Alabama Department of Environmental Management
Land Division
P. O. Box 301463
Montgomery, AL 36130-1463
Telephone 334-271-7730
www.adem.alabama.gov
July 2016

Alabama Department of Environmental Management

Hazardous Waste Management

Final Report of Corrective Measures

Facilities may submit a final report of corrective measures (FRCM) for a site when it has reached the end of the corrective action process. This document provides guidance on terms and concepts related to FRCMs.

- **What are FRCMs?** ADEM's solid waste management unit (SWMU) corrective action permit language states the following for FRCMs:

  > "Within 90 calendar days following attainment of cleanup levels or goals as outlined in this Permit and the approved Corrective Measures Implementation (CMI) Plan, the Permittee shall submit to the Department a Final Report of Corrective Measures (FRCM). The FRCM shall contain a certification by the Permittee and an independent professional engineer registered in the State of Alabama that all remedial measures required by this permit and the approved CMI Plan have been completed. The FRCM shall outline any procedures and schedules for dismantling of corrective measures systems, groundwater monitoring or recovery systems, removal of land use controls, and any other remedial systems or controls required by this permit or the approved CMI Plan."

- **When should a facility submit an FRCM?** The FRCM should be submitted at the very end of the corrective action process (whether for a single solid waste management unit [SWMU], a group of SWMUs, or an entire facility, as applicable), once all corrective measures for the unit, group, or facility, as applicable, are completed, cleanup goals have been achieved, and the site is ready for anticipated reuse. In RCRAInfo terms, the FRCM would come between the CA900 and CA999 RCRAInfo codes. CA900 refers to Corrective Action Performance Standards Attained and CA999 refers to Corrective Process is Terminated.

- **What are land use controls?** There are generally two types of land use controls: 1) engineering controls, and 2) institutional controls. Engineering controls are those that are constructed and/or create a barrier against hazards. Engineering controls require operation and/or maintenance to ensure continued protection. Examples of engineering controls include, but are not limited to, the following:

  - Caps or covers
  - Fencing
  - Signs
  - Security personnel or monitoring
  - Containment systems
  - Groundwater monitoring networks

  Institutional controls are non-engineered legal or administrative controls that provide notice (e.g., former military facility) or prohibit certain uses of the property (e.g., residential use, excavations, groundwater access, etc.). These are often enforced through the use of government controls (zoning restrictions, ordinances, etc.) or proprietary controls (environmental covenants, easements, etc.). Institutional controls may also include engineering control requirements.

Alabama Department of Environmental Management

- **Can a facility submit an FRCM for a site with an environmental covenant in place?** An FRCM can be submitted for sites with only institutional controls remaining (e.g., advisory deed notices, prohibitions of residential or other specific uses, prohibition of use of groundwater, etc.). FRCMs should not be submitted for sites with engineering controls or when periodic maintenance or monitoring requirements remain (e.g., caps or covers, groundwater monitoring, treatment or remediation systems, etc., which must be "operated or maintained" over time.) For federal facilities, a notice of environmental use restriction can be used in place of an environmental covenant if an environmental covenant will be established at the time the property is transferred out of federal ownership.

- **Can a facility submit an FRCM for a site with groundwater contamination?** Maybe. In most cases, groundwater contamination above maximum contaminant levels (MCLs) or residential screening values would require monitoring to confirm that the plume is not migrating off-site, expanding in size, or that concentrations are not increasing. Therefore, submittal of an FRCM would not be appropriate for the site until unrestricted use standards are attained. Submittal of an FRCM for a site with groundwater contamination may be appropriate if the facility can adequately demonstrate to the Department's satisfaction the following: 1) continuous groundwater monitoring is not necessary because the contamination plume is not expanding, migrating, and/or concentrations are not increasing and hydrogeological conditions at the site will prevent such expansion, migration, and increase in concentrations from occurring in the future, 2) an environmental covenant has been filed to prohibit groundwater use, and 3) site conditions are protected from activities or naturally-occurring events that could affect the conditions of the plume. For example, it may be necessary to evaluate whether installation of a well off-site could cause the plume to migrate.