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Solid Waste Transfer Station Geotechnical Guidance

Transfer stations can vary by design, size, method of operation, location and other factors. For example, some transfer station operations utilize a pit for the collection of waste, while others will collect the waste directly from the floor. All facilities will be covered with a roof that will need to be supported. Some transfer stations will be small enough to be supported by many soil types, while others will require specific types of soil. Finally, the topography at the transfer station may be flat or sloping.

A geotechnical sampling plan should be completed on the basis of the preliminary design of the transfer station. The preliminary design will dictate the amount of sampling required. The engineering property that is usually of interest to the designer of a transfer station is the strength of soil supporting the various features of the transfer station. The investigation of the on-site soils is aimed at determining the density, water content, and classification so that the soil strength can be calculated and engineering decisions made.

Within the geotechnical sampling plan limits, enough soil samples should be taken to identify the in-place density, moisture content, and classification of all soils beneath the features of the transfer station. Representative, undisturbed samples should be obtained from each soil beneath the site. Large, disturbed samples should be taken in cases where the soil must be reconstructed. Structures designed with footings or posts embedded below the frost line would require site-specific soil boring information.

It is possible to use Soil Conservation Service Soil Survey reports as the source of engineering properties for soil. This source should be used with caution since the data is usually not site specific. The engineering properties in the Soil Survey would be satisfactory for designs utilizing slabs on grade (slabs placed on natural, undisturbed soil).

If you have any questions concerning the geotechnical testing requirements at your site, contact the Waste Management Section at (402) 471-4210.

RESOURCES:

- NDEQ Home Page <http://deq.ne.gov/>

Contacts:

- NDEQ Waste Management Section (402) 471-4210
- NDEQ Toll Free Number (877) 253-2603
- NDEQ Hazardous Waste Compliance Assistant (402) 471-8308
- Email questions to: NDEQ.moreinfo@nebraska.gov

NDEQ Publications:

- [Title 132 – Integrated Solid Waste Management Regulations](#)
Titles are available on the NDEQ Home Page under “Laws/Regs & EQC”, “Rules & Regulations”