JARROD TIMMONS, EI

Education

B.S. – Civil & Environmental Engineering, University of North Carolina-Charlotte, 2016

Professional Licenses

Engineer in Training, 2016

Professional Affiliations

NC SWANA  
SCS Young Professionals

Professional Experience

Mr. Timmons joined SCS Engineers in February 2017. Since joining SCS, he has worked as a staff engineer and project professional on projects in landfill engineering, environmental engineering, civil engineering, and regulatory compliance. He is proficient in landfill design using AutoCAD, preparing stormwater calculations, and geosynthetics. His experience also includes landfill gas system design, landfill cell and closure design, construction quality assurance (CQA) and quality control, and environmental compliance.

Landfill Infrastructure, Design, Permitting, and CQA Projects

**Republic Services, Charlotte Motor Speedway Landfill, Concord, NC.** Assisted with the design preparation of a Municipal Solid Waste (MSW) Phase 4 construction drawings for an approximately ±7.5‑acre MSW landfill cell. The landfill cell liner system included either a compacted clay liner or combination clay liner and geosynthetic clay liner (GCL), a 60-mil HDPE geomembrane liner, compacted clay liner, and protective cover layer. The design included surface grading of perimeter roads, modeling stormwater conveyance and control features, and abandoning existing and installation of new landfill gas and liquid conveyance piping and fittings. The design also included upgrading two (2) existing facility sediment basins to include revision of existing basin grades and up-fitting stormwater conveyance features related to the basins.

**Mecklenburg County, Solid Waste Convenience Center, Charlotte, NC.** Assisted with the layout, design, and preparation of construction drawings for the approximately ±1‑acre solid waste convenience drop-off center located at William R. Davie Park in Charlotte, NC. The layout and design comprised of locating public ingress and egress to the facility, locating solid waste equipment inside the facility (i.e., roll-off boxes, hydraulic compactors, and small attendant building). The design also included grading the property to achieve a near net zero soil balance while considering stormwater runoff from the property. Lastly, helped manage a subcontracted electrical engineer to design electrical service to aforementioned solid waste equipment.

**Buncombe County, Solid Waste Management Facility, Alexander, NC.** Assisted with the design and preparation of construction drawings for an approximately ±4.6-acre Construction and Demolition (C&D) landfill cell. The design included final surface grading, and modeling stormwater conveyance and control features. As part of the construction process, assisted with development of an Erosion and Sediment Control (E&SC) Plan. Prior to construction, the E&SC Plan was submitted, and subsequently approved, by North Carolina Department of Environmental Quality (NCDEQ). For post-design approval, assisted with construction administration duties, which included material(s) submittal review and approval, and coordinating with CQA field personnel, the County, and the contractor.

**Buncombe County, Solid Waste Management Facility, Alexander, NC.** Assisted with the design and preparation of construction drawings for an approximately ±13.1-acre Municipal Solid Waste (MSW) landfill cell, which included a geosynthetic clay liner (GCL), a 60-mil HDPE geomembrane liner, compacted clay liner, and protective cover layer. The design included surface grading of perimeter roads, modeling stormwater conveyance and control features, and landfill gas and liquid conveyance piping. As part of the construction requirements, assisted with development of an Erosion and Sediment Control (E&SC) Plan. Prior to construction, the E&SC Plan was submitted, and subsequently approved, by NCDEQ. For post-design approval, assisted with construction administration duties, which included material(s) submittal review and approval, and coordinating with CQA field personnel, the County, and the contractor.

**Republic Services, Charlotte Motor Speedway Landfill, Concord, NC.** Assisted with the preparation of the new MSW landfill Phase 4 permit to construction (PTC). Primary duties for the PTC included design, calculations, stormwater routing, and modeling of various stormwater and sediment control features. Stormwater features included various lined side slope berms, downchute pipes, lined drainage swales, culverts, and sediment basin design. During, post design, assisted with the preparation of the ES&C summary calculations report.

**Berkeley County, Municipal Solid Waste Landfill, Moncks Corner, SC.** Assisted with the design, the preparation of the construction drawings for the ±6.6-acre MSW landfill Cell 14 and associated stormwater control features. The cell is part of the Berkeley County Class 3 landfill. The landfill cell liner system included a geosynthetic clay liner (GCL) and a 60-mil HDPE geomembrane liner. Along the perimeter of the landfill cell, assisted with the design of the perimeter access road and concrete lined perimeter channel.

**Buncombe County, Solid Waste Management Facility, Alexander, NC.** Assisted with the preparation of a Permit to Construct for an approximately ±4.6-acre C&D landfill cell. The permit included permit drawings, depicting final subgrade surface grading, various stormwater control features, and numerous design details. Also included with the permit were modeling and calculations of the stormwater conveyance and control features. The permit was submitted to, and approved by, NCDEQ.

**Cumberland County, Site Entrance Improvements, Fayetteville, NC.** Assisted with the design of the landfill entrance layout. The layout included designing the layout for three (3) new scales, a new modular scale house, entrance roadway, commercial and residential drop-off areas, and associated utilities. For post design, assisted with construction engineering support, permitting, and developing as-built drawings.

**Cumberland County, Construction and Demolition Landfill, Fayetteville, NC.** Assisted with the Life of Site permitting for the C&D landfill. The permit included grading the landfill phases from existing conditions through final contours within the permitted landfill footprint. The permit also included designing and modeling various stormwater conveyance and control features at time of landfill closure, updating the sites Facility, Operations, and Closure Plans, and the Financial Assurance cost estimate at time of closure. The Life of Site permit documents and drawings were submitted to NCDEQ for review and comment, and was ultimately approved by NCDEQ.

**Cumberland County, Municipal Solid Waste Landfill, Fayetteville, NC.** Assisted with the design and preparation of construction drawings for an approximately ±12-acre partial closure of the active MSW landfill. The final cover system included an intermediate soil cover layer, 40-mil textured geomembrane and geocomposite drainage net, protective cover soil, and vegetative layer. The design included surface grading of the final closure area, including intermediate and protective cover soil layers, stormwater conveyance and control features, and active landfill gas system piping and components. For post-design approval, assisted with closure CQA administration, which included material(s) submittal review and approval, coordinating with CQA field personnel and the contractor, and assisting with the preparation of the final construction certification documentation report.

**Great Oak Landfill Cell 2 and 3A Construction Quality Assurance, Randleman, NC.** Assisted with the CQA management of Cell 2 and was the primary CQA manager for the construction of Cell 3A. The quality assurance included daily coordination and communication with on-site inspectors, the client, and the contractor, as well as periodic communication with NCDEQ representatives. The project also included having a full understanding of the project specifications and State certification requirements necessary for documentation and preparation of construction certification report for operational approval. Duties subsequent to field work included preparing the construction certification report, daily field logs, boring logs, and assisting with the preparation of the as-built construction drawings.

**Yarnell Construction and Demolition Debris (C&D) Landfill, Knoxville, TN.** Assisted with the Minor Permit Modification for closed or completed C&D landfill cells. Minor Modification included calculation and design of stormwater conveyance features that would limit landfill slope erosion and sedimentation. Calculation and design features included side slope diversion berms, diversion berm downchute conveyance piping, and primary lined conveyance channel that conveyed stormwater to existing stormwater basins. Also included with the permit modification was a report, outlining calculation and design given, assumed, and calculated data, as well as design drawing sheets outlining existing and proposed site layout.

Landfill Gas Design and CQA Projects

**Republic Services, Foothills Environmental Landfill, Lenoir, NC.** Assisted with and managed field CQA duties during the construction of landfill gas collection and control system (GCCS) expansion in 2022. This project included installation of four (4) new liquid collector sump systems as well as installation of various above and below ground gas collection piping and fittings. Duties in the field included documenting daily progress for all associated piping, valves, and maintaining a photographic record of work completed. Duties during post-construction included preparing as-built drawings and preparation of the construction certification report, which included daily field logs, boring logs, construction photographs, and as-built drawings.

**Republic Services, Upstate Landfill, Enoree, SC.** Assisted with field CQA duties during the construction of landfill gas collection and control system (GCCS) expansion in 2022. This project included 12 new and re-drilled LFG extraction wells and associated piping and fittings. Duties in the field included documenting daily progress for all associated piping, valves, and maintaining a photographic record of work completed. Duties during post-construction included preparing as-built drawings and preparation of the construction certification report, which included daily field logs, boring logs, construction photographs, and as-built drawings.

**Republic Services, Uwharrie Environmental Landfill, Mt. Gilead, NC.** Managed the design and preparation of construction drawings for the landfill gas collection and control system (GCCS) project for 2021. For post designs, managed onsite CQA personnel, on behalf of Republic, during the construction of landfill GCCS expansion in 2021. This project included 13 new and re-drilled LFG extraction wells, associated piping and fittings, and a condensate sump. Duties for post-construction included preparing the construction certification report, daily field logs, boring logs, and assisting with the preparation of the as-built construction drawings.

**Republic Services, Uwharrie Environmental Landfill, Mt. Gilead, NC.** Managed the design and preparation of construction drawings for the landfill gas collection and control system (GCCS) project for 2020. For post designs, managed onsite CQA personnel, on behalf of Republic, during the construction of landfill GCCS expansion in 2020. This project included 13 new and re-drilled LFG extraction wells, associated piping and fittings, and a condensate sump. Duties during post-construction included preparing the construction certification report, daily field logs, boring logs, and assisting with the preparation of the as-built construction drawings.

**New Hanover County Landfill, Municipal Solid Waste Landfill, Wilmington, NC.** Performed CQA duties during the construction of new landfill gas collection and control system (GCCS) expansion in 2018 and 2019. This project involved installation of new gas collection and control system components including, new header piping and laterals, new leachate and condensate conveyance piping, new airline, and installation of new blower and flare system and their components. Duties in the field included documenting daily progress for all associated piping, valves, and maintaining a photographic record of work completed.

**Republic Services, Upstate Landfill, Enoree, SC**. Performed CQA duties during the construction of the landfill gas collection and control system (GCCS) expansion in 2018. This project included 23 new and re-drilled LFG extraction wells, piping, a condensate sump, and a new liquids pump station. Duties in the field included documenting daily progress for all associated piping, valves, condensate sumps, and leachate pump station and maintaining a photographic record of work completed. Duties during post-construction included preparing as-built drawings, assisting with the preparation of the construction certification report, which included daily field logs, boring logs, construction photographs, and as-built drawings.

**Republic Services, Charlotte Motor Speedway Landfill, Concord, NC.** Performed CQA duties during the construction of the landfill gas collection and control system (GCCS) expansion in 2018. This project included 16 re-drilled LFG extraction wells, associated piping and fittings, and installation of four (4) methane probe extraction wells. Duties in the field included documenting daily progress for all associated piping, valves, and maintaining a photographic record of work completed. Duties during post-construction included preparing as-built drawings, assisting with the preparation of the construction certification report, which included daily field logs, boring logs, construction photographs, and as-built drawings.

**Cumberland County, Municipal Solid Waste Landfill, Fayetteville, NC.** Assisted with the design and preparation of construction drawings for the landfill gas collection and control system (GCCS) expansion in 2017; For post design, performed CQA duties during the construction of landfill GCCS expansion in 2017. This project included 10 new and re-drilled LFG extraction wells and associated piping and fittings. Duties in the field included documenting daily construction progress for installation of landfill gas wells, associated piping and fittings, and maintaining a photographic record of work completed. Duties subsequent to field work included preparing the construction certification report, daily field logs, boring logs, and assisting with the preparation of the as-built construction drawings.

**Republic Services, Uwharrie Environmental Landfill, Mt. Gilead, NC.** Assisted with the design and preparation of construction drawings for the landfill gas collection and control system (GCCS) project for 2017; For post design, performed CQA duties, on behalf of Republic, during the construction of landfill GCCS expansion in 2017. This project included six (6) new and re-drilled LFG extraction wells, associated piping and fittings, and a condensate sump. Duties in the field included documenting daily construction progress for installation of landfill gas wells, associated piping and fittings, and maintaining a photographic record of work completed. Duties subsequent to field work included preparing the construction certification report, daily field logs, boring logs, and assisting with the preparation of the as-built construction drawings.

**Waste Connections, Anson County Landfill, Polkton, NC** – Performed third-party construction quality assurance, on behalf of Anson County, NC, during a new cell construction in 2017. Duties in the field included documenting construction progress for placement of structural soil, clay soil liner, HDPE liner, geotextile drainage liner, protective cover soil, and leachate piping. Photographic record of performed work was maintained throughout the course of the project. Assisted with the preparation of the construction certification report, which included daily field logs, construction photographs, and laboratory analysis results.

**Republic, Lee County Landfill, Bishopville, SC -** Performed CQA duties during the construction of the landfill gas collection and control system (GCCS) expansion in 2017. This project included 25 new and re-drilled LFG extraction wells, associated piping and fittings, and two condensate sumps. Duties in the field included documenting daily construction progress for installation of landfill gas wells, associated piping and fittings, and maintaining a photographic record of work completed. Duties subsequent to field work included preparing the construction certification report, daily field logs, boring logs, and assisting with the preparation of the as-built construction drawings.

Environmental Compliance Projects

**Northeast Alternative Fuels, Fayetteville, NC.** Assisted with the preparation of the Erosion and Sediment Control plan for site construction activities. Included with preparation of E&SC plan were calculations and designs of sediment trap, permanent sediment pond, stormwater conveyance piping, and other sediment control devices. Also included were a report and design drawing sheets which, together, outlined historical site use, existing and planned site use and layout, and explanation of calculations and designs.

**City of Rock Hill, University Center Infrastructure, Rock Hill, SC.** An approximately 16-acre property of former industrial manufacturing buildings in downtown Rock Hill, South Carolina, was acquired by the City of Rock Hill under a voluntary cleanup contract. Numerous assessments identifying areas of concerns and a materials management plan was developed to regulate the disturbance and handling of soil and groundwater at the property before, during, and after redevelopment activities. SCS Engineers was retained for environmental health and safety, on-site environmental inspection and oversight, sampling, and reporting. Activities included:

* Onsite Quality Assurance and health and safety monitoring
* Surface Water Sampling
* Sub-surface soil sampling

**Greens of Rock Hill, Cap Investigation, Rock Hill, SC.** The Greens of Rock Hill development is situated on the former Celanese Acetate facility in Rock Hill, South Carolina. Several of the former waste management units at the former facility operated under a RCRA Part B Permit. The waste management units, including a 1.8-acre asbestos disposal landfill, are currently in the post-closure phase. Activities included:

* Oversight during the collection of soil samples on top of the capped asbestos landfill
* Assisted with updating the asbestos landfill closure permit to include sampling results
* Assisted with asbestos remediation oversight in a known contaminated area

**A-1 Sandrock, Inc., Construction and Demolition Landfill, Greensboro, NC.** Assisted with the collection of semi-annual groundwater and surface water samples to comply with federal and state guidelines.