Guidance Document for Limited Site Assessments (LSA) [September 16, 2020]

ADE&E, Division of Environmental Quality, Office of Land Resources
Assessment & Remediation Program – Regulated Storage Tanks (RST)

Upon confirmation of a release of a petroleum substance from a regulated tank, the RST staff may, at its discretion, request a Limited Site Assessment (LSA). Under the authorities of 40 CFR § 280.65 and APC&EC Reg. 12, the LSA will provide RST staff and the Owner/Operator with initial environmental information to determine if further assessment and/or remediation are needed. The purpose of this guidance document is to define a minimum scope of work for consultants and environmental professionals in the successful implementation of a LSA.

A request for a LSA from the RST staff will include a not-to-exceed cost authorization, pending an eligibility determination from the Arkansas Petroleum Storage Tank Trust Fund. This cost approval, researched by RST staff, is intended to provide adequate coverage under most circumstances. Under special circumstances, RST staff will consider reasonable requests to modify the cost approval.

TASKS FOR IMPLEMENTATION OF LSA

1. **Planning**
   Confer with the RST case manager to reach a consensus on drilling locations and any other necessary modifications to this guidance. Conduct a site reconnaissance (if not already accomplished during release confirmation) to identify buried structures and potential drilling locations.

2. **Field Activities**
   Under the supervision of an Arkansas-registered Professional Geologist (PG), and using best practices, advance a minimum of four (4) soil borings, at locations pre-approved by the RST case manager. Sufficient depth of each soil boring shall be determined by the shallowest of the following three criteria: 1] bit "refusal", 2] penetration of ten feet (10') of the saturated zone, or 3] twenty-five feet (25'). If the combined footage of the first four soil borings does not exceed 80', then a fifth soil boring should be advanced at a location selected by the prime contractor PG.

   Using appropriate sample-handling procedures, field-screen soil samples with a pre-calibrated photo-ionization detector (PID) at minimum 2' intervals. Collect and preserve a minimum of one soil sample per boring for laboratory analysis from a depth corresponding to the highest PID detection, or if there are no elevated PID detections, from a depth corresponding with top of saturation.

   In an effort to collect groundwater data, each soil boring should be left open for a minimum of 2 hours to allow any groundwater accumulation. All borings which accumulate groundwater should be gauged with a decontaminated interface probe, and a grab water sample should be collected for laboratory analysis using appropriate sample-handling procedures. One duplicate water sample should be collected, if volume permits. Any UST basin "observation" wells should also be inspected for free product and gauged, but not sampled.

   Boreholes should be plugged (either with cuttings or bentonite). The uppermost 1' of each borehole should be plugged with grout or grout mixture. Ground surface should be restored to match existing grade.

3. Laboratory Analyses

All samples collected must be analyzed by a laboratory certified by DEQ.

Soil samples should be analyzed for TPH-GRO and –DRO, BTEX and Naphthalene. Water samples should be analyzed for TPH-GRO and –DRO, BTEX, MtBE and Naphthalene. Additional analytes may be requested by the RST case manager during the planning stage.

4. Waste Management

Any solid or liquid wastes generated during field activities must be properly contained and promptly disposed at a permitted facility. Investigation-derived wastes must not be left unattended at the site. Custody documentation must be created for **all** waste generated.

5. Reporting

A Limited Site Assessment Report must be submitted to the RST within sixty (60) days of receiving authorization. The Report must bear the signature and seal of an Arkansas-registered Professional Geologist. The information contained in the LSA Report must include, but is not limited to the following:

A. Information about the site and the nature, cause and estimated quantity of the release, including information gained while confirming the release. Describe all response activities, including how and when the release was discovered and by whom. Include supporting documents (e.g. inventory records, system test results, repair reports/invoices).
B. Provide a full description of the existing UST/AST system (active or inactive) configuration and the methods of release prevention and release detection.
C. Detailed description of field activities, including names of prime contractor personnel, sub-contractors employed, dates of service, observations by the field geologist, sampling SOPs, sample handling procedures, evaluation of laboratory reports and management of investigation-derived wastes.
D. Figures/Maps and Tables must bear the relevant Facility Name and Number, AFIN and LUST/LAST#. Maps must include a north arrow and bar scale. Figures/Maps and Tables must include, but are not limited to the following:
    1) Current USGS topo map encompassing a minimum of one mile radius;
    2) Recent aerial imagery of study area within a 500’ radius of the release site identifying the point of release, adjoining land use and potential receptors (e.g. water wells, surface streams, basements);
    3) Site map from available data illustrating facility components, observation wells, point of release, boring locations;
    4) Annotated geological map of the study area. Base map made available from the Arkansas Geological Survey;
    5) Soil boring logs should include date and times, personnel (prime contractor and sub-contractor), drilling and sample methods, total depth, estimated surface elevation, description of lithology and moisture content, field screening data, depth of sample collection;
    6) Tabulated laboratory data (soil and groundwater) and gauging results (including observation wells).
    7) Supporting documents should include laboratory reports with chain-of-custody documents, fully executed waste manifests (if any), copies of field notes, and photographs.