**Impoundment Study Guide**

* By traversing the entire impound the qualified person will ensure the entire impound area has been inspected.
* Site inspection for leakage is to evaluate seepage, volume and appearance of seepage, and the location of seepage.
* A boil is – A piping through of leakage in the foundation.
* If you have a bulge on the slope, a qualified inspector will walk straight up from the bulge and locate the corresponding crack.
* Riprap or concrete is most often required at entrance and discharge points along the bottom if not carved in rock and at curved areas.
* Section 77.214-77.216 of the 30 CFR shall pertain to refuge piles and impounding structures.
* Watershed is – The area within whose boundaries precipitation will normally be channeled toward a refuse facility.
* A circular arc is a type of slope failure.
* Some slope movement has occurred when you have a bulge of a toe near the embankment.
* Ground water level is an indication of phreatic surface.
* The lowest point of the embankment crest, and the vertical distance between the surface of the water in the impoundment is freeboard.
* To improve the cohesiveness of coarse refuge and reduce bulk is by compaction.
* The inspection route of an impounding embankment is the examination of the crest, slope face, abutments, and toe area.
* A distance of 100 feet of a downstream foundation area is the maximum distance downstream of the toe that should be examined.
* Miniture volcanos are seepage boils associated with piping.
* Location, color, amount, and any changes since the last inspection are points to be noted about seepage.
* Ground movement can be indicated by the unnaturally tilting of trees.
* Extensive logging and strip mining upstream of a refuge facility may cause or permit more rapid runoff of rainfall.
* Circular arc and wedge are the most common types of slope failure.
* Tension cracks, surface sloughing, and bulging are signs of slope movement.
* The angle of repose is the natural angle in which a material will stand if dumped in a pile.
* A diversion ditch is a channel designed to carry around and away from a refuge facility.
* A piezometer is a length of pipe installed to measure ground water level.
* Any structure that can impound water 5 feet or more above the upstream toe and can have a storage capacity of 20 acre feet or more, shall be inspected by a qualified MSHA Impoundment Inspector.
* The maximum intervals between examinations, in the event of a potential hazardous condition, by a qualified person is 8 hours.
* The process in which water, seeping uncontrolled through an embankment, picks up and transports progressively large particles is called piping.
* One or two days after a storm when the surface runoff has stopped but the pond level is still high, is the best time to check the slope for seepage.
* The results of an examination conducted by a qualified person are to be entered in a book kept at the mine and counter-signed by one of several authorized persons.
* Seepage is – A change in color over a part of an embankment slope.
* A burning refuge facility shall be extinguished using firefighting methods outlined in the plan approved by the district manager.
* The decants are the trash rack and inlet and outlet points.
* The ability of the site to safely support the refuse and the downstream conditions that would be affected if the facility should fail is the two major items to be carefully considered.
* Bulges are the indication of – Ground movement
* Clogging of the decant inlet is not an indication of seepage.
* To control seepage use drainage blankets and toe drains.
* The purpose of Hydraulic structures is to dispose of excess water.
* To discharge clarified water from an impoundment and to relatively slowly discharge inflow from collected and stored during large rainstorms is the primary function of a decant.
* The refuse material should be spread and compacted in lifts not to exceed 2 feet.
* Impoundment examines by a qualified person will be done no less frequently than 7 day intervals.
* Failing to clear the area of vegetation and topsoil is a serious error in preparing the foundation of a embankment.
* The amount of precipitation within a watershed that reaches a refuse facility is called runoff.