

15A NCAC 05H .1502 WELL SITE CONSTRUCTION STANDARDS

(a) The applicant or permittee shall submit a Well Site Development Plan to the Department pursuant to Rule .1304(c)(2) of this Subchapter. The Well Site Development Plan shall be signed and sealed by a North Carolina Professional Engineer and shall include the following information:

- (1) the name, address, telephone number, fax number, and email address of applicant or permittee;
- (2) the lease name and the oil or gas well name and number;
- (3) the name and address of surface and mineral owners;
- (4) the latitude and longitude (in decimal degrees) of the proposed access road entrance, corners of the well pad, wellhead(s), tank battery, pits, and all other production equipment reported to five decimal places of accuracy and precision using the North American Datum of 1983 (NAD83);
- (5) a well site location map depicting the well pad and access road using a scale of one inch equals 2,000 feet;
- (6) maps, plan sheets, and details depicting the proposed well site, well pad, tank battery, pits, access road, and topsoil stockpiles along with existing roads, surface water bodies, wetlands, and other surface features affected by the construction using a scale ranging between one inch equals 50 feet to one inch equals 500 feet with two foot topographic contours, depending on the total disturbed area;
- (7) the details of the leak detection system, either electrical or piped, that will be installed on any proposed pit, including a plan of action to mitigate leakage;
- (8) the proposed cut and fill areas with two foot grading contours depicting slope ratios and identifying elevation at the top and bottom of slopes using the North American Vertical Datum of 1988 (NAVD88);
- (9) the cross-sections of the length and width of the well site, well pad, and access road that include cut and fill volumes posted in cubic yards;
- (10) a description of proposed well site construction sequence and stabilization techniques;
- (11) the erosion and sedimentation control measures that are designed and constructed to prevent sedimentation to water bodies and adjacent properties from any land disturbing activities related to the construction of the well site in accordance with the SPCA and 15A NCAC 04, and the "North Carolina Erosion and Sediment Control Planning and Design Manual," which is incorporated by reference, including subsequent amendments and editions. The North Carolina Erosion and Sediment Control Planning and Design Manual may be viewed online for no charge at <http://portal.ncdenr.org/web/lr/publications>;
- (12) the stormwater management control measures shall be designed and constructed in accordance with 15A NCAC 02H and the "North Carolina Division of Water Quality Stormwater Best Management Practices Manual," which is incorporated by reference, including subsequent amendments and editions. The Stormwater Best Management Practices Manual may be viewed online for no charge at <http://portal.ncdenr.org/web/lr/bmp-manual>;
- (13) the maintenance procedures for the access road and well pad; and
- (14) the pre-construction conditions at the proposed well site, including aerial photographs, topographic maps, and pre-construction site inspection data.

(b) The permittee shall notify the Department via telephone or email at least 48 hours prior to the commencement of construction of a new well site or prior to the implementation of an approved permit modification. The contact information is set forth in Rule .0201 of this Subchapter. The permittee shall submit Form 11 – Required Notifications to the Department, by mail, email, or fax within five calendar days of the telephone or email notice and shall include the following information:

- (1) the permittee's name, address, telephone number, fax number, and e-mail address;
- (2) the county and nearest city or town where the oil or gas well is located;
- (3) the property street address, or nearest address to the ingress and egress point leading from a public road to the well pad;
- (4) the API number, the lease name, and the oil or gas well name and number; and
- (5) the scheduled date and approximate time of day for commencement of construction activities.

(c) Well site disturbed areas shall be minimized. Taking into consideration the geologic target, setbacks, and safety, the well site shall be located in accordance with API Recommended Practice 51R "Environmental Protection for Onshore Oil and Gas Production Operations and Leases," and the United States Department of the Interior, Bureau of Land Management (BLM) "Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, the Gold Book," which are incorporated by reference, including subsequent amendments and editions.

Recommended Practice 51R, published by API, may be viewed online for no charge at <http://publications.api.org/>. The Gold Book may be viewed online for no charge at http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/gold_book.html.

(d) Well sites shall be designed and located pursuant to the SPCA and in accordance with the North Carolina Erosion and Sediment Control Planning and Design Manual.

(e) All topsoil shall be stockpiled for reuse during reclamation. Topsoil shall be segregated and stored separately from subsurface materials. Stockpiles shall be located and protected to minimize wind and water erosion in accordance with the North Carolina Erosion and Sediment Control Planning and Design Manual.

(f) Well pads shall be designed and constructed to support the maximum weight of all vehicles, equipment, and material on the site.

(g) Well pads shall be designed and constructed using surface or subsurface containment systems that prevent spills or releases of any substances from escaping the well pad.

- (1) containment systems shall be required on the well pad for all equipment used for any phase of drilling, casing, cementing, hydraulic fracturing, or flowback operations and for all substances including drilling mud, drilling mud additives, hydraulic oil, diesel fuel, hydraulic fracturing additives, or flowback fluid.
- (2) containment systems shall have a coefficient of permeability no greater than 1×10^{-10} centimeters per second (cm/sec) and shall be at least 30 millimeters (mils) in thickness.
- (3) adjoining sections of containment systems shall be sealed together in accordance with the manufacturer's directions to prevent leakage.
- (4) all components of the containment system that could potentially come into direct contact with any substances shall be compatible with those substances and be resistant to physical, chemical, and other failure during handling, installation and use pursuant to American Society for Testing and Materials (ASTM) D5747/D5747M-08 (2013) e1 "Standard Practice for Tests to Evaluate the Chemical Resistance of Geomembranes to Liquids," which is incorporated by reference, including subsequent amendments and editions. This document, published by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428, may be purchased at a cost of forty-three dollars (\$43.00) at <http://www.astm.org/Standards/D5747.htm>.
- (5) the permittee shall inspect all containment systems to ensure that integrity is maintained. Containment systems shall be maintained in such manner to prevent an impact to public health, welfare, and the environment. Containment system inspection and maintenance records shall be available at the well site for review by the Department.
- (6) the permittee shall notify the Department if a spill or release occurs at the well site and take necessary remedial actions in accordance with Rule .2005 of this Subchapter.
- (7) the permittee shall provide primary and secondary containment when storing additives, chemicals, oils, or fuels. The secondary containment shall have the capacity to contain 110 percent of the volume being stored.

(h) Well sites shall be constructed to prevent stormwater runoff from entering the well pad. All stormwater control measures shall be designed and managed in accordance with 15A NCAC 02H and the "North Carolina Division of Water Quality Stormwater Best Management Practices Manual."

(i) All erosion control or stormwater measures shall be maintained according to the approved Well Site Development Plan.

History Note: Authority G.S. 113-391(a)(4); 113-391(a)(5)l; 150B-2(8a)h; Eff. March 17, 2015.