2012 Groundwater CAP QA/QC Checklist
Virginia Department of Environmental Quality Division of Land Protection and Revitalization

Groundwater Resource Required Discussion	**Included?**
Aquifer characteristics of site & surrounding property	
Background groundwater quality and aquifer yield	
Discussion of current resource value (use) of the aquifer	
Discussion of future resource value (use) of the aquifer	
Current proximity and withdrawal rates of any GW users	
Current extent of contamination	
Potential damage to crops/vegetation and wildlife caused by potential exposure to landfill waste constituents in the groundwater	
Availability (and cost) of GW treatment vs providing alternate water	
Risk Required Discussion	
Ability to reduce risk to HH & E	
Ability to control residual risk from post remedy implementation waste mass releases to groundwater	
Assessment of the short term risk to community, workers, or environment during the implementation of the remedy	
Performance Required Discussion	
Has capability to achieve GPS	
Estimated time until GPS is achieved on site	
Ability to handle/manage waste in a manner protective of HH & E and meeting all federal/state requirements	
Ability to utilize future enhancements in technology	
Ability of containment to reduce further releases to GW	
Extent to which active GW treatment technology will be used on site	
O&M Required Discussion	
The type/degree of any long-term O&M requirements	
Long-term reliability of engineering/institutional controls	
Implementation Required Discussion	
Demonstration community concerns addressed by remedy	
Evaluation of potential difficulty in remedy construction	
Need for other Agency permits/approvals prior to implementation	
Necessary equipment/specialists required for are available	
Treatment capacity/storage/disposal services available to use	
Practical economic capability of owner/operator to install and complete the remedy	
The need for use of Interim Measures based on factors of F.3	

Remedy Monitoring Required Discussion	
Site Plan shows locations/designations of all CAP related MWs	
Sufficient *compliance, performance, and sentinel wells* in place to define the horizontal + vertical extent of aquifer impacted above background levels	
For MNA sites, network wells located at appropriate distances along downgradient flow paths (*located at a distance no greater than a five year travel time distance)*	
For Presumptive Remedy sites, does CAP GMP include a sentinel network which has sufficient number of wells located along the Permitted facility boundary (or any onsite receptor)	
Sampling constituent list can demonstrate the effectiveness of the remedy (*for sites using MNA, are the additional USEPA parameters included*)	
Minimum sampling frequency meets VSWMR requirements? (*for sites using MNA is the frequency at least quarterly in the 1st year as suggested by USEPA*)	
Surface Water Required Discussion	**Included or NA?**
Does site contain any surface water bodies or does surface water form any of the Permitted facility boundaries? (*If yes answer the questions* below)	
Is GW plume moving toward, or has it reached any surface water bodies	
Does CAMP contain a surface water sampling program containing, at a minimum, the contaminants of concern	
Does CAMP contain a surface water sampling program which contains, at a minimum, sampling points at the upgradient property boundary, downgradient property boundary, and plume discharge point(s)	
Remedy Evaluation Required Discussion	**Included?**
Content of periodic CASE reports	
Potential need for a replacement remedy	
Process for determining GPS cannot be practically achieved	
Timeframe for submittal of a technical impracticality report	
Process for implementation of Alternate Measures	
Timing of demonstration/certification of remedy completion	