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MEXICO ISSUES NEW HAZARDOUS WASTE CHARACTERIZATION STANDARD

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On June 23, 2006 Mexico's Official Gazette of the Federation published Official Mexican Standard, NOM-052-SEMARNAT-2005, which establishes the characteristics, and procedures for identification, classification and listing of hazardous waste. Issued by the Secretariat of Environment and Natural Resources (SEMARNAT), this new rule is a major revision of the original NOM-052-SEMARANT-1993, one of the most cited federal environmental standards. The new Official Mexican Standard, or NOM for its Spanish-language acronym will become effective 90 days after its publication, on September 21, 2006.

This new rule applies to all hazardous waste within Mexico regardless of its point of origin or its intended final treatment or disposal destination.

As in the original standard, the core of this NOM consists of the hazardous waste classification lists, which define the procedures for determining if a waste is hazardous. The rule has two tables, five lists, and one attachment.

Table 1 describes the Waste Hazard Codes or CPRs, corresponding to Corrosive, Reactive, Explosive, Flammable, Toxic (environmental, acute, and chronic), and Biological-infectious.

Table 2 lists the Maximum Permissible Limits for Toxic Constituents of the PECT extract for 40 substances, including metals, and volatile and semi-volatile organic compounds. PECT stands for Procedure for Extraction of Toxic Constituents, which is similar to the Toxic Characteristic Leaching Procedure, or TCLP found in U.S. federal hazardous waste regulations.

According to the NOM, a waste is hazardous if it is listed in one of the following:

- List 1: Classification of hazardous waste by specific source (Code E).
- List 2: Classification of hazardous waste by non-specific source (Code NE).

- List 3: Classification of hazardous waste resulting from disposal of out-of-specification or out-of-date chemical products (Code H, Acute Toxics).
- List 4: Classification of hazardous waste resulting from disposal of out-of-specification or out-of-date chemical products (Code T, Chronic Toxics).
- List 5: Classification by type of waste, subject to Specific Management Conditions (Code RP). For example, used cutting or cooling oils from lathes, stamping, drilling and grinding operations.

In one of the rule's new requirements, if a waste is not listed in Lists 1 through 5 and is regulated by criteria described in other standards, then the waste is subject to the provisions of the corresponding regulations. This includes the following:

- Sludge and biosolids are regulated by NOM-004-SEMARNAT-2002.
- Polychlorinated biphenyls (PCBs) are subject to the provisions established in NOM-133-SEMARNAT-2000.
- Maximum Permissible Limits for hydrocarbons in soil are subject to the definitions in NOM-138-SEMARNAT/SS-2003.
- Mining leach piles are ruled by the specifications included in NOM-141-SEMARNAT-2003.

The significance of this provision means that while used fuels and oils are considered hazardous waste, soil affected with these same hydrocarbons can only be considered hazardous if it exceeds the maximum permissible limits of NOM-138-SEMARNAT/SS-2003, which in the case of diesel-fraction hydrocarbons is above 5,000 mg/kg. It follows that diesel-affected soil below this concentration would be able to be disposed of at sites designated for non-hazardous solid waste, such as municipal landfills.

Waste that is not listed or does not fall into the established criteria of other rules must be evaluated to determine if it meets any of the hazardous characteristics described in the Official Mexican Standard. This determination can be made through one of the following options:

- Characterization or analysis of the waste according to the CRIT (for Corrosive, Reactive, Flammable, and environmental Toxic) method, as well as determination of Explosive and Biological-infectious characteristics.
- Declaration based on scientific knowledge or empirical evidence about the materials and processes used in the generation of the waste in the following cases:
    - If the generator knows that the waste has any of the hazardous characteristics established in the standard.
    - If the generator knows that the waste contains a toxic constituent that makes it hazardous
    - If the generator declares under oath that the waste is not hazardous.

The CRIT analysis to determine the waste's hazardous characteristics does not include tests for acute or chronic toxicity referred to in Lists 1 through 4. For environmental toxicity, the waste's PECT extract obtained by the procedures described in NOM-053-SEMARNAT-1993 must contain any one of the toxic constituents listed in Table 2 of this rule at a greater concentration than the established limits.

Samples for analysis must be collected directly from the end of the process or from the waste storage area in accordance with the procedures of the corresponding standard and must be representative of the volume generated, taking into account process variations. Samples must also be handled under Chain of Custody.

Attachment 1 of the standard includes a list of hazardous substances that were used to classify waste as hazardous under the Specific Source, and Non-specific Source categories in terms of their environmental, acute and chronic toxicity. However, it does not indicate numeric concentration limits for acute or chronic toxicity.

Specific Management Conditions may be requested for hazardous waste in Lists 1 and 2 according to the Regulations of the General Law for the Prevention and Integral Management of Waste, which has not yet been published.

SEMARNAT will accept the analytical results of the CRIT test that have been sampled and analyzed by an accredited laboratory approved in accordance with the applicable legal provisions.

This new standard replaces the previous procedure for obtaining Non-Hazardous Determinations, which were issued by SEMARNAT at the request of a generator for the purpose of reclassifying a specific waste as non-hazardous, resulting in fewer regulatory, management, and waste disposal requirements. The new rule allows the generator to make such determinations through the CRIT analysis or simply based on the generator's knowledge as described in this standard. Any current SEMARNAT Non-Hazardous Determinations at the time this new standard becomes effective will remain valid through the period for which they were issued.

Overall, the new NOM is more in keeping with current practice in hazardous waste management in Mexico such as non-hazardous determinations, and management of remediation-generated waste. It also brings the waste characterization process more in line with the new Integral Waste Management Law, which allows for classification of certain waste streams as subject to special management, most noticeably used oils, and electronic equipment waste, which are apt for reuse and recycling. At the same time, the rule leaves some unanswered questions in part due to the delays in issuing the waste management law's regulations.

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