1.0 PURPOSE AND SCOPE

This policy articulates policies and expectations with regard to Washington River Protection Solutions’, LLC (WRPS) commitment to excellence in engineering. This policy applies to engineering organizations within or supporting the Tank Operations Contract (TOC).

Details supporting this policy and other requirements for management of the TOC Engineering Function are provided in the Engineering Program Management Plan (TFC-PLN-03).

2.0 IMPLEMENTATION

2.1 Chief Engineer

The TOC Chief Engineer is accountable to the WRPS President and Project Manager and serves as the Responsible Level 1 Manager for TOC Engineering; leading, managing and integrating the Engineering Function and the associated functional support areas.

The Chief Engineer is responsible for maintaining the Engineering capability, working arrangements, work processes and governance required to support achievement of WRPS operations and project delivery objectives across the TOC in a manner that strives to achieve the agreed standards of safety, security, quality, and technical rigor.

2.2 Specific Policies

The following policies apply to the Engineering Function and engineering activities that fall within the accountability of the TOC Chief Engineer’s office:

1. Engineering procedures and standards necessary to produce quality engineering products and associated services that satisfy applicable regulatory requirements, DOE orders, technical standards, and administrative controls are developed, approved, maintained, and distributed.

2. The technical adequacy of engineering activities, documents, and services shall be maintained in spite of schedule or cost pressures.

3. Use of Human Performance Improvement Tools, especially those found in the Human Performance Survival Guide (WRPS-56532), are incorporated into engineering work practices and reinforced by engineering managers.

4. Training and qualification programs are provided for demonstrating and maintaining competence and proficiency commensurate with the scope, complexity, and nature of the engineering activities performed.
5. Technical Rigor standards, as articulated in the Human Performance Survival Guide (WRPS-56532), are applied to ensure that engineering products are produced using sound and accepted principles, are complete and clear, accurate, compliant, consistent, and fit for purpose.

6. Engineering products are checked to ensure they meet the standards for technical rigor. Document checking is performed by individual(s) other than those who produced the work.

7. Engineering personnel performing review and approval of engineering products are qualified to perform such review and approval.

8. Technical rigor deficiencies in released engineering products are investigated to determine the cause using analysis methodologies (e.g., Technical Rigor Assessment Tool, apparent cause or root cause) commensurate with the impact and complexity of the issues. Deficiencies are captured in PERs and corrective actions assigned to prevent reoccurrence. Corrective actions are completed and closed as intended and their completion is verified.

9. Data systems and computer software used to prepare and deliver technical work documents and services including codes, models, databases and simulators are managed by documented procedures, plans, or instructions to ensure the integrity, protection, and validity of data and information.

2.3 Chief Engineer’s Expectations for Engineering Staff
(3.1.2, 3.1.4, 3.1.5, 3.1.6, 3.1.7, 3.1.8)

The Chief Engineer has set out the following expectations that are applicable to all engineering staff and engineering subcontractors working under the direction of TOC Engineering:

2.3.1 Health and Safety

1. Engineering personnel shall immediately report any work-related personal injury or illness, regardless of severity, to their manager or lead.

2. If an immediate, adverse safety or regulatory condition exists, it shall be immediately communicated to the Central Shift Manager and applicable engineering manager.

3. Engineering personnel shall perform their assigned duties safely, strictly adhering to company safety policies and procedures.

2.3.2 Interactions

1. Engineering personnel are encouraged to utilize the Chief Engineer’s “Open Door Policy” to elevate technical or safety issues that need additional management attention for timely resolution.

2. Engineering personnel shall maintain a healthy balance between work and non-work activities to ensure they are physically, mentally and psychologically prepared to perform their assigned duties in the work place.
3. Engineering personnel are professionals and, as such, deserve to be treated with respect and shall treat others with respect. Professional differences of opinions shall be resolved in accordance with WRPS policies and procedures.

4. Engineering personnel shall be self-critical, learning from their own mistakes as well as the mistakes of others. If engineering personnel discover they have made a mistake on an issued engineering product, they are expected to notify their management and, if warranted, initiate a PER.

2.3.3 Time Management

1. Engineering personnel are expected to report to and from work on time and record time worked in accordance with company policies and submit time cards in a timely manner.

2. Engineering personnel are expected to attend assigned training and company medical appointments as scheduled and actively participate in the process and if training or medical appointments cannot be attended as scheduled, make notifications in a timely manner to avoid a “no-show.”

3. Engineering personnel are expected to be on time to meetings, actively participate and respect other points of view during the meeting.

4. Engineering personnel shall support the timely disposition of PERs, take ownership of PER actions assigned to them, and complete PER evaluations and action closeout in line with established timescales.

2.3.4 Technical Rigor

1. Engineering personnel are expected to use Human Performance Improvement Tools, especially those included in the Human Performance Survival Guide (WRPS-56532), to improve the quality of engineering products by reducing human error through the correction of the conditions that cause errors.

2. Engineering personnel shall ensure there is a documented basis for inputs and assumptions contained within technical work documents. If a basis must be developed for an input or assumption it shall be reviewed and approved in accordance with applicable procedures. Where the basis for an input or assumption is engineering judgment the basis for that judgment shall be stated clearly in the technical work document.

3. Engineering products should be subject to an interdisciplinary or Subject Matter Expert review for complex technical work documents. Complex technical work documents include those whose content affects multiple engineering disciplines or unique specialties.

4. Engineering personnel shall withhold their signature from engineering products that contain known flaws or omissions, or a lack of technical basis for inputs or assumptions.

5. Engineering personnel shall release technical data/information (e.g., reports, calculations, photos, video inspections, visual inspections or ultrasonic testing) only after it has been
appropriately reviewed, checked/verified and, if required, cleared for off-site release in accordance with TOC and DOE procedures and policies.

2.3.5 Training and Qualifications

1. Engineering personnel are expected to maintain all required engineering qualifications including, where required, periodic requalification, scrupulously avoiding any lapse in qualification.

2. Engineering personnel shall seek out lessons learned from peers, managers, and the site Lessons Learned system.

2.3.6 Procedures

1. Engineering products shall be prepared, reviewed, and approved in accordance with applicable processes, procedures, standards and instructions.

2. Engineering staff must know what procedures govern and are applicable to the work being performed.

3. Engineering staff must ensure they are using the most recent version of applicable procedures. This includes ensuring the current version of Site Form(s) are used.

4. If a procedure is unclear or there is a problem understanding a procedure, staff should seek clarification from the procedure owner or a Subject Matter Expert. (TFC-BSM-AD-C-01)

5. If a procedure cannot be followed as written:
   • Notify the procedure owner and seek guidance before proceeding. Generate a PER to document the issue
   • If procedural issues/questions cannot be resolved in a timely manner that allows work to proceed, the procedure owner shall provide direction on how to meet the intent or requirements of the procedure and ensure that actions for continued use are implemented through appropriate means e.g., verbal clarification, change requests, revision, etc. (see TFC-BSM-AD-C-01)
   • At the procedure owner’s or management’s discretion, the use of an administrative procedure with unresolved issues/questions may continue based on the significance of the problem. (see TFC-BSM-AD-C-01).

6. Engineering staff should review, understand and verify that required review and approval requirements have been met in accordance with applicable procedures rather than relying solely on experience.

7. Ensure procedure requirements are met when processing forms in SmartPlant® Foundation (SPF.) SPF navigates the preparation of the forms; however, it does NOT ensure procedure compliance. There are often steps that must be taken outside of SPF in order to comply with the process.
2.4 Chief Engineer’s Expectations for Engineering Managers
(3.1.2, 3.1.5, 3.1.8)

The Chief Engineer has set out the following expectations for engineering managers in connection with this document:

1. Communicate and reinforce the policies and expectations.
2. Model the desired behavior with respect to following the policies and meeting the expectations.
3. Support assigned engineering staff in following the policies and meeting the expectations by providing required guidance, tools, training, resources, time, and budget.

3.0 SOURCES

3.1 Requirements

3.1.1 DOE O 420.1C, “Facility Safety.”
3.1.2 DOE O 426.2, “Personnel Selection, Training, Qualification, and Certification for DOE Nuclear Facilities.”
3.1.3 TFC-CHARTER-01, “Tank Operations Contractor Charter.”
3.1.4 TFC-PLN-02, “Quality Assurance Program Description.”
3.1.5 TFC-PLN-03, “Engineering Program Management Plan.”
3.1.7 TFC-PLN-150, “Human Performance Improvement.”
3.1.8 WRPS-56532, “The Pocket Human Performance Survival Guide”

3.2 References

3.2.1 TFC-BSM-AD-C-01, “Administrative Document Development and Maintenance.”