A concern has been raised with the increase in the number of installations of Cathodic Protection wells within West Virginia. These types of wells are installed to protect metallic objects in contact with the ground from electrolytic corrosion. Cathodic Protection wells that are not properly constructed can allow groundwater quality degradation to occur that may be detrimental to public health and the environment. This has brought to light that this type of specialized well shall be required to be constructed in accordance with Water Well Design Standards (64CSR46) and Water Well Regulations (64CSR 19) for public health and groundwater protection.

Cathodic Protection wells that are constructed for the purpose of installing deep ground bed anodes in excess of fifty (50) feet, per NACE International Standard Recommended Practice RP0193-2001, to minimize or prevent electrolytic corrosive action of metallic structures installed below ground surface, such as pipelines, transmission lines, well casings, storage tanks, or pilings shall be required to obtain a permit as required in Water Well Regulations (64CSR 19) before construction begins. The same requirements shall apply for shallow ground bed anodes exceeding twenty (20) feet in depth.

Cathodic Protection wells shall be constructed or abandoned in accordance with the casing, joint, surface seal, and other applicable requirements outlined in Water Well Design Standards (64CSR46). Any annular space existing between the base of the annular surface seal and the top of the anode and conductive fill interval shall be completely filled with appropriate fill or sealing material, e.g. bentonite or neat cement. This applies to both cased and uncased ground bed anodes. Fill material shall consist of washed granular material such as sand, pea gravel, graphite or carbon based material, or sealing material. Fill material shall not be subject to decomposition or consolidation ,shall be free of pollutants and contaminants and not be toxic or contain drill cuttings or drilling mud.

Vent pipes, anode access tubing, and any other tubular materials (i.e., the outermost casing) that pass through the interval to be filled and sealed are considered casing for the purposes of these standards and shall meet the requirements of Water Well Design Standards (64CSR46). Cathodic protection well casing shall be at least two (2) inches in internal diameter to facilitate eventual well abandonment.

The general requirements for permanent well abandonment requirements outlined in Water Well Design Standards (64CSR46) shall be followed for the abandonment of cathodic protection wells. A cathodic protection well shall be investigated before it is abandoned to determine its condition; details of its construction and whether conditions exist that will interfere with filling and sealing.

References: Water Well Regulations (64CSR 19)
Water Well Design Standards (64CSR46)

History:

Attachments :