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# **HAZARDOUS WASTE RECYCLING GUIDANCE DOCUMENT**



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**Colorado Department  
of Public Health  
and Environment**

**Hazardous Materials and Waste Management Division  
(303) 692-3300**

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## **Purpose of this Guidance**

*This is intended as general guidance for generators of hazardous waste and is meant to assist in compliance with the hazardous waste regulations. The guidance is not meant to modify or replace the promulgated regulations which undergo periodic revisions. In the event of a conflict between this guidance and promulgated regulations, the regulations prevail. Some portions of the hazardous waste regulations are complex and this guidance does not go into details of these complex situations. If a regulatory situation is not described in the guidance or clarification is desired, an official interpretation of a specific hazardous waste regulation can be requested by writing to the Hazardous Materials and Waste Management Division at the address on page 19.*

*We would appreciate any comments or suggestions for making improvements in future editions. Suggestions or comments can be sent to the address on page 19.*

**Note:** *This document has been reformatted to improve accessibility in Portable Document Format (PDF). This opportunity was also used to update the contact information and list of available documents. No other substantive changes were made unless specifically noted.*

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## 1.0 INTRODUCTION

Proper hazardous waste identification is important because whether or not a waste qualifies as hazardous usually dictates whether all, some or none of the extensive RCRA hazardous waste regulations apply to its handling. As mandated by Subtitle C of the Resource Conservation and Recovery Act (RCRA), EPA created hazardous waste regulations in 1980 to ensure that wastes that pose a threat to human health and the environment would be managed safely. In order to be regulated as a hazardous waste under RCRA, a material must first be classified as a solid waste. After confirming that a material is a solid waste, the generator of the waste must then determine if it is a hazardous waste. Recyclable materials are a special subset of solid wastes.

There are three basic steps in the hazardous waste determination process:

- 1) determine if your waste meets the definition of a RCRA Subtitle C solid waste (“CDPHE Solid Waste Definition and Solid and Hazardous Waste Exclusions Guidance Document”),
- 2) if so, determine if your waste is excluded from being a RCRA Subtitle C solid or hazardous waste (“CDPHE Solid Waste Definition and Solid and Hazardous Waste Exclusions Guidance Document” and “CDPHE Hazardous Waste Recycling Guidance Document”),
- 3) if not excluded, determine if your waste is a listed hazardous waste and/or exhibits a characteristic of hazardous waste (“CDPHE Hazardous Waste Identification Guidance Document”).

Evaluating whether a waste is a RCRA Subtitle C hazardous waste may require detailed process review and reference to EPA background documents, regulatory preambles, Colorado Hazardous Waste Statute Title 25 Article 15 and/or Colorado Hazardous Waste Regulations (CHWR) 6 CCR 1007-3. If you need assistance in this process, you can request an interpretation on the classification of your waste in writing by providing detailed design and/or process knowledge to the Hazardous Materials and Waste Management Division (the Division) of the Colorado Department of Public Health and Environment (CDPHE, the Department). Unless otherwise noted, all regulatory citations in this document refer to the Colorado Hazardous Waste Regulations.

This document is intended to be used as “plain English” guidance on determining if a waste is a RCRA Subtitle C solid waste and if it meets one of the exclusions from regulation as a recyclable material. The information in this document is by no means a complete representation of U.S. Environmental Protection Agency’s (EPA) or the Department’s regulations or policies. This document is not intended and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with Colorado.

## 2.0 REGULATORY SUMMARY

Under RCRA Subtitle C, Congress granted EPA the authority to regulate hazardous wastes. The principle objective of hazardous waste regulation is the protection of human health and the environment. Hazardous waste regulation is also intended to encourage the conservation and recovery of valuable materials. The definition of solid waste under RCRA, which serves as the starting point for the hazardous waste management system, reflects EPA's effort to obtain the proper balance between these two underlying objectives.

According to the hazardous waste regulations, a material must be a solid waste before it can be considered a hazardous waste. The regulatory definition of solid waste, found in the Colorado Hazardous Waste Regulations 6 CCR 1007-3 Section 261.2(a), encompasses: (1) materials that are abandoned; (2) materials that are recycled; (3) materials that are inherently waste-like; and (4) waste military munitions. Materials that do not fall within one of these broad categories are not subject to regulation as hazardous wastes.

Materials that are recycled are a special subset of the solid waste universe. When recycled, some materials may qualify for an exclusion from the definition of solid waste and fall out of hazardous waste regulation or be subject to less stringent regulatory controls. Based on the material and the type of recycling, the generator of a recyclable solid waste must determine if it is subject to reduced requirements or full regulation.

This guidance document explains the range of hazardous waste management standards for different types of hazardous waste recycling, as dictated by Sections 261.4 and 261.6 and Parts 267, 273, and 279 of the Colorado hazardous waste regulations. This range of management - from no regulation to full regulation - is essentially based on the type of recycling activity involved and the hazards posed, and demonstrates EPA's and the Department's intent to encourage recycling while still protecting human health and the environment.

### 2.1 HAZARDOUS WASTE IDENTIFICATION PROCESS

Hazardous waste identification begins with an obvious point: in order for any material to be a hazardous waste, it must first be a waste. A waste is essentially a thing that someone throws away, an item with no value. RCRA uses the term "solid waste" in place of the common term "waste." Under RCRA, the term "solid waste" means any waste, whether in solid, semisolid, liquid, or contained gaseous physical form. Thus, the first step in the RCRA hazardous waste identification process is deciding whether an item qualifies as a RCRA solid waste.

Only a small fraction of all RCRA solid wastes actually qualify as hazardous wastes. At first glance, one would imagine that distinguishing between hazardous and nonhazardous wastes is a simple matter of chemical and toxicological analysis. Other factors must be considered, however, before evaluating the actual hazard that a waste's chemical composition poses. Regulation of certain wastes may be impractical or otherwise undesirable, regardless of the hazards they pose. For instance, household waste often contains dangerous chemicals, but making households subject to the strict RCRA waste management regulations would create a number of practical problems. EPA exempted or excluded certain wastes, like household wastes, from the hazardous waste definition and regulations.

The second step in the hazardous waste determination process requires the generator to determine if the waste fits any of the four categories of exclusions identified in CHWR Section 261.4. The first category includes wastes that are excluded from being solid wastes (FLOWCHART 1). The second category covers wastes that are excluded from being hazardous wastes (FLOWCHART 2). The other two categories are conditional exclusions that only apply when the provisions established under each section are met. The third category contains an exclusion for hazardous waste generated in raw material, product storage, or manufacturing units. The final category is a limited exclusion for laboratory samples and waste treatability studies. If a waste is excluded under any of these categories, the hazardous waste requirements do not apply, but the waste may still be regulated under other regulatory programs.

Certain wastes are exempt from regulation as hazardous wastes or are subject to special requirements if they are recycled in specific ways (FLOWCHART 3 - 3C, FLOWCHART 5). Only after determining that a solid waste is not somehow excluded from hazardous waste regulation should the analysis proceed to evaluate the actual chemical hazard that a waste poses.

The third step in the hazardous waste identification process is determining whether a waste actually poses a sufficient chemical or physical hazard to merit regulation. This step in the hazardous waste identification process involves evaluating the waste in light of the regulatory definition of hazardous waste. (FLOWCHART 4 *and* CDPHE Hazardous Waste Identification Guidance Document)

Since proper hazardous waste identification is essential to the success of the hazardous waste management program, the Colorado Hazardous Waste Regulations (CHWR) at 6 CCR 1007-3 Section 262.11 require that any person who produces or generates a waste must determine if that waste is hazardous. In addition to the wastes that EPA considers hazardous, the Department can determine that certain wastes are hazardous wastes if the Colorado Hazardous Waste Commission makes a written finding that such action is necessary to protect public health and the environment. Such Colorado-specific wastes are not regulated as hazardous waste by EPA and other states. The only examples of Colorado-specific hazardous wastes are the listings of chemical munitions mustard, mustard agent and mustard gas.

Some wastes may be identified as hazardous by one or more RCRA hazardous characteristics and/or listings. Process knowledge and origin of the waste is crucial in determining which, if any, hazardous waste codes apply. All applicable hazardous waste codes must be used when managing these wastes.

Some widely generated wastes are subject to different management standards in order to reduce the regulatory burden while still ensuring the wastes are managed in a way that is protective of human health and the environment. These wastes include certain pesticides, mercury-containing thermostats, batteries, and aerosol cans that contain hazardous waste when discarded [known as Universal Wastes, CHWR Part 273] and used oil that is recycled [CHWR Part 279]. If these wastes are managed in accordance with these management standards, the generator is subject to reduced notification requirements, reduced recordkeeping requirements, does not have to use a

hazardous waste manifest or hazardous waste transporter to ship their waste, and can store the waste longer than if it were managed under the full hazardous waste requirements.

## **2.2 DEFINITION OF SOLID WASTE [CHWR Section 261.2]**

The statutory definition of a solid waste is not based on the physical form of the material, (i.e., whether or not it is a solid as opposed to a liquid or gas), but on the fact that the material is a waste. RCRA Section 1004(27) defines solid waste as:

Any garbage, refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material, including solid, liquid, semisolid, or contained gaseous material, resulting from industrial, commercial, mining, and agricultural operations and from community activities.

The regulatory definition of solid waste, found in Section 261.2, is narrower than the statutory definition. The regulatory definition of solid waste is any discarded material that is not specifically excluded by Section 261.4(a) as being a solid waste or that is not otherwise excluded by a variance given by the Colorado Hazardous Waste Commission. Discarded material encompasses three categories of materials: (1) materials that are abandoned; (2) materials that are inherently waste-like; or (3) materials that are recycled.

### **2.2.1 ABANDONED**

The term abandoned simply means thrown away. A material is abandoned if it is disposed of, burned, or incinerated. In addition, a material that is stored prior to, or in lieu of, one of these activities is also considered to be abandoned.

### **2.2.2 INHERENTLY WASTE-LIKE**

Some materials are always considered solid wastes, even if they are recycled in some manner (i.e., they are considered to be “inherently waste-like”). Because these materials may pose a threat to human health and the environment when they are recycled, they do not qualify for any recycling exemptions. Inherently waste-like materials include the dioxin-containing listed wastes F020, F022, F023, F026 and F028. Hazardous waste meeting the F021 listing is also considered inherently waste-like unless it is used at the site of generation as an ingredient in a product. In addition, any secondary materials that are characteristic or listed hazardous wastes are considered to be inherently waste-like when they are fed to a halogen acid furnace. This provision was added to ensure that halogen acid furnaces, which burn some of the most toxic wastes generated in this country, would be regulated when burning any type of hazardous waste.

### **2.2.3 RECYCLED**

A material is recycled if it is used, reused, or reclaimed. These three terms have specific regulatory definitions. A material is reclaimed if it is processed to recover a usable product or if it is regenerated (e.g., regeneration of spent solvents). A material is used or reused if it is either employed as an ingredient in an industrial process to make a product (e.g., distillation bottoms from one process used as feedstock in another process) or if it is employed as an effective



substitute for a commercial product (e.g., spent pickle liquor used as a sludge conditioner in wastewater treatment), without being reclaimed first.

Some materials that are recycled are classified as solid wastes, while others are exempt from regulation as wastes. Sections 261.2 (c), (d), and (e) describe the general requirements that determine whether wastes are considered solid wastes when recycled. Section 261.2(c) designates as solid wastes certain materials that are recycled in particular ways (i.e., used in a manner constituting disposal, burned for energy recovery, reclaimed, or speculatively accumulated). Section 261.2(d) lists inherently waste-like materials that are solid wastes no matter how they are recycled. Other materials that are recycled through use or reuse of the material may qualify for exemptions from the solid waste definition under Section 261.2(e). Section 261.6 describes the regulations that apply to hazardous wastes that are recycled.

### **2.3 CLASSIFICATION OF RECYCLED MATERIALS [CHWR Section 261.1]**

One way a material may meet the definition of a solid waste in Section 261.2 is if it is recycled in a certain manner. When a material is recycled, its regulatory classification (i.e., whether or not it is a solid waste, and potentially a regulated hazardous waste) depends on two factors: first, what type of secondary material is being recycled; and second, what type of recycling is occurring. Depending on these determinations, a waste destined for recycling may or may not be regulated.

#### **2.3.1 SECONDARY MATERIALS**

A secondary material is a material that potentially can be a solid and hazardous waste when recycled. Used or residual waste-like materials are called secondary materials and are divided into five groups. TABLE 1 [CHWR Section 261.2(c)] lists the five types of secondary materials: spent materials, sludges, by-products, commercial chemical products, and scrap metal. All waste-like materials fit into one of these five secondary material categories. Some of these secondary materials are solid wastes when recycled and some are not (FLOWCHART 5).

##### **2.3.1.1 Spent Materials [CHWR Section 261.1(d)(1)]**

Spent materials are those materials that have been used and, as a result of physical or chemical contamination, can no longer serve the purpose for which they were produced without undergoing regeneration, reclamation, or reprocessing. Examples include spent solvents, spent activated carbon, spent catalysts, and spent acids. All spent materials are solid wastes if reclaimed.

##### **2.3.1.2 Sludges [CHWR Section 261.1(d)(2)]**

A sludge is any solid, semisolid, or liquid waste generated from a wastewater treatment plant, water supply treatment plant, or air pollution control device (e.g., baghouse dust) [CHWR Section 260.10]. This regulatory definition of sludge in the hazardous waste regulations is very different from common English usage, and can lead to significant misunderstanding if not used properly in determining how a material is regulated. What is commonly considered “sludge” is actually a by-product under this definition.

TABLE 1 contains two sludge categories: those sludges listed on the F or K lists (e.g., F037 petroleum refinery oil/water/solids separation sludge), and those exhibiting a hazardous characteristic under CHWR Part 261, Subpart C. Sludges listed on the F or K lists are solid wastes if reclaimed, while those that are solely characteristic hazardous wastes are not.

### **2.3.1.3 By-products [CHWR Section 261.1(d)(3)]**

By-product is a catch-all term, and includes most wastes that are not spent materials or sludges. A by-product is a material that is not intended as one of the primary products of a production process and is not solely or separately generated by the production process. It is essentially what's left after the desired product is made. There are two types of by-product categories in TABLE 1: those listed on the F or K lists (e.g., plating bath residues from cyanide plating, F008), and those exhibiting a hazardous characteristic under CHWR Part 261, Subpart C. By-products that are listed on the F or K lists are solid wastes if reclaimed, while those that are solely characteristic hazardous wastes are not. Examples of by-products include slags and distillation column bottoms.

### **2.3.1.4 Commercial Chemical Products [CHWR Section 261.33]**

Commercial chemical products include unused chemical intermediates, off-specification variants, and spill or container residues (e.g., unused sodium cyanide). The definition of commercial chemical product, which is also part of the hazardous waste identification process for P- or U-listed wastes, is expanded for the purposes of defining a material as a solid waste. For this purpose, the term commercial chemical product also includes chemicals that are not listed in Section 261.33 but exhibit a hazardous characteristic (e.g., off-specification jet fuel), as well as other unused commercial products that exhibit a characteristic of hazardous waste, even though they are not commonly considered chemicals (e.g. unused circuit boards, unused batteries).

### **2.3.1.5 Scrap Metal [CHWR Section 261.6(a)]**

Scrap metal is defined as bits and pieces of metal parts that are worn or superfluous (e.g., scrap turnings and wire). This term may also include products made of metal that become worn out such as scrap automobile bodies, lead shielding, and radiators. There are two regulatory categories of scrap metal: scrap metal and excluded scrap metal. Excluded scrap metal includes processed scrap metal, unprocessed home scrap metal generated by steel mills, and unprocessed prompt scrap metal generated by metal-fabrication industries. This category of scrap metal is excluded from regulation as a solid or hazardous waste when recycled [CHWR Section 261.4(a)(14)]. Other scrap metal is solid waste when reclaimed, but is not subject to regulation under CHWR Parts 262-268, 99, and 100 if recycled.

## **2.3.2 TYPES OF REGULATED RECYCLING**

There are three types of recycling activities which the Department currently regulates: use constituting disposal, burning waste fuels, and reclamation. Unless otherwise subject to special requirements, generators and transporters of recyclable materials that are solid and hazardous wastes are subject to the same regulation as other generators and transporters of hazardous waste. To determine whether a secondary material is a solid waste, you must determine what kind of material is being recycled. Once the type of secondary material (e.g., spent material, sludge, or

scrap metal) is known, the manner in which it is recycled will determine whether or not the material is a solid waste and therefore potentially regulated as a hazardous waste.

#### **2.3.2.1 Use Constituting Disposal [CHWR Section 261.2(c)(1)]**

Directly placing wastes or products containing wastes on the land is considered to be use constituting disposal. Such materials would generally be solid wastes. If, however, direct placement of a commercial chemical product on the land is consistent with its normal use (e.g., pesticides), then the material is not regulated as a solid waste. For example, heptachlor can potentially be a P-listed waste. This pesticide is not regulated as a solid waste, however, when it is used for its intended purpose.

#### **2.3.2.2 Burning Waste Fuels [CHWR Section 261.2(c)(2)]**

Burning hazardous waste for energy recovery and using wastes to produce a fuel are both covered under burning waste fuels. Wastes burned as fuel would generally be solid wastes. Commercial chemical products that are themselves fuels are not considered solid wastes when burned, however, since burning is consistent with the product's intended use. For example, off-specification jet fuel is not a solid waste when it is burned for energy recovery because it is itself a fuel.

#### **2.3.2.3 Reclamation [CHWR Section 261.2(c)(3)]**

Reclamation is the regeneration of wastes or recovery of usable materials from wastes (e.g., regenerating spent solvents in a solvent still). Wastes are regenerated when they are processed to remove contaminants in a way that restores them to their usable condition. Many reclaimed wastes are regulated as solid wastes, though there are exceptions. Sludges and by-products exhibiting a characteristic of hazardous waste and commercial chemical products listed in CHWR Section 261.33 (P & U-listed wastes) are not solid waste if they are reclaimed. These materials, however, may not be placed on the land in a manner that constitutes disposal, burned for energy recovery, or accumulated speculatively. (FLOWCHART 5)

#### **2.3.2.4 Speculative Accumulation [CHWR Section 261.1(d)(8)]**

Certain materials are exempt from the definition of solid waste in Section 261.2 when destined for recycling (see TABLE 1). In order to ensure these materials are actually recycled, a provision was established in Section 261.2 which increases regulation of facilities that recycle insufficient amounts of these materials. This provision designates as solid wastes certain materials that are accumulated speculatively. A material is accumulated speculatively if it has no viable market or if the person accumulating the material cannot demonstrate that 75 percent or more of the material is recycled in a calendar year, commencing on January 1. For example, on December 15, 1991, a facility generates 200 kg of D008 sludge, a characteristic sludge which is normally excluded from the definition of solid waste when reclaimed. The facility has this entire quantity of D008 sludge in storage on-site on January 1, 1992. If by the end of that calendar year (December 31, 1992), less than 75 percent (i.e., less than 150 kg) of the sludge has been reclaimed or sent off-site for reclamation, the sludge has been accumulated speculatively and is not excluded from the definition of solid waste. Since it is a solid waste, it must be managed as a hazardous waste because it exhibits a characteristic. In other words, while providing incentives

for recycling by excluding certain hazardous wastes from the definition of solid waste, the regulations ensure that the wastes are being legitimately recycled rather than simply being stored to avoid regulation.

## **2.4 MATERIALS THAT ARE NOT SOLID WASTE WHEN RECYCLED [CHWR Section 261.2(e)]**

Recycling is broadly defined under the hazardous waste regulations. Use constituting disposal, burning for energy recovery, and reclamation are all forms of recycling. The direct use or reuse of a secondary material is also a form of recycling. Section 261.2(e)(1) provides exclusions from the definition of solid waste for materials that are used or reused in one of the following ways: used or reused as an ingredient, used or reused as a product substitute, or returned as is to the production process where they were generated.

### **2.4.1 USED AS AN INGREDIENT**

If a secondary material is directly used as an ingredient in a production process without first being reclaimed (e.g., carbon tetrachloride still bottoms used in producing tetrachloroethylene), then that material is not a solid waste.

### **2.4.2 USED AS A PRODUCT SUBSTITUTE**

If a secondary material is used as an effective substitute for a commercial product without first being reclaimed (e.g., hydrochloric acid by-product from chemical manufacturing used by the steel industry for pickling steel), it is exempt from the definition of solid waste. In applying this exclusion, it is important to have sufficient information to show that the secondary material is as effective as the commercial product it is replacing. Effectiveness of the material may be judged on efficiency of using the material (e.g., time to do the job or volume used) and on whether there are deleterious effects on quality caused by its use. The person using the secondary material should be able to provide a description of the product specifications for the commercial product for which the secondary material is being substituted.

### **2.4.3 RETURNED TO THE PRODUCTION PROCESS**

When a material is returned as-is to the original production process from which it was generated, it is not a solid waste. When this exclusion was originally adopted, it applied only to materials returned to a primary production process. This was later modified to include materials returned to secondary processes. This exclusion only applies if the material is used as a raw material or feedstock in the production process and if it is not reclaimed prior to its reintroduction into the system (e.g., emission control dust returned directly to a primary zinc smelting furnace). The material does not have to be returned to the exact unit, but may be returned to any unit associated with the production of a particular product. In the case where the original process to which the material is returned is a secondary process, the material must be managed such that there is no placement on the land.

### **2.4.4 EXCEPTIONS**

There are certain situations where use or reuse of a material without prior reclamation is still considered to be management of a solid waste. CHWR Section 261.2(e)(2) designates as solid

wastes the following materials, even if they are used or reused directly: materials used in a manner constituting disposal or used to produce products that are applied to the land; materials burned for energy recovery, used to produce a fuel, or contained in fuels; materials accumulated speculatively; and dioxin-containing wastes considered inherently waste-like (F020, F021, F022, F023, F026, and F028). For example, an F002 spent solvent is used without prior reclamation in the formulation of a pesticide that is applied to soils. While this particular waste is recycled without reclamation (a condition of CHWR Section 261.2(e)(1)), it would not qualify for the exclusion because the manner in which it is recycled is one of the activities listed in CHWR Section 261.2(e)(2), and this use is not consistent with its normal use.

#### **2.4.5 DOCUMENTATION OF CLAIMS [CHWR Section 261.2(f)]**

A person claiming that a waste is not a solid waste or that a waste is conditionally exempt from regulation (for example, because it is recycled in accordance with CHWR Section 261.2(e)) must be prepared to demonstrate that the conditions for the exclusion are being met. In the case of an enforcement action, generators must provide documentation supporting their claim, such as proof the material is being reused in a production process or that there is a known market for the material.

Any person may petition the Colorado Hazardous Waste Commission to exclude a waste or waste-derived material at a particular facility from being defined as a hazardous waste by demonstrating to the satisfaction of the Commission that their waste doesn't meet any of the criteria under which the waste was listed as a hazardous waste (6 CCR 1007-3 Section 260.20). This can be accomplished by demonstrating that their waste doesn't exhibit the relevant characteristic for which the waste was listed, that it doesn't contain the relevant constituent(s) that caused the waste to be listed, or that it doesn't fit any of the criterion used for identifying hazardous wastes.

#### **2.5 REQUIREMENTS FOR RECYCLABLE MATERIALS [CHWR Section 261.6]**

Hazardous wastes that are recycled are known as recyclable materials. When a material is classified as a solid waste when it is recycled (and does not qualify for any exemptions in CHWR Section 261.2(e)) and it meets the definition of a hazardous waste, CHWR Sections 261.6 and 261.9 are used to determine the level of regulation placed on the waste and the recycling activity. These standards range from no regulation to full regulation, with the amount of regulation depending on the type of material and manner of recycling.

##### **2.5.1 STANDARDS FOR SPECIFIC WASTES [CHWR Section 261.6(a)(2)]**

###### **(FLOWCHART 3B)**

Recyclable materials are subject to the requirements for generators, transporters, and storage facilities, except for the recyclable materials listed in CHWR Section 261.6(a)(2). These specific recyclable materials are subject to the permitting requirements under Part 100 and to Part 267. Part 267 of the Colorado regulations and Part 266 of the federal regulations provide special standards for hazardous wastes recycled in certain ways. These materials include:

- recyclable materials used in a manner constituting disposal (CHWR Part 267 Subpart C);
- hazardous waste burned for energy recovery (CHWR Part 267 Subpart D/40 CFR Part 266 Subpart H);
- recyclable materials from which precious metals are reclaimed (CHWR Part 267 Subpart F);
- spent lead-acid batteries that are being reclaimed (CHWR Part 267 Subpart G).

#### **2.5.1.1 Use Constituting Disposal [CHWR Part 267 Subpart C]**

CHWR Part 267 Subpart C regulates recyclable materials that are placed on the land either directly or after mixing with other materials. This type of reuse of a recyclable material is regulated as land treatment or landfilling when the material being applied to the land is a hazardous waste or contains a hazardous waste. The Department regulates the placement of hazardous secondary materials on the land due to the similarity of this practice to simple land disposal. Under CHWR Section 267.20(b), commercial hazardous waste-derived products are not regulated when recycled by application to the land, provided the products: (1) are made for the general public's use; (2) have undergone a chemical reaction so as to be inseparable by physical means; and (3) meet applicable Part 268 land disposal restrictions treatment standards. Examples of such products may include asphalt and cement. Also, commercial fertilizers produced from mixing recyclable material containing nutrients or micronutrients with other ingredients are exempt from regulation if they meet the Part 268 land disposal treatment standards for each recyclable material they contain. Zinc-containing fertilizers produced from hazardous waste K061 for the general public's use, however, are not subject to regulation and thus are not required to meet Part 268 treatment standards. If a material does not meet the conditions in CHWR Section 267.20(b), it must be managed as a hazardous waste when applied to the land, a result which effectively prohibits placement on the land in anything but a hazardous waste landfill.

Under CHWR Section 267.21, the management of these recyclable materials prior to being used in a manner constituting disposal is fully regulated as hazardous waste management. Generators and transporters of these materials, therefore, are subject to Part 262 (generator) and Part 263 (transporter) regulations, and to Part 99 notification procedures for obtaining EPA identification numbers. Under CHWR Section 267.22, facility owners and operators who are not the ultimate users of the materials are also subject to the notification requirements, the permitting requirements of Part 100, and applicable Parts 264/265 facility standards.

Owners or operators of facilities that use recyclable materials in a manner constituting disposal are subject to Part 99 notification, permitting requirements under Part 100, and applicable Parts 264/265 facility standards. Products meeting the requirements under CHWR Section 267.20(b) as described above are the sole exception.

In addition to the above regulations on use constituting disposal, additional restrictions may apply to the placement of hazardous waste on the land. The Hazardous and Solid Waste Amendments of 1984 (HSWA) amended the regulations to prohibit use of waste oil, used oil, or

other materials contaminated with hazardous waste (other than waste hazardous for ignitability only) for dust suppression or road treatment [CHWR Sections 267.23(b)(7)].

### **2.5.1.2 Burning Hazardous Waste [CHWR Part 267 Subpart D]**

Part 267 Subpart D includes Colorado's rules for hazardous waste fuel burned for energy recovery in boilers and industrial furnaces as defined in CHWR Section 260.10. Originally, these units were considered to be exempt recycling units, but it was later determined that there was a need for regulatory action to control this type of burning. The Colorado rules for burners of hazardous waste fuels have been superseded by Federal rules at 40 CFR Part 266 Subpart H. These should be consulted if you are contemplating burning hazardous waste fuels in a boiler or industrial furnace. Hazardous waste fuel includes hazardous waste burned for energy recovery and fuel produced from hazardous waste by processing, blending, or other treatment.

Generators and transporters of hazardous waste fuel are subject to the requirements in Part 262 (generators) and Part 263 (transporters). Marketers and burners of hazardous waste fuels must notify the Department under Part 99 for their hazardous waste fuel activities, even if they have already notified the Department of their other hazardous waste management activities. They are also subject to the applicable storage requirements of Part 264/265, accumulation time limits of CHWR Section 262.34, the financial assurance requirements of Part 266 and the permit requirements of Part 100. Marketers who ship hazardous waste fuel are subject to the standards for generators of hazardous waste in Part 262.

### **2.5.1.3 Precious Metal Reclamation [CHWR Part 267 Subpart F]**

Subpart F of Part 267 applies to recyclable materials from which precious metals are recovered (i.e., gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these). Generators, transporters, and storers of recyclable materials intended for precious metal recovery are subject to notification under CHWR Part 99 and manifest requirements under Part 262, Subpart B (for generators), Part 263 (for transporters), and Sections 265.71 and 265.72 (for storers). While hazardous wastes that will be reclaimed for their precious metal content are exempt from much of the hazardous waste regulations, these materials lose any applicable exemptions if they are accumulated speculatively and become subject to all applicable requirements under CHWR Parts 262 and 264/265. The provisions barring speculative accumulation are set out in CHWR Section 267.70(c). To document that speculative accumulation is not occurring, generators must keep records showing the volume of materials on hand at the beginning of the calendar year, the amount of materials generated or received during the calendar year, and the amount of waste remaining at the end of the calendar year.

Although the storage of recyclable materials that will be reclaimed for their precious metal content is not subject to full hazardous waste regulation, under CHWR Sections 260.40 and 260.41 the Department may regulate storage of precious metal wastes on a case-by-case basis if the wastes are not being stored safely. This case-by-case regulation subjects the generator or storer/recycler to CHWR Sections 261.6(b) and (c) (full regulation) rather than Part 267 Subpart F.

#### **2.5.1.4 Spent Lead-Acid Battery Reclamation [CHWR Part 267 Subpart G]**

Part 267 Subpart G covers spent lead-acid batteries that will be reclaimed. These provisions apply only to spent lead-acid batteries. These requirements focus on storage of the batteries by persons who reclaim the batteries. Persons who generate, transport, regenerate, collect, and/or store spent lead-acid batteries, but are not the ones who reclaims them, are not subject to hazardous waste regulation. According to CHWR Section 267.80(b), owners or operators of facilities that store spent batteries before reclaiming them are subject to certain requirements. Storers must comply with Part 99 notification and all applicable provisions in Parts 264/265, Subparts A through L. The only exceptions are the waste analysis plan and use of the manifest requirements. The permitting requirements of Part 100 and the financial assurance provisions of Part 266 also apply.

#### **2.5.2 EXEMPT RECYCLABLE MATERIALS [CHWR Section 261.6(a)(3)]**

##### **(FLOWCHART 3C)**

Certain recyclable materials are exempt from hazardous waste regulation when recycled in specific ways. These materials are exempt from the notification requirements of Part 99, Parts 262 through 268, and Part 100. All of these materials meet the definition of a solid waste and hazardous waste, but are not required to be managed as hazardous wastes if recycled according to the provisions in this section.

##### **2.5.2.1 Industrial Ethyl Alcohol**

Industrial ethyl alcohol that is reclaimed is exempted from hazardous waste regulation because the Bureau of Alcohol, Tobacco and Firearms already regulates it from the point of generation to redistillation.

##### **2.5.2.2 Scrap Metal**

Scrap metal that is not excluded under CHWR Section 261.4(a)(14)(i.e. processed scrap metal, unprocessed home scrap metal generated by steel mills, or unprocessed prompt scrap metal generated by metal-fabrication industries) is a solid waste under the definition of hazardous waste. It is, however, exempted from hazardous waste regulation when it is reclaimed. As was mentioned earlier, scrap metal is defined as products made of metal that become worn out (or are off-specification) or metal pieces that are generated from machining operations. Examples of scrap metal are scrap automobile bodies, machine turnings, pieces of wire, sheets of metal, lead shielding, and scrap radiators. When these materials are recycled to recover their metal content, they are exempted from hazardous waste regulation.

##### **2.5.2.3 Waste-Derived Fuels from Refining Processes**

Fuels produced by refining oil-bearing hazardous wastes along with normal process streams at a petroleum refining facility are exempt if such wastes resulted from normal petroleum refining, production, and transportation practices. For these wastes to be considered to be "refined," they must be inserted into a part of the process designed to remove contaminants; this would typically mean insertion prior to distillation. Consequently, if a facility takes an oil-bearing hazardous



waste and processes it without distillation to produce a fuel, the resulting fuel is not covered by this exemption.

#### **2.5.2.4 Waste-Derived Fuels and Oils That Are Not Refined**

Fuels produced at a petroleum refinery from oil-bearing hazardous wastes that are introduced into the refining process after the distillation step, or that are reintroduced in a process that does not include distillation, may be exempt under CHWR Section 261.6(a)(3)(iv). Since these hazardous wastes do not undergo a distillation step that would ensure contaminant removal, the resulting fuel must meet the used oil specifications in Part 279 to fall within this exemption. Oil that is reclaimed from oil-bearing hazardous wastes generated by petroleum refining, production, and transportation practices is also exempted. This exemption applies to oil that is burned as a fuel without reintroduction into the refining process, provided it meets the used oil specifications in Part 279.

#### **2.5.2.5 Petroleum Coke Fuels**

Petroleum coke produced from petroleum refinery hazardous waste containing oil is exempted from hazardous waste regulation if: 1) the coke is produced by the same person that generated the hazardous waste; and 2) the coke does not exhibit a characteristic of hazardous waste. Note that recycled coke by-products are also exempt under CHWR Section 261.4(a)(10).

#### **2.5.2.6 Used Oil [261.6(a)(4)]**

Used oil that is recycled and is also a hazardous waste solely because it exhibits a characteristic is regulated under the used oil management standards in Part 279. This includes used oil that is re-refined, reclaimed, burned for energy recovery, or reprocessed.

### **2.5.3 MANAGEMENT STANDARDS FOR RECYCLING [CHWR Section 261.6(b), (c), (d)]**

Recyclable materials that do not meet an exemption or that are not subject to special requirements are regulated under CHWR Sections 261.6(b), (c), and (d). Generators and transporters of recyclable materials that are solid and hazardous wastes are subject to the same regulations as other generators and transporters of hazardous waste. Facilities that store these materials prior to recycling are subject to the applicable treatment, storage, or disposal facility (TSDF) standards. However, the recycling process itself is not subject to regulation under the hazardous waste regulations. Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled must notify the Department of their activity in compliance with Part 99, comply with the use of the hazardous waste manifest when receiving shipments of recyclable materials from off-site and, if they have permitted hazardous waste management units that recycle hazardous waste, they must comply with subparts AA & BB of Parts 264/265.

#### **2.5.3.1 Generators and Transporters**

Generators of recyclable hazardous wastes are required to follow all the applicable requirements of Part 262. Likewise, transporters of recyclable materials must comply with Part 263 standards. Both generators and transporters are subject to the notification requirements of Part 99.

### 2.5.3.2 Treatment, Storage, and Disposal Facilities

Owners or operators of facilities that store hazardous materials prior to recycling are subject to all of the requirements of treatment, storage, and disposal facilities. In other words, storage is fully regulated and requires a permit or interim status.

If the recyclable material is not stored before reuse or recycling but put immediately into the reuse/recycling unit, a storage permit or interim status is not necessary. Colorado interprets "immediately" to mean within 24 hours. The facility must only obtain an EPA ID number and comply with the manifest requirements under CHWR Sections 265.71-265.72 and the requirements of Subparts AA & BB of Parts 264/265.

An important component to CHWR Section 261.6(c) is that while storage of a hazardous waste is regulated, the recycling process itself is generally exempt from hazardous waste regulation, including permitting requirements. The one exception is that the unit may have to comply with some air emission regulations if located at a permitted or interim status treatment, storage, or disposal facility. Parts 264/265, Subparts AA and BB require air emission controls for specific units that manage waste with a minimum organic content. If recycling units meet these criteria, the units would need to comply with the appropriate regulations. The Subpart CC air emissions standards do not apply to recycling units. In addition, other federal or state environmental laws or regulations may be applicable.

### 2.5.4 MANAGEMENT STANDARDS FOR UNIVERSAL WASTE [CHWR Part 273]

Universal wastes are subject to special standards. Hazardous waste batteries, hazardous waste pesticides that are recalled or sent to a collection program, hazardous waste mercury-containing devices, hazardous waste electronic devices and components, hazardous waste mercury-containing lighting wastes, and aerosol cans containing hazardous wastes are subject to the standards of CHWR Part 273 when recycled and/or disposed. The universal waste rule provides an alternative set of management standards in lieu of regulation under CHWR Parts 260-268, 99 and 100. This rule was designed to streamline the regulatory process and encourage recycling. The rule also contains provisions for adding other wastes to the universal waste system. **Note: Refer to CHWR Part 273 for the wastes currently included in the Universal Waste Rule.**

### 2.6 OTHER MATERIALS THAT ARE NOT SOLID OR HAZARDOUS WASTE WHEN RECYCLED [CHWR Section 261.4(a)(7)-(15) & 261.4(b)(12)]

(FLOWCHART 3A)

A number of wastes are specifically excluded from hazardous waste regulation in CHWR Section 261.4 if they are recycled in a certain manner. These include pulping liquors, closed-loop recycling, spent sulfuric acid, spent wood preserving solutions, coke by-products, splash condenser dross residue, recovered oil, excluded scrap metal, shredded circuit boards, and some used chlorofluorocarbons (CFCs).

### **2.6.1 PULPING LIQUORS**

Pulping liquor is a corrosive material used to dissolve wood chips. Pulping liquors, also called black liquors, that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process are excluded from hazardous waste management, unless accumulated speculatively or reclaimed in another manner.

### **2.6.2 RECLAMATION IN ENCLOSED TANKS**

This exclusion, known as the closed-loop recycling exclusion, covers secondary materials (e.g., spent materials or sludges) generated during production processes which are reusable in those same processes. These secondary materials, if reclaimed and returned to the original process(es), are excluded, provided:

- only tank storage is involved and the entire process, through the completion of reclamation, is a closed system by being entirely connected with pipes or other comparable enclosed means of conveyance (i.e., the process does not require any human intervention to occur);
- reclamation does not involve incineration or other controlled-flame combustion (boilers or furnaces);
- secondary materials are never accumulated in tanks for more than 12 months without being reclaimed;
- reclaimed materials are not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

### **2.6.3 SPENT SULFURIC ACID**

Spent sulfuric acid is typically used to produce virgin sulfuric acid by reintroduction into the sulfuric acid production process. Spent sulfuric acid that is recycled in this manner is excluded from the definition of solid waste, unless accumulated speculatively.

### **2.6.4 SPENT WOOD PRESERVATIVES**

Spent wood preservatives are typically collected and reclaimed through a series of drip pads connected integrally to the production process, closely resembling a closed-loop scenario. Because the use of drip pads will not allow this reclamation process to fit the closed-loop exclusion, however, EPA developed this exclusion for reclaimed spent wood preserving solutions and wastewaters containing spent preservative that are reused for their original purpose.

Both spent preserving solutions and wastewaters are solid and hazardous wastes until they are reclaimed (normally by filtration), but cease being solid wastes once reclamation is completed if the reclaimed material is used to treat wood.

### **2.6.5 COKE BY-PRODUCT WASTES**

EPA granted an exclusion from hazardous waste management for K087, K141, K142, K143, K144, K145, K147, and K148 listed wastes, and any other waste coke by-product wastes which exhibit the toxicity characteristic, if they are recycled in one of the following ways:

- returned to the coke oven as a feedstock to produce coke; or
- returned to the tar recovery process as a feedstock to produce coal tar; or
- mixed with coal tar prior to coal tar refining or sale as a product.

To qualify for the exclusion, the coke by-product waste cannot be placed on the land from the time it is generated to the point it is recycled. Recycling these wastes does not have a significant effect on the chemical composition of the products. Further, coke by-product residues are often managed as raw materials rather than wastes, thereby reducing the risk posed to human health and the environment because the material has an intrinsic value that promotes its safe management.

### **2.6.6 SPLASH CONDENSER DROSS RESIDUE**

The treatment of emission control dust/sludge from the primary production of steel in electric furnaces (K061) generates a zinc-laden dross residue from the splash condenser in a high temperature metal recovery process, known as splash condenser dross residue. This splash condenser dross residue is typically considered a partially reclaimed secondary material because it contains 50 to 60 percent zinc. Splash condenser dross residue is commonly sent off-site for further reclamation, reused on-site in the high temperature metal recovery process, or reprocessed by the high temperature metal recovery process on-site. The splash condenser dross residue exclusion applies when the material is used as a source of zinc in zinc recovery operations, provided it is shipped in drums (if sent off-site) and not disposed of on the land at any point prior to further recovery.

### **2.6.7 RECOVERED OIL FROM PETROLEUM OPERATIONS**

Recovered oil is a generic term that refers to secondary materials such as oil/water separator skimmings from plant wastewaters, slop oil and emulsions, oil skimmed from ballast water tanks, oil from refinery process units, oil recovered from oil and gas drilling operations, and oil recovered from wastes removed from crude oil storage tanks. It does not include used oil as defined in the used oil management standards of CHWR Part 279.

Recovered oil that is returned to the petroleum refinery along with the normal process streams at or before a point where contaminants are removed is excluded from hazardous waste management provided the oil is not managed on the land or accumulated speculatively before placement in the refinery process. The exclusion does not apply to water-in-oil emulsions before the oils are recovered. Management of these wastes before separation could be subject to hazardous waste management requirements.

### **2.6.8 SCRAP METAL**

Some scrap metal that is being recycled is excluded from being a solid waste. This exclusion applies to processed scrap metal, unprocessed scrap generated by steel mills (home scrap metal), and unprocessed scrap generated by metal-fabrication industries (prompt scrap metal).

### **2.6.9 SHREDDED CIRCUIT BOARDS**

Shredded circuit boards that are being recycled are excluded from hazardous waste management as long as they are stored in safe containers and are free of mercury switches, mercury relays, and batteries.

### **2.6.10 USED CHLOROFLUOROCARBON REFRIGERANTS (CFC)**

To decrease the practice of venting used CFCs into the atmosphere in order to avoid regulation as hazardous waste, EPA suspended application of the toxicity characteristic rule to certain CFCs. These include used CFCs from totally enclosed heat transfer equipment including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use CFCs as the heat transfer fluid in a refrigeration cycle. This suspension only applies to CFCs which exhibit the toxicity characteristic for one or more of the 25 new TCLP organic constituents (D018- D043), and only when the CFCs are reclaimed for reuse.

## **3.0 SPECIAL ISSUES**

### **3.1 MILITARY MUNITIONS**

Unused military munitions become solid wastes when the munitions are removed from storage for disposal or treatment prior to disposal; when the munitions are leaking or deteriorated so that they cannot be recycled or reused; or when declared a solid waste by an authorized military official. Unused munitions that are repaired, recycled, or reclaimed, are not considered solid wastes, nor are they considered solid wastes while in storage in demilitarization accounts (e.g., scheduled for treatment or disposal). Only when these munitions are finally removed from storage for the purposes of disposal do they become solid wastes.

Used military munitions become solid wastes when they are buried or landfilled on-site, or when they are removed from their landing spot for subsequent management (storage, reclamation, treatment, or disposal) off-range. Note that munitions that have been used for their intended purpose (e.g., fired munitions or munitions used in training exercises) are not considered solid wastes when they land on a firing range, because landing on the ground is part of their intended use (rather than disposal). Once these military munitions are collected and sent off-site for further management, however, they become solid and potentially hazardous wastes.

### **3.2 REFINING VERSUS RECLAMATION**

There is often uncertainty about when a reclamation process is complete and when the recycled material is a final product rather than a partially reclaimed material. Sometimes a product must be further purified to be sold or used, and this is viewed as refining or purification of the product, and not reclamation. When in doubt, the generator should consult the Department for waste-specific guidance.

### **3.3 SHAM RECYCLING**

For all recycling activities, the premise is that legitimate reclamation or reuse is taking place. To encourage recycling, EPA and the Department subject these activities to reduced regulation. Some facilities, however, may claim that they are "recycling" a material in order to avoid being subject to hazardous waste regulation, when in fact the activity is not legitimate recycling. Therefore, guidelines have been established for what constitutes legitimate recycling and EPA has described activities it considers to be "sham recycling" [45 FR 33093, May 19, 1980 and 48 FR 11157, March 16, 1983]. Considerations include whether the secondary material is effective for the claimed use, the secondary material is used in excess of the amount necessary, and whether or not the facility has maintained records of the recycling transactions.

#### 4.0 CONTACT INFORMATION

24-hour Emergency Response Line (toll-free)	(877) 518-5608
Colorado Department of Public Health and Environment:	(303) 692-2000
(CDPHE) toll-free	(800) 886-7689
Pollution Prevention Program	(303) 692-2977
Hazardous Materials and Waste Management Division	(303) 692-3300
(HMWMD) toll-free	(888) 569-1831
HMWMD Technical Assistance Line	(303) 692-3320
toll-free	(888) 569-1831 ext. 3320

CDPHE Website	<a href="http://www.cdphe.state.co.us/">http://www.cdphe.state.co.us/</a>
HMWMD Website	<a href="http://www.cdphe.state.co.us/hm/">http://www.cdphe.state.co.us/hm/</a>
Downloadable Regulations	<a href="http://www.cdphe.state.co.us/regulate.asp">http://www.cdphe.state.co.us/regulate.asp</a>
HMWMD Internet e-mail	<a href="mailto:comments.hmwmd@state.co.us">comments.hmwmd@state.co.us</a>

#### Other Phone Numbers:

National Response Center	(800) 424-8802
RCRA/Superfund Hotline	(800) 424-9346

#### Send questions in writing to:

Colorado Department of Public Health and Environment  
Hazardous Materials and Waste Management Division  
Technical Assistance  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530

OR

FAX (303) 759-5355

Please provide as much detail as possible regarding your question and the waste or process to which it applies.

## 5.0 RELATED CDPHE REFERENCES

*These documents are available on our website or by contacting the HMWMD technical assistance line.*

### **RCRA Policy and Guidance**

Groundwater VOC Sample Preservation Policy (6/98)  
Guidance for Analysis of Indoor Air Samples (4/00)  
Guide to Generator Requirements of the Colorado Hazardous Waste Regulations (10/01)  
Guide to Implementing the Division's Wastewater Treatment Unit Policy (1/00), Includes Policy on Wastewater Treatment Unit Exemption (6/91)  
Hazardous Waste Control Program PENALTY POLICY (1/00)  
Hazardous Waste Identification Guidance Document (9/98)  
Hazardous Waste Recycling Guidance Document (1/99)  
Hazardous Waste Transporters Guidance Document (11/99)  
Interim Final Policy and Guidance on Investigation Derived Waste (IDW) at RCRA Facilities  
Interim Final Policy and Guidance on Risk Assessments for Corrective Action at RCRA Facilities (11/93)  
Personnel Training & Emergency Response/Preparedness and Prevention for Small Quantity Generators (4/98)  
Personnel Training for Large Quantity Generators of Hazardous Waste (3/97)  
Preparedness and Prevention Contingency Plan Emergency Procedures for Large Quantity Generators of Hazardous Waste (3/97)  
Proposed Soil Remediation Objectives Policy Document (12/97)  
RCRA Integrated Corrective Action Plan Application Guidance Document and Checklist (1/00)  
Satellite Accumulation for Small and Large Quantity Generators of Hazardous Waste (2/98)  
Solid Waste Definition and Solid and Hazardous Waste Exclusions Guidance Document (9/98)  
State of Colorado Policy: Early Transfer of Federal Property (6/98)  
Summary Table of Hazardous Waste Generator Requirements (3/01)  
Treatment of Hazardous Waste by Generators Guidance Document (4/00)

### **RCRA Compliance Bulletins**

Batteries  
Contaminated Shop Towels and Reusable Absorbents  
EPA Identification Number  
Lead-Based Paint Abatement and Waste Management  
Lighting Wastes  
Management of Electronics Waste  
Management of Waste Aerosol Cans  
Photographic, X-ray and Dental Wastes  
Universal Waste Rule  
Used Antifreeze

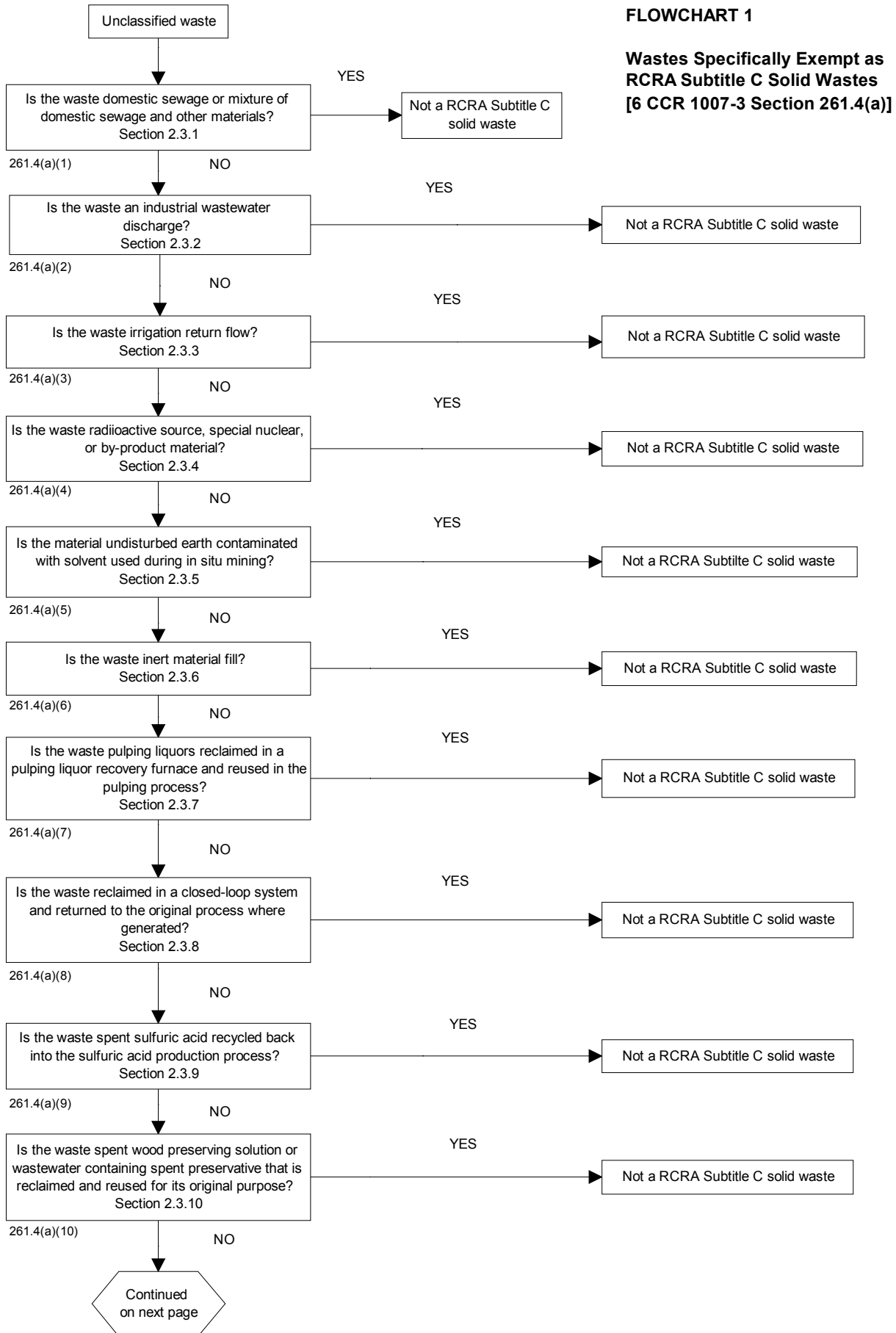


**TABLE 1 Materials That are Solid Waste if Recycled**

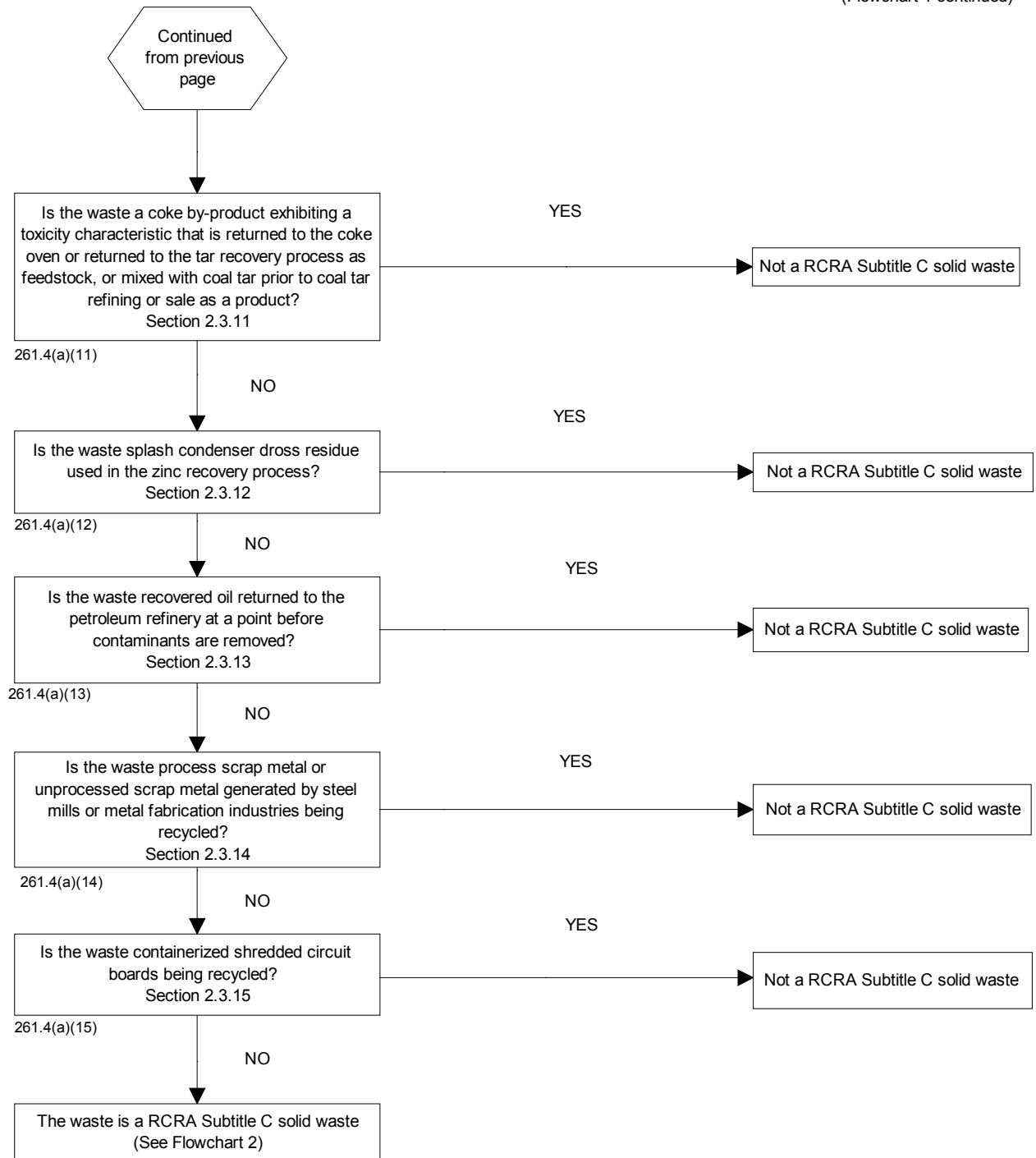
	Use Constituting Disposal §261.2(c)(1)	Energy Recovery/ Fuel §261.2(c)(2)	Reclamation §261.2(c)(3)	Speculative Accumulation §261.2(c)(4)
Spent Materials	YES	YES	YES	YES
Sludges listed in CHWR §§261.31 Or 261.32	YES	YES	YES	YES
Sludges exhibiting a characteristic	YES	YES	NO	YES
By-products listed in CHWR §§261.31 or 261.32	YES	YES	YES	YES
By-products exhibiting a characteristic	YES	YES	NO	YES
Commercial Chemical Products listed in CHWR §261.33	YES*	YES**	NO	NO
Scrap Metal other than excluded scrap metal (see CHWR §261.1(d)(9))	YES	YES	YES	YES

Once the type of secondary material and the recycling method are known, you can determine whether the material will be a solid waste according to CHWR Section 261.2(c) and therefore possibly a hazardous waste. Materials that are solid wastes when recycled in a particular manner are marked with a “YES” in that column; materials that are not solid wastes when recycled in that manner are marked with a “NO.”

- \* Commercial products are not solid wastes when applied to the land if that is their normal use.
- \* Commercial products are not solid wastes when burned for energy recovery if they are already fuels or normal constituents of fuels.



**FLOWCHART 1 Wastes Specifically Exempt as RCRA Subtitle C Solid Wastes**



**Key**

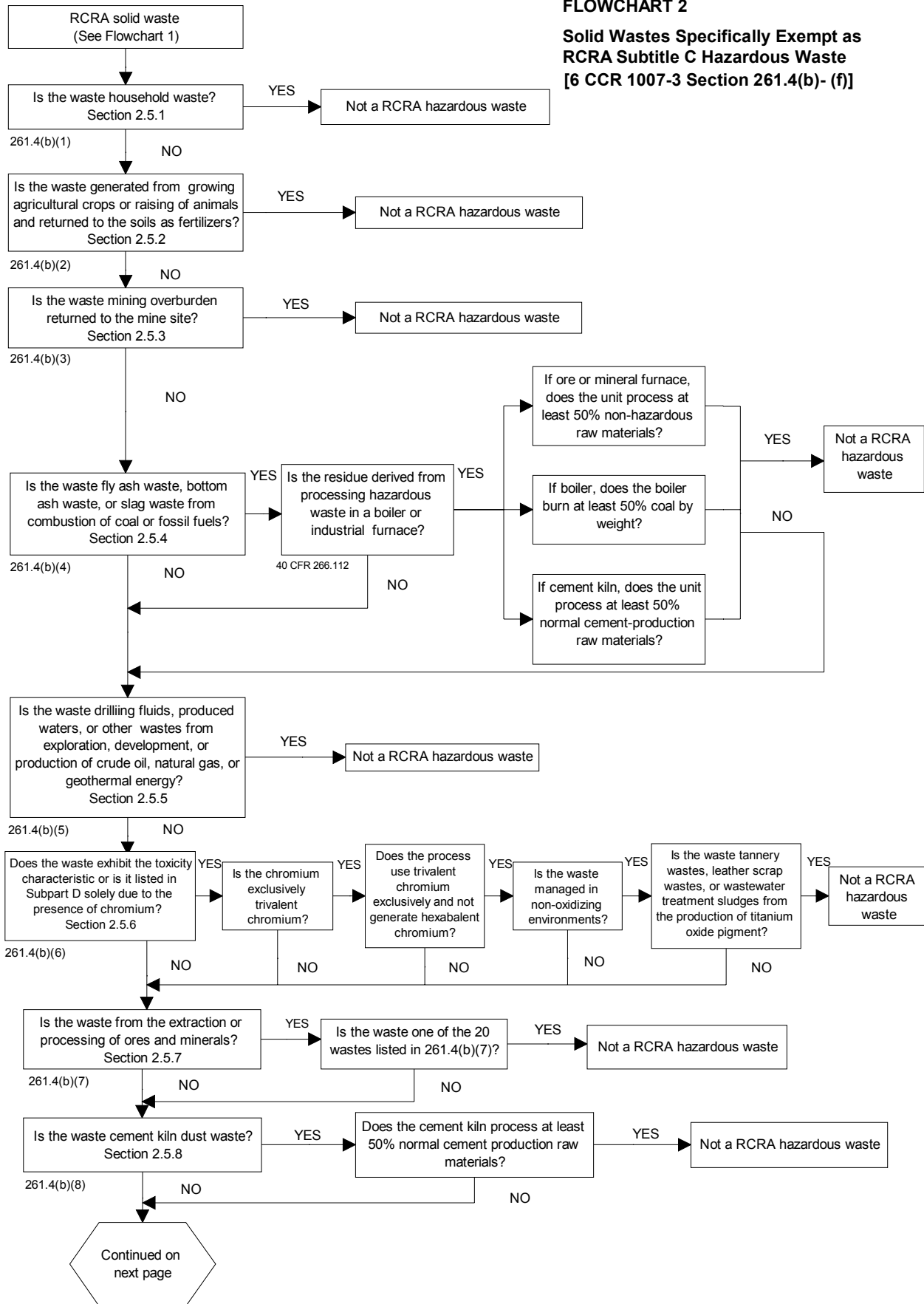
Is the waste an industrial wastewater discharge?  
**Section 2.3.2**

Refers to the "CDPHE Solid Waste Definition and Solid and Hazardous Waste Exclusions Guidance Document"

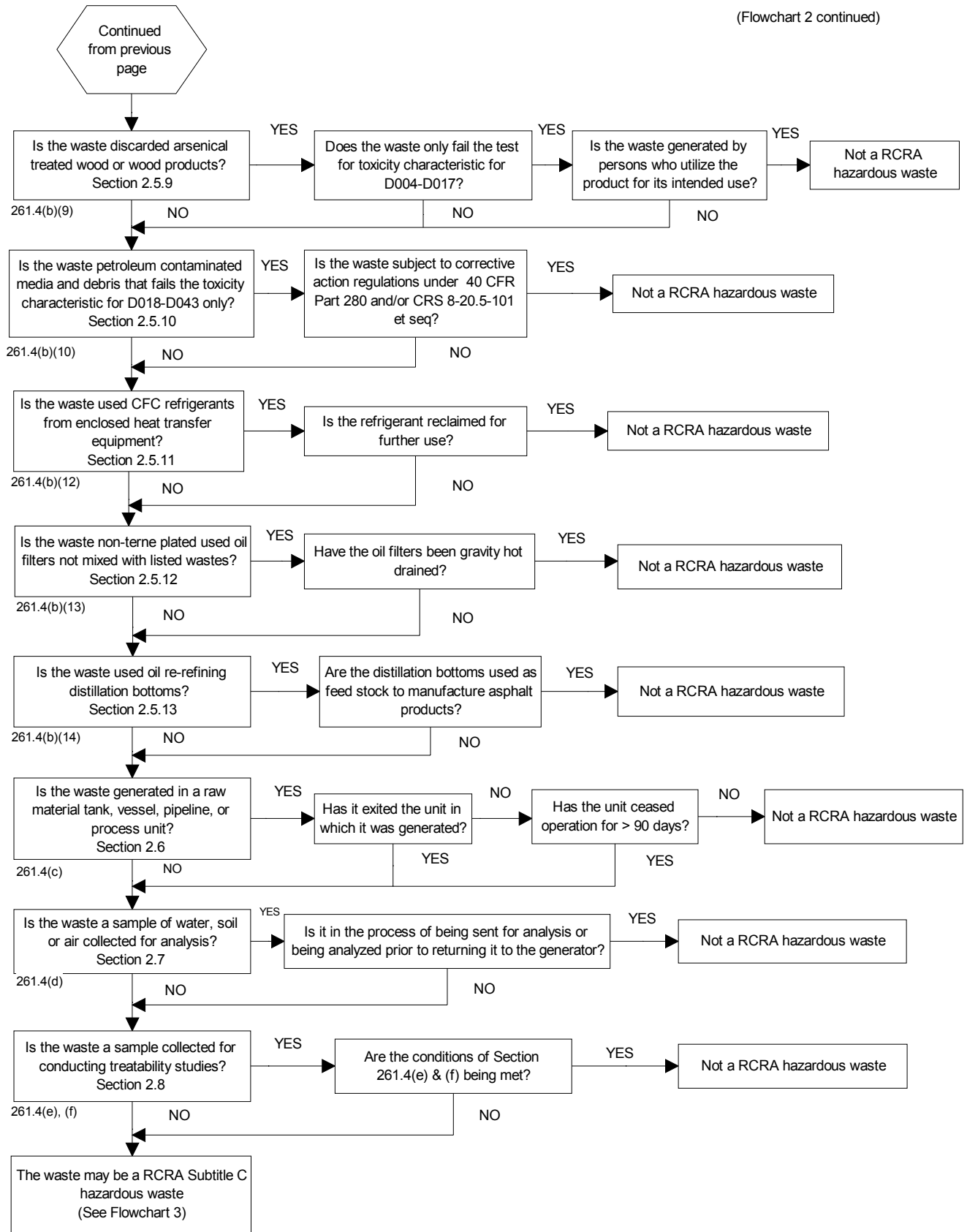
**261.4(a)(2)** Refers to the Colorado Hazardous Waste Regulations 6 CCR 1007-3

Note: Wastes that are not regulated as RCRA Subtitle C solid or hazardous wastes may be regulated under other statutes and/or regulations such as the Colorado Solid Waste Regulations, Colorado Water Quality Control Regulations, Colorado Radiation Control Regulations, Atomic Energy Act, and Clean Water Act.

**FLOWCHART 2**  
**Solid Wastes Specifically Exempt as**  
**RCRA Subtitle C Hazardous Waste**  
**[6 CCR 1007-3 Section 261.4(b)- (f)]**



**FLOWCHART 2 Solid Wastes Specifically Exempt as RCRA Subtitle C Hazardous Waste**



**Key**

Is the waste cement kiln dust waste?  
**Section 2.5.8**

Refers to the "CDPHE Solid Waste Definition and Solid and Hazardous Waste Exclusions Guidance Document"

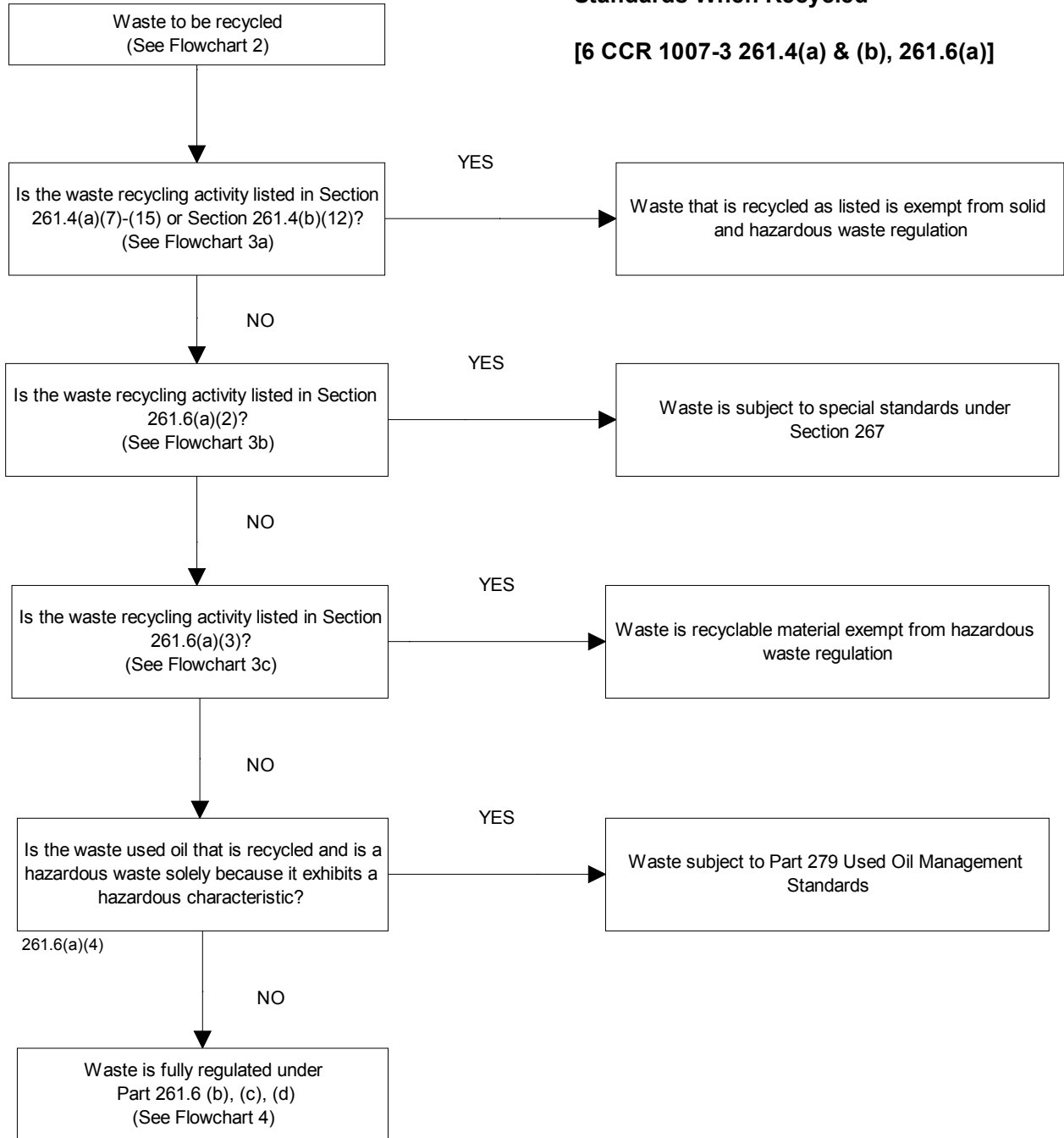
**261.4(b)(8)**

Refers to the Colorado Hazardous Waste Regulations 6 CCR 1007-3 unless otherwise noted

### FLOWCHART 3

#### Solid Wastes Specifically Exempt as Hazardous Wastes or Subject to Special Standards When Recycled

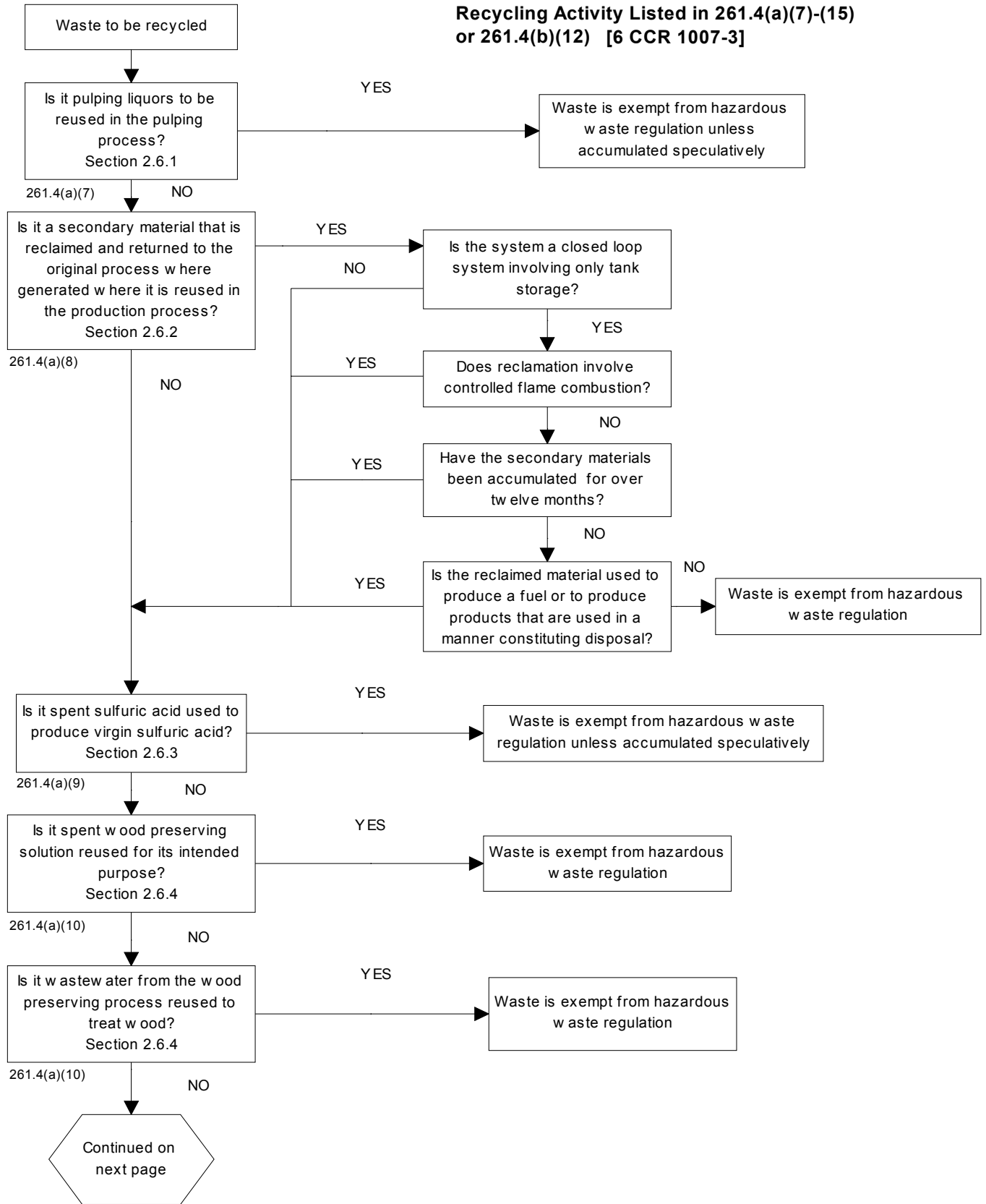
[6 CCR 1007-3 261.4(a) & (b), 261.6(a)]

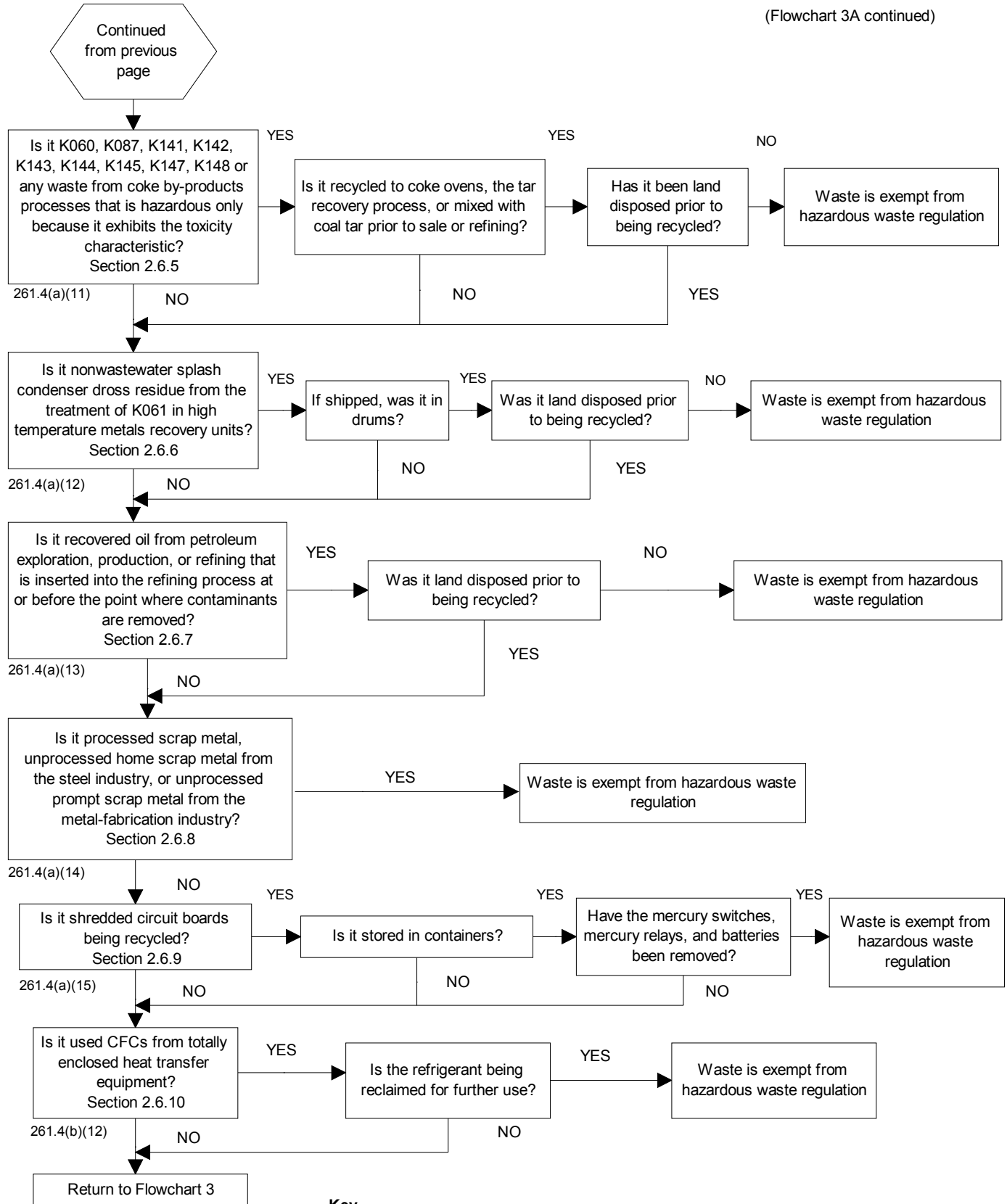


**FLOWCHART 3 Solid Wastes Specifically Exempt as Hazardous Wastes or Subject to Special Standards When Recycled**

**FLOWCHART 3A**

**Recycling Activity Listed in 261.4(a)(7)-(15) or 261.4(b)(12) [6 CCR 1007-3]**





**Key**

Is it spent sulfuric acid used to produce virgin sulfuric acid?  
**Section 2.6.3**

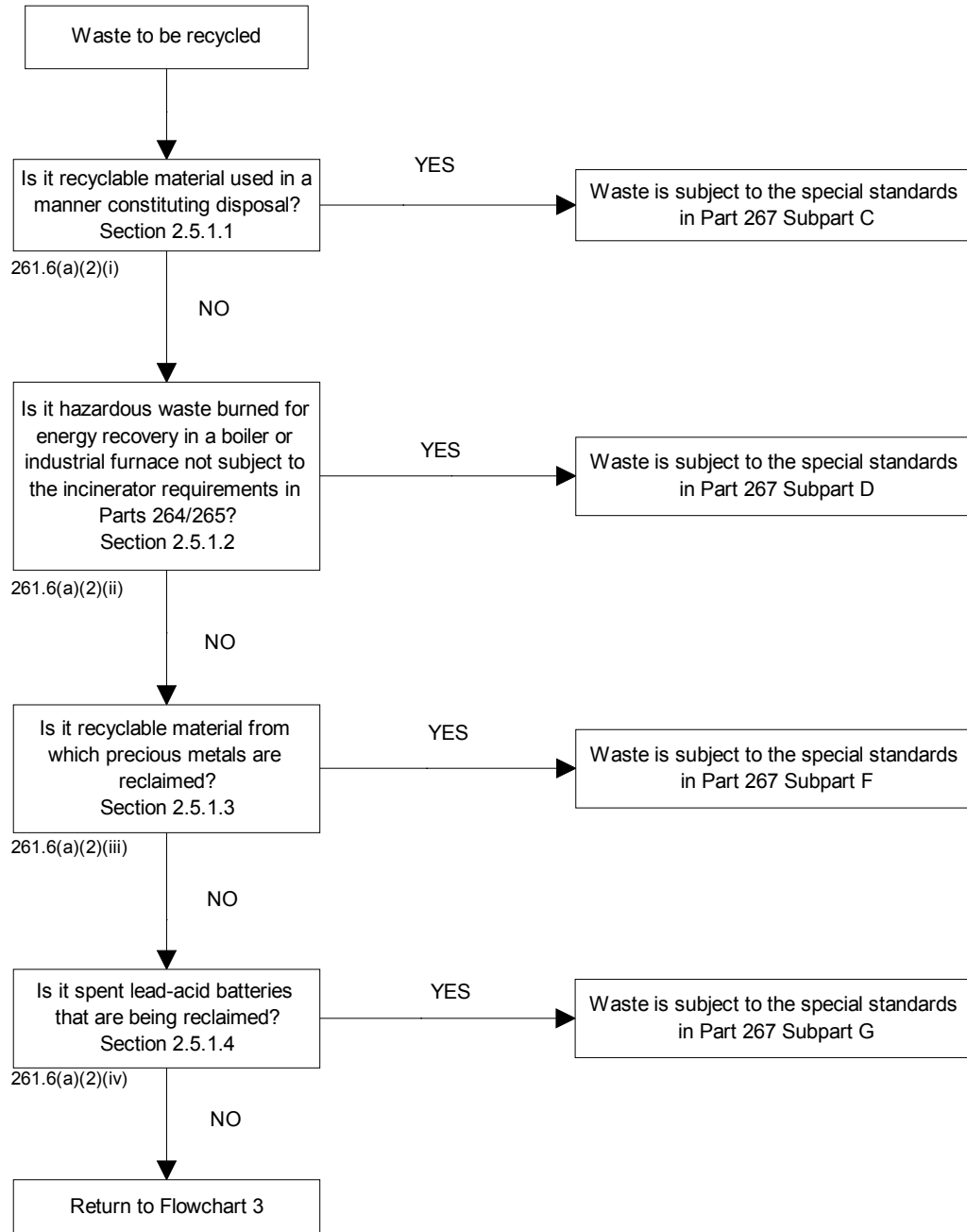
Refers to the "CDPHE Hazardous Waste Recycling Guidance Document"

**261.4(a)(9)** ← Refers to the Colorado Hazardous Waste Regulations 6 CCR 1007-3



### FLOWCHART 3B

#### Recycling Activity Listed in 261.6(a)(2) [6 CCR 1007-3]



**Key**

Is it spent lead-acid batteries that are being reclaimed?  
**Section 2.5.1.4**

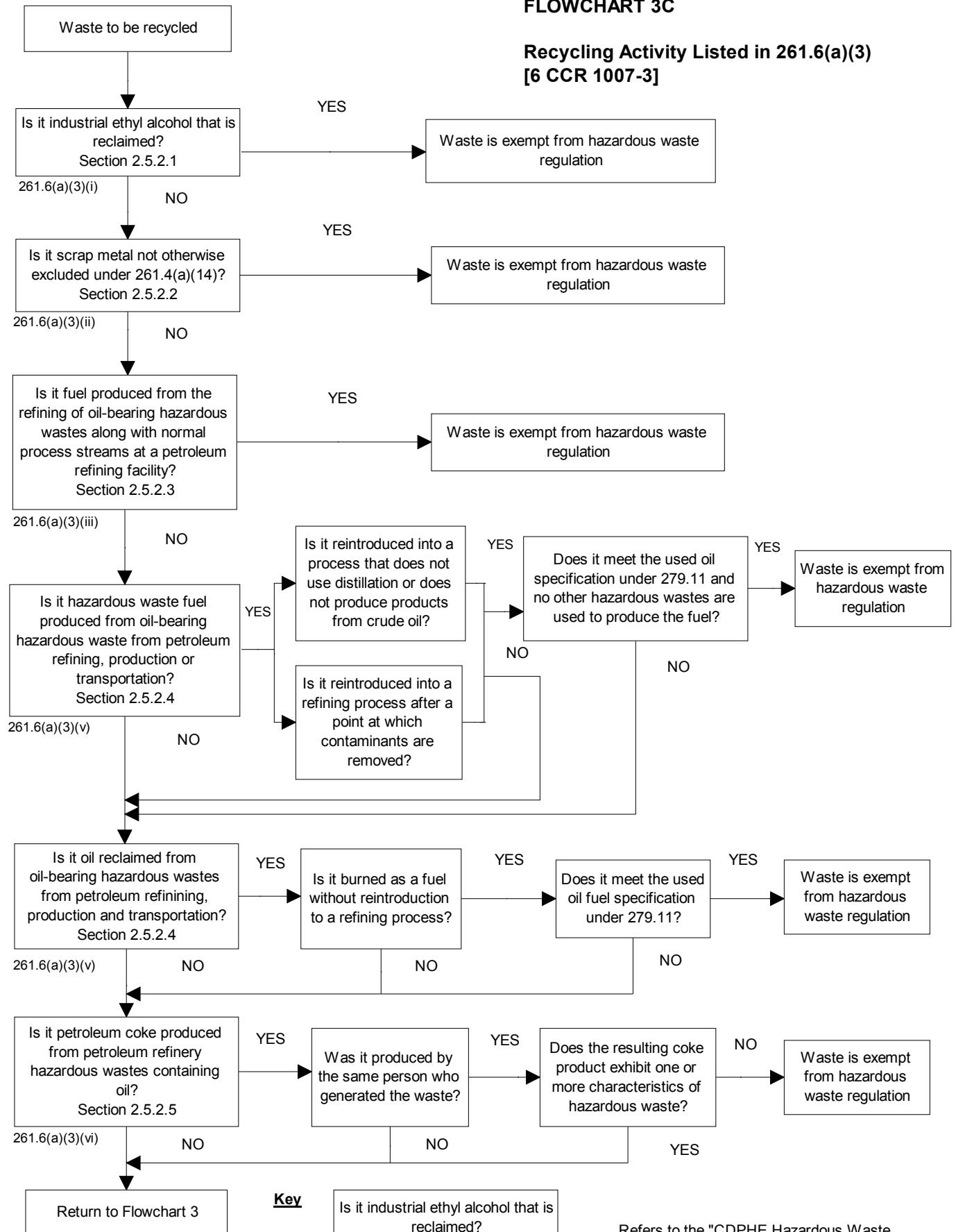
Refers to the "CDPHE Hazardous Waste Recycling Guidance Document"

261.6(a)(2)(iv)

Refers to the Colorado Hazardous Waste Regulations 6 CCR 1007-3

**FLOWCHART 3C**

**Recycling Activity Listed in 261.6(a)(3)  
[6 CCR 1007-3]**



**Key**

Is it industrial ethyl alcohol that is reclaimed?  
**Section 2.5.2.1**

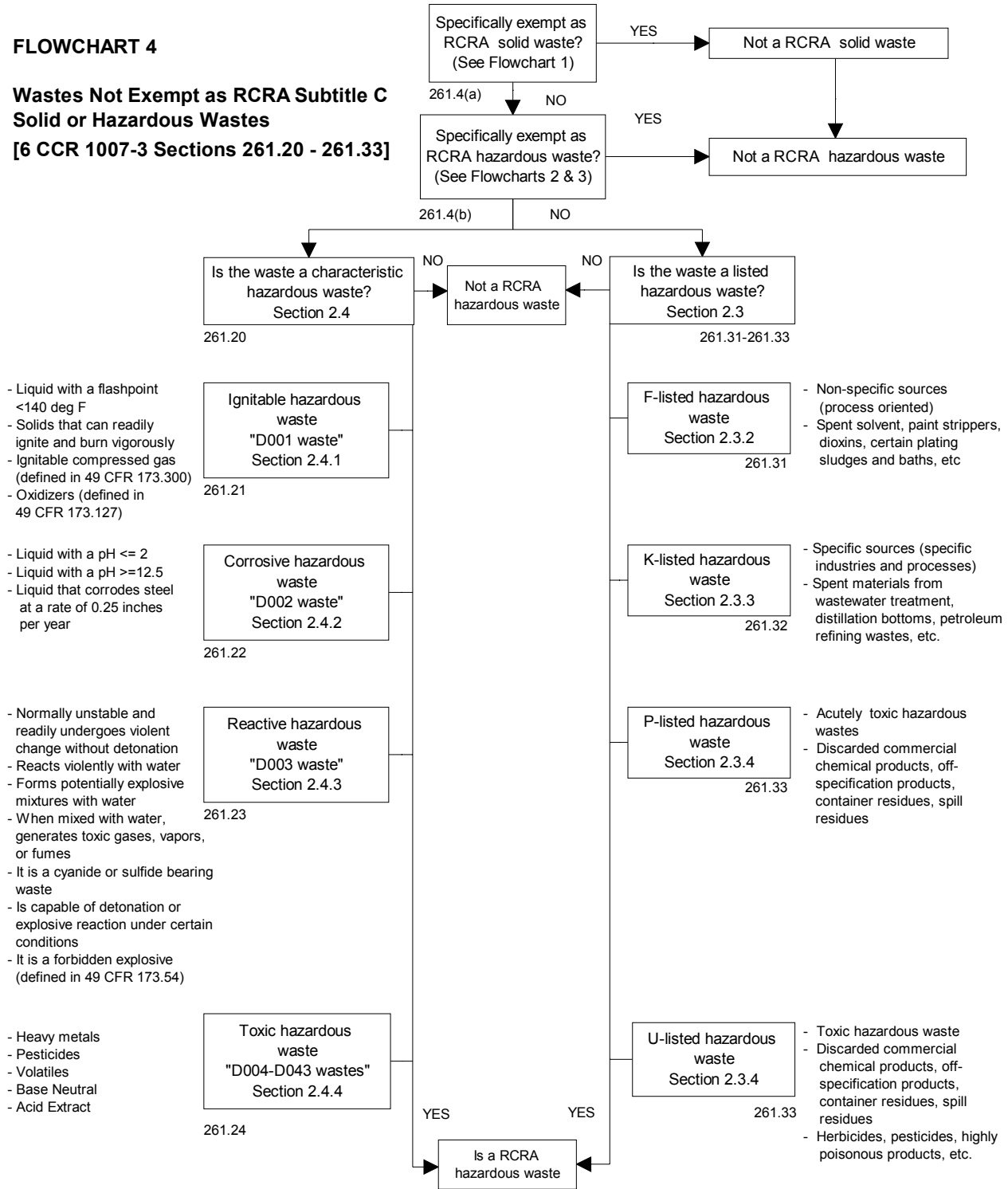
Refers to the "CDPHE Hazardous Waste Recycling Guidance Document"

261.6(a)(3)(i)

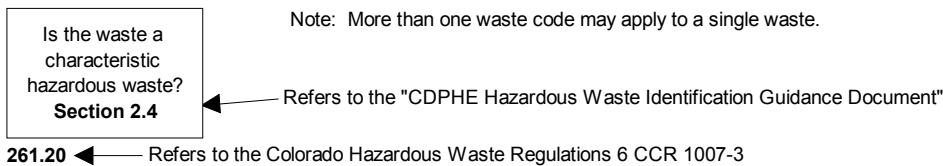
Refers to the Colorado Hazardous Waste Regulations 6 CCR 1007-3

**FLOWCHART 4**

**Wastes Not Exempt as RCRA Subtitle C Solid or Hazardous Wastes**  
**[6 CCR 1007-3 Sections 261.20 - 261.33]**



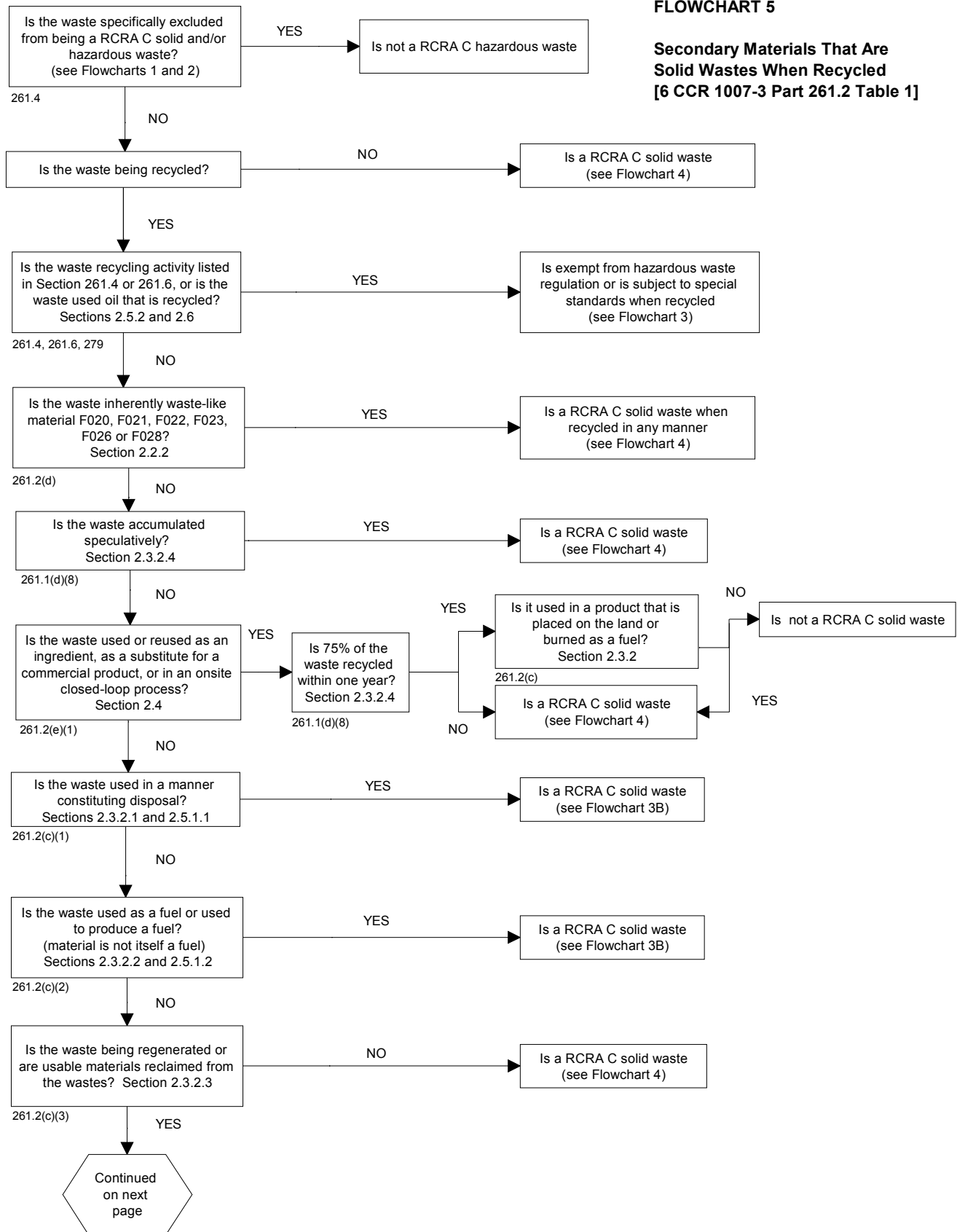
**Key**



**FLOWCHART 4 Wastes Not Exempt as RCRA Subtitle C Solid or Hazardous Wastes**

**FLOWCHART 5**

**Secondary Materials That Are Solid Wastes When Recycled  
[6 CCR 1007-3 Part 261.2 Table 1]**



**FLOWCHART 5 Secondary Materials That are Solid Wastes When Recycled**

