

January 4, 2008

Work Plan for the Abandonment of SGP-6 Countywide Landfill

SGP-6 encountered unanticipated conditions, specifically soft, saturated material and liquid. The soil gas monitoring probe SGP-6 could not be constructed as intended due to the collapse of material that occurred during installation. With the limitations of the direct push rig and access challenges for any other available rig, there was no other way to construct this probe that could have ensured a successful completion. As a result of the conditions encountered, SGP-6 is "watered in", that is the liquid level within the probe is above the screened interval. Therefore, SGP-6 cannot function as a soil gas probe as originally intended. SGP-6 also represents a potential preferential pathway for liquid to move downward from the saturated zone encountered. Countywide RDF is therefore proposing to abandon SGP-6 using the procedures described herein.

The access ramp to SGP-6 and the pad at SGP-6 will be improved to allow a capable drill rig (truck-mounted or ATV) to reach and set up on SGP-6. The probe will be over-drilled using $3\frac{3}{4}$ inch I.D. (approximately 8-inch O.D.) hollow stem augers. The augers will remove the existing seal and any material that may have collapsed into the annular space below the seal. The 1-inch PVC screen and riser will be removed from the interior of the auger, assuming it survives the over drilling intact. The augers will be advanced to the depth equal to or slightly greater than that of the original boring.

Once the augers have reached the target depth, a cement-bentonite grout will be prepared. The percentage of Type I Portland cement and bentonite will be approximately 95 percent and 5 percent by weight, respectively. The grout will be mixed using approximately 7 gallons of clean water for each 96 lb bag of Portland cement. The grout mix may have to be adjusted based on the pumping capability of the rig.

The grout will be pumped into the interior of the augers so that it displaces any liquid that may be present within the augers. The augers will then be removed from the borehole, one flight at a time. As each flight is removed, additional grout will be pumped into the augers so that the borehole is filled with grout, from the bottom up, as the augers are removed. Once the augers are removed, the grout level in the borehole will be topped off. The following day, once the grout has had a chance to settle, additional grout will be added if the surface of the grout is more than 5 feet below the ground surface. The remaining borehole will be filled with clean soil fill.

Given the other probes in the vicinity, there is not need to replace SGP-6. Replacement at the existing location and depth has risks that are not outweighed by any potential benefit of having a probe at the existing location. The other probes provide sufficient data at the toe of the buttress so that the replacement of SGP-6 with a 30-foot probe or a deeper probe at the toe of the buttress does not provide any worthwhile additional data.