner" or "as soon as possible" is the responsibility of the regulating agency. Prior to and after one year of storage, it is a Rocky Flats responsibility to document the rationale and justification for storing the RCRA-regulated hazardous waste and for meeting the requirements of 268.50. After one year, Rocky Flats must document and has the responsibility of the burden of proof for justifying storage of the waste prior to recycling, treatment or disposal.

" (b) An owner/operator of a treatment, storage, or disposal facility may store such wastes for up to one year unless the Department can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate the proper recovery, treatment or disposal." [Section 268.50(b)]

" (c) An owner/operator of a treatment, storage or disposal facility may store such wastes beyond one year; however, the owner/operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal." [Section 268.50(c)]

- Rocky Flats must meet the following conditions for the GAC in order to store it for one year or longer prior to recycling, treatment or disposal. In addition, Rocky Flats must maintain documentation that these conditions have been and are being met.

" (a) Except as provided for in this section, the storage of hazardous wastes restricted from land disposal under Subpart C of this Part or RCRA section 3004 [42 U.S.C. § 6924] is prohibited unless the following conditions are met:

(1) A generator stores such wastes in tanks, containers, or containment buildings on-site solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment or disposal and the generator complies with the requirements in Section 262.34 and Parts 264 and 265 of these regulations.

(2) An owner/operator of a hazardous waste treatment, storage, or disposal facility stores such wastes in tanks, containers, or containment buildings solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and;

(i) Each container is clearly marked to identify its contents and the date each period of accumulation begins;

(ii) Each tank ...

(3) A transporter stores the manifested shipments of such wastes at a transfer facility for 10 days or less." [Section 268.50]

- Because the currently available analytical results for the GAC do not include "total volatile organic compounds", the conservative determination that the GAC does not meet the LDR treatment standards was made. However, if Rocky Flats documents that the GAC meets the treatment standards, storage of the GAC for greater than one year is in compliance with the storage prohibition requirements in Section 268.50.

"The prohibition in paragraph (a) of this section does not apply to hazardous wastes that meet the treatment standards specified under §§ 268.41, 268.42, and 268.43 or the treatment standards specified under the variance in § 268.44, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in § 268.32 or RCRA section 3004." [Section 268.50(e)]

3. What are the management requirements for the GAC while at Rocky Flats?
MANAGEMENT (INCLUDING, BUT NOT LIMITED TO, LABELING, INSPECTIONS, CONTAINER STORAGE REQUIREMENTS) IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF THE HAZARDOUS WASTE REQUIREMENTS MANUAL AND 6 CCR 1007-3 PARTS 261, 262, 265, AND 268
- A. Do the lesser management requirements of Sections 261.6 for recyclable materials or Section 267 for specific types of hazardous waste apply to the GAC? No
- These sections of the regulations are applicable to specific waste types (e.g. batteries, hazardous waste fuel, wastes destined for precious metal recovery) which do not include GAC.
- B. What criteria determine the specific management requirements for the GAC?
- The GAC is a hazardous waste destined for recycling which has been generated and stored at Rocky Flats.
 - A generator determination based on process knowledge and, if available, analytical data is used to evaluate if the GAC meets the LDR treatment standards. If the GAC meets the treatment standards, then the storage prohibition requirements of Section 268.50 would be met.
 - The decision to recycle the GAC is based on the intent to use or to sell the regenerated GAC for use as a commercial product. Recycling of a RCRA-regulated hazardous waste to circumvent disposal requirements is not allowed by the Colorado Hazardous Waste Regulations. In other words, if there is no intent to use or sell the regenerated GAC, regeneration of the GAC to remove the hazardous constituents prior to disposal of the GAC as a solid waste (not a hazardous waste) would be considered "sham recycling" and improper treatment and disposal.
 - Additional characterization and management requirements may be dictated by the hazardous waste regulations in the State where the GAC will be recycled.

LAG:bk

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