Designation: D 5013 – 89 (Reapproved 1998)

Standard Practices for Sampling Wastes from Pipes and Other Point Discharges[1]

This standard is issued under the fixed designation D 5013; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 Those practices provide guidance for obtaining samples of waste at discharge points from pipes, sluiceways, conduits, and conveyor belts. The following are included:

	Sections
Practice A—Liquid or Slurry Discharges	7 through 9
Practice B—Solid or Semisolid Discharges	10 through 12

1.2 These practices are intended for situations in which there are no other applicable ASTM sampling methods (see Practices D 140 and D 75) for the specific industry.

1.3 These practices do not address flow and time-proportional samplers and other automatic sampling devices.

1.4 Samples are taken from a flowing waste stream or moving waste mass and, therefore, are descriptive only within a certain period. The length of the period for which a sample is descriptive will depend on the sampling frequency and compositing scheme.

1.5 It is recommended that these practices be used in conjunction with Guide D 4687.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* See Section 5 for more information.

2. Referenced Documents

2.1 *ASTM Standards:*

D 75 Practice for Sampling Aggregates[2]

D 140 Practice for Sampling Bituminous Materials[2]

D 4687 Guide for General Planning of Waste Sampling[3]

E 882 Guide for Accountability and Quality Control in the Chemical Analysis Laboratory[4]

2.2 *Other Document:*

EPA-SW-846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods[5]

3. Summary of Practices

3.1 The variability of the waste stream is first determined based on (*1*) knowledge of the processes producing the stream, or (*2*) the results of a preliminary investigation of the waste stream's variability. A sampling design is then developed that considers the waste stream's variability, the time frame the sample is to represent, and the precision and accuracy required for waste analysis or testing. The actual sampling procedure consists of obtaining several grab samples from the moving stream or mass for analysis or testing.

4. Significance and Use

4.1 The procedure outlined in these practices are guides for obtaining descriptive samples of solid, semisolid and liquid waste from flowing streams, and incorporate many of the same procedures and equipment covered in the Referenced Documents. These practices by themselves will not necessarily result in the collection of samples representative of the total waste mass. The degree to which samples describe a waste mass must be estimated by application of appropriate statistical methods and measures of quality assurance. It is recommended that those practices be used in conjunction with Guide D 4687.

5. Hazards

5.1 In all sampling practices, safety should be the first consideration. Personnel involved in the sampling should be fully aware of, and take precautions against, the presence of toxic or corrosive gases, the potential for contact with toxic or corrosive liquids or solids, and the dangers of moving belts, conveyors, or other mechanical equipment. Guidance on waste sampling safety can be found in Guide D 4687.

6. Sampling Design

6.1 The frequency of sampling and the number of composites required to obtain a sample of the waste will depend on the following:

6.1.1 Time variability of the waste composition,

6.1.2 Time span which the sample is to represent, and

6.1.3 Precision of waste analysis that is required, for example, if a hazardous constituent is present in the waste at levels near the regulatory limit or another limit of concern, then better precision will be required than if the levels are well below or well above the limits of concern.

6.2 The processes that produce the waste will largely dictate

[1] These practices are under the jurisdiction of ASTM Committee D34 on Waste Management and are the direct responsibility of Subcommittee D34.01.02 on Monitoring.

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[2] *Annual Book of ASTM Standards*, Vol 04.03.

[3] *Annual Book of ASTM Standards*, Vol 11.04.

[4] *Annual Book of ASTM Standards*, Vol 03.05.

[5] Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.