

Memorandum

Florida Department of Environmental Protection

TO: Petroleum Cleanup Preapproval Program Staff and Contractors

FROM: Michael Ashey, Chief *MA 9/28/2010*
Bureau of Petroleum Storage Systems

DATE: October 1, 2010

SUBJECT: Preapproval Program Backfill Quality Assurance Procedure for Sites Undergoing Excavation

The following procedure is required to provide reasonable assurance that soil used as clean backfill at state-funded petroleum contamination cleanup projects within the Bureau of Petroleum Storage Systems (BPSS) does not contain Chemicals of Concern at concentrations exceeding Soil Cleanup Target Levels (SCTLs). This procedure supercedes the previous backfill sampling memo dated April 7, 2008.

Backfill must be provided from a source of native soil from an area that was previously undisturbed (other than the operation of the borrow pit facility) and should be in an area which has not previously been used for commercial or industrial activities. A history of previous agricultural use is acceptable, but may warrant testing for additional Chemicals of Concern. This requirement may be waived if a "known" (previously sampled) clean source is available. Records and verification of the backfill source must be submitted to the BPSS.

Grab samples must be collected from the fill source (borrow pit) prior to loading for delivery to the remediation site. The frequency (number) of samples can be increased based on the volume of soil as well as the ultimate disposition of the fill material (example: large volume excavation and backfill in residential areas may warrant more frequent sampling). The number and frequency of samples should be specified in the Remedial Action Plan (RAP). For situations where the RAP does not specify the backfill sampling details (such as RAPs submitted prior to issuance of this memo or for excavations less than 200 cubic yards that do not require a RAP), the backfill sampling details will be negotiated between the BPSS site manager and the consultant and documented in writing (or email). Samples will be collected sufficiently far in advance of delivery such that the analytical results can be reviewed and determined to be acceptable before material from the fill source is delivered to the remediation site. For preapproval sites, this can be accomplished by tasking the backfill facility soil sampling as the first event of the Work Order/Task Assignment that initiates the excavation. The site manager will negotiate the number of samples to be taken to ensure that the backfill meets SCTLs and build these costs into the first event.

Soil samples will be analyzed for the following:

- Volatile Organics (by EPA Method 8260)
- Semi-volatile Organics [Base/Neutrals (e.g., PAHs, Pesticides, PCBs) and Acid Extractables (e.g., Phenols)] (by EPA Methods 8270/8081/8082)
- RCRA Metals (by EPA Method 6010 and EPA Method 7471 OR EPA Method 6020, and EPA Method 7471 if not certified for mercury under EPA Method 6020)
- Petroleum Residual Organics (by FL-PRO)

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Other analytes may be added on a case-specific basis.

Soil will only be accepted for use as clean backfill if the results of laboratory analyses show that there are no exceedances of SCTLs for any of the analytes measured. If soil from the low-bid backfill facility does not qualify for use as clean backfill, the second lowest bid backfill facility will be considered.

These procedures also apply to the soil used to mix flowable fill for LDA source removals if the flowable fill will be mixed by the remediation contractor that is performing the LDA source removal (or another subcontractor) but do not apply if the flowable fill is obtained from a commercial concrete products supply company.

Treated soil from a soil treatment facility permitted to operate under Chapter 62-713, Florida Administrative Code (F.A.C.), is also considered suitable for backfill if it has been treated to the standards of "cleaned soil" as described in Subsection 62-713.520(2), F.A.C. In this case no additional soil analysis will be required.

If you have any questions, please contact Diane Pickett of the BPSS at (850)222-6446 ext. 265 or diane.pickett@dep.state.fl.us.