Laramie Energy Cuttings Management

During drilling operations, cuttings are captured in a “Catch Pan”. The catch pan is a steel open top flat tank under the cuttings discharge chute with one end open to allow a front loader to come in scoop out cuttings after they have gone through the shakers and press.

The cuttings are then stacked on the cut slope of the pad and allowed to air dry. Once the rig has completed drilling all wells, the cuttings will remain until well completion (stimulation) operations are finished. Since the wells are drilled with the same mud program to the same geologic formation, a homogenous sample of the cuttings is gathered by an independent third party contractor and analyzed for Table 910 standards to establish baseline for future reclamation. Note: If a well is drilled into a different geologic zone, or the mud program changes that might impact the constituents in the cuttings, the sampling procedure would be reviewed and revise if needed.

Once all wells are completed and equipment is offsite, Laramie gathers another homogenous sample of the cuttings and test them to 910 standards. If cuttings are still above 910 standards they will be blended with amendments, and re-tested until they are below 910 requirements. At this point the cuttings material can be incorporated into the interim reclamation process. During the interim reclaim of the location, the cut slope will be reshaped using the available materials, cuttings will be covered with a minimum of three feet of soil.

Once the location has been reshaped and the cuttings covered, the available topsoil is utilized and spread out over the reclaimed area. Stormwater BMPs and seeding are implemented as appropriate.

Laramie Management of Excess Cement

During surface casing cement operations, Laramie’s standard practice is to pump more cement than the annular volume to insure good cement integrity from the surface casing shoe to the surface. Whatever excess cement that is pumped and circulates out of the hole needs to be managed. The excess cement (10-15 bbl usually) is diverted around the shaker and pumped into the catch pan. Any free water in the pan is pumped to the mud tanks, while the cement remains in the pan. Current procedure is to allow cement to semi harden in shaker catch pan (just to the point where a front loader is able to move it), and then transfer to a bermed area in the cuttings to let the cement set further. Once the cement has set, it is then mixed into the cuttings pile. Any free water that comes out of the cement as it sets is then pumped into a truck and hauled off or reused by the drilling system.

To manage excess cement from casing jobs is typically moved to a bermed area in the cuttings pile to contain the cement material and allow drying of the excess cement. Ultimately this material is blended with cuttings prior to reclamation.