

For the SeaPort-e contract, The Squires Group Inc. (TSGi) has developed a QA Plan that creates a strategic quality partnership at both the contract and Task Order level and is firmly based on the metrics required to support a SeaPort-e Task Order.

TSGi will establish a quality partnership and incorporate SeaPort-e, TSGi SeaPort-e Program Manager and the Task Order Project Manager on metrics and reports that are focused on Task Order level performance. TSGi Program Manager will also interact with SeaPort-e Task Order COR and Technical Advisor and TSGi Project Managers on Task Order level performance.

For each Task Order TSGi will provide a Task Order specific Quality QA Plan. This plan will:

- Define the roles and responsibilities of all participants
- Define the types of work to be performed and required results
- Describe the evaluation methods employed by TSGi in assessing our performance
- Provide copies of the QA monitoring forms used by TSGi in documenting and evaluating our performance
- Describe the process of documenting performance

Using SeaPort-e Quality QA Plan and the Performance Work Statement, TSGi Project Manager for the Task Order will prepare a Task Order specific QA Plan. This plan will specifically identify the methods that the Project Manager will use to ensure that processes are followed and products are checked before the products are provided to the Government. The goal of the QA Plan is to ensure that the project complies with our standard processes and produces high quality products.

TSGi Project Manager will also prepare a Measurement and Analysis (M&A) plan. This plan will provide the details of the metrics that TSGi will collect for the Task Order. For each metric the plan will also identify the threshold for management involvement. The Project Manager will include these two plans as components of the Project Management Plan that is provided to TSGi Program Manager for review and approval.

The Task Order QA Plan will encompass:

- QA tasks and responsibilities
- Management controls
- Problem reporting and corrective actions

TSGi Program Manager will provide monthly metrics reports to the Task Order COR. These monthly reports will provide the COR with the information required to develop their monthly reports for the CO. In these monthly reports TSGi Program Manager will also provide information on QA activities that TSGi Program Manager performed during the month related to the Task Order.

In addition to providing these reports to the COR, TSGi Program Manager will also provide them to the Task Order Technical Advisors. TSGi Program Manager will develop a summary report for the SeaPort-e Contracting Officer on the status of each Task Order. This summary report will provide information on potential issues and what TSGi is doing to address each potential issue. The intent of this report is to provide advance notice to SeaPort-e on the issues that we are managing to ensure that there are no surprises on the contract.

Each Task Order's QA Plan will follow the format in the remainder of this plan.

1. Overview

This section presents an overview of the QA Plan specifically developed for the SeaPort-e contract.

1.1 Objectives

The purpose of this document is to specify the QA activities and responsibilities that TSGi quality control manager will perform to ensure that the performance requirements specified in the Task Orders are met.

1.2 Scope

The Quality Assurance Plan defines the methodology to be used to ensure that all activities fulfill the requirements specified in the tasks orders. In addition, the Quality Assurance Plan summarizes quality control efforts at the Task Order level and reports contract level metrics to managers at SeaPort-e and TSGi.

1.3 References

Table 1 represents the following corporate and industry standards to which this Quality Assurance Plan was developed.

DOCUMENT TITLE
TSGi Project Planning Process
TSGi Project Monitoring and Control Process
TSGi Measurement and Analysis Process
TSGi Quality Process
TSGi Configuration Management Process
International Standards Organization (ISO)9001; 2007

Table 1. TSGi Quality Assurance Plan References.

1.4 Roles and Responsibilities

Table 2 represents the roles and responsibilities of the key personnel involved with this Quality Assurance Plan.

ROLES	RESPONSIBILITIES
TSGi Program Manager	Responsible for preparing, maintaining, and executing this Quality Assurance Plan.
TSGi Task Order Project Managers	Responsible for the development of the M&A plan that reflects both the management measures required by TSGi and the performance measures required by the Task Orders
Technical Team Lead 1	As specified in each Task Order Quality Assurance Plan
Technical Team Lead 2	As specified in each Task Order Quality Assurance Plan

Table 2. Key Roles and Responsibilities for Quality Assurance

1.5 Resource Requirements

Table 3 lists staff members who will participate in interviews and audits.

TEAM MEMBER	ROLE
As specified in each Task Order	Project Manager
As specified in each Task Order	Configuration Manager
As specified in each Task Order	Technical Team Lead
As specified in each Task Order	Technical Team Lead
As specified in each Task Order	Technical Team Lead
As specified in each Task Order	Technical Team Lead

Table 3. Audit Team Members.

1.6 Relationships

This Quality Assurance Plan is an integral part of the Project Management Plan (PMP). TSGi Program Manager will be available to assist the Project Manager, as needed. This will ensure that all TSGi and SeaPort-e requirements for the program will comply with the contract and all Task Orders.

1.7 Quality Objectives

The quality objectives for SeaPort-e program are as follows:

- All documentation is to be reviewed and checked for compliance before submission to the client.
- Responses to Corrective Action Requests (CAR) that exceed a 10 day past due status will be escalated to a higher management level.
- TSGi will follow its standard policies and procedures
- 100% compliance with SeaPort-e requirements.

2. Quality Assurance Tasks and Responsibilities

Table 4 represents a list of QA tasks for the SeaPort-e program. The responsible organization has been identified and will be subject to audits of processes and products.

QA TASK	RESPONSIBLE ORGANIZATION
Review program work products	TSGi Program and all Task Order Project Managers will prepare agendas, meeting minutes, action items, etc. TSGi Program Manager will review these work products for accuracy, clarity and completeness prior to being put under project Configuration Management control.
Review program deliverable documentation	TSGi Task Order teams will prepare deliverable documentation as called for in each Task Order. TSGi Program Manager will review this documentation three (3) days prior to final submission to SeaPort-e. These deliverables will be reviewed for accuracy, clarity, and completeness to ensure they comply with Task Order requirements.
Developing an Audit Plan and schedule.	TSGi Program Manager will monitor Task Orders. This includes their project plan and the project schedule. TSGi Program Manager will ensure that the schedule is maintained by developing an Audit Plan and schedule.
Audit project processes against corporate standards	TSGi Program Manager will perform process audits by interviewing appropriate staff on the Task Order teams (See Section 1.5). These audits will be held at specific points during the period of performance.

Table 4. QA Tasks for SeaPort-e IDIQ Program.

2.1 Configuration Management Tasks

All QA audit and product evaluation reports will be controlled under each Task Order’s Configuration Management Plan (CMP). TSGi Program Manager will periodically audit this plan to ensure compliance with TSGi and TO requirements.

2.2 Change Control Tasks

Changes to any Task Order requirements will be managed in accordance with the Requirements Management Plan (RMP) and the Configuration Management Plan (CMP). TSGi Program Manager will periodically audit this process to ensure compliance with the RMP and CMP.

2.3 Metric Tasks

Metrics will be collected for each Task Order and will be used to identify trends that may lead to process improvements. These metrics are part of TSGi’ Statistical Process Control (SPC)

initiative, which identifies potential problems and mitigates risk to ensure the program is on schedule and within the budget.

At the inception of the SeaPort-e program, TSGi Program Manager will develop a Microsoft Excel spreadsheet to capture quality metrics throughout the program’s duration. TSGi Program Manager will analyze the quality metrics for possible process improvements. Any quality metrics will be forwarded to TSGi Chief Executive Officer for review and appropriate action.

Table 5 represents a list of QA metrics that will be captured on the SeaPort-e program. These metrics are segregated into two categories:

- QA Activities (QAA)
- QA Findings (QAF)

METRIC
Number of QA Audits and Evaluations Number of process audits and product evaluations (proposed vs. actual)
Time Spent on Quality Assurance Project related time of internal project QA personnel Project-related time of external QA personnel
Supplier “On-Time Deliverables” Number of Documents/ Work products proposed vs. number of documents delivered on time
Test Severity Tracking Number of High trouble tickets, or equivalent, generated per month Number of Medium trouble tickets, or equivalent, generated per month Number of Low trouble tickets, or equivalent, generated per month
Number of Corrective Actions Requests generated Number of CARs per month Number of CARs that are escalated to TSGi Program Manager

Table 5. Quality Assurance Metrics for the SeaPort-e Program.

TSGi Program Manager will encourage Task Order Project Managers to use the project metrics in planning, tracking, and overseeing project activities. Each Task Order Quality Assurance Plan will have a similar table that identifies metrics specific to that Task Order.

2.4 Review Tasks

TSGi Program Manager will monitor all required reviews to ensure compliance with TSGi internal procedures and SeaPort-e requirements. Minutes of these reviews will be recorded and placed under configuration control. Action Items (AI), will be documented, assigned to a responsible individual, and tracked to closure using the AI database and reporting system prior to the next review.

The SeaPort-e program will include following types of reviews:

- Management reviews (e.g., approval meeting, project plan acceptance meeting, project review meeting, etc.)
- Milestone reviews (e.g., requirements review, design review, test readiness review, test evaluation review, etc.)
- Technical reviews (e.g., peer reviews, product transition reviews, etc.)

TSGi Program Manager will submit the results of QA reviews to TSGi Program Manager. The information will also be available to senior TSGi managers to review. Each deficiency will be tracked until it is successfully corrected or mitigated.

3 Management Controls

The following is a list of controls and processes to ensure that the project and quality control activities are managed and tracked properly:

- Program status meetings
- Review of quality control weekly progress reports
- Internal audits
- Corrective actions
- Escalation of corrective actions

All QA audit and review reports will be under program configuration management control and will be available for review.

3.1 Internal Audits

3.1.1 Overview

Internal audits will be held on a regular basis, or as a follow-up to a previous audit, to ensure that corrective action was taken. A QA Plan and audit schedule will be created prior to any start of program audits. This plan will be submitted to TSGi Program Manager for review and approval.

In addition to scheduled formal audits, random audits may occur during the gathering of information or evidence concerning a suspected deficiency. If a random audit reveals non-conformance with QA procedures, a formal audit and report will be prepared and discussed with TSGi Program Manager. All QA audits and review reports will be under configuration management policies and procedures and will be available to SeaPort-e upon request.

If other review documentation from TSGi Program Manager is appropriate, it will be prepared and placed under project Configuration Management control as well. At least once per quarter, there will be an independent review of QA activities for the program. This review will be fully documented and placed under Configuration Management control. TSGi Director of Operations will be the independent QA reviewer.

3.1.2 TSGi Program Manager Review Process

TSGi Program Manager will perform the following steps:

- Assign a designated representative who will schedule the review and announce it to the participants, which will always include a member of the Quality Assurance group.
- Assign a designated representative who will ensure that review materials are distributed to participants at least three (3) working days in advance.
- Assign a designated representative who will ensure meeting minutes are taken and action items documented and distributed to TSGi Chief Executive Officer, and all applicable participants.
- Assign a designated representative who will to conduct follow-up reviews as appropriate.
- Review noncompliance items and metrics with TSGi Chief Executive Officer.

These steps will ensure that the review has been properly planned, thoroughly conducted, and appropriately documented. In addition, evidence of reviews will be documented and maintained as verification that the review process is being followed. Reviews will not be conducted to assess individual performance. Rather, reviews allow TSGi to assess the merits of the process, how well it is followed, and where it can be improved.

Table 6 represents the types of reviews covered in this QA plan.

TYPE OF REVIEW	RESPONSIBILITY	PARTICIPANTS
Process Review – Internal	TSGi Program Manager	SeaPort-e Contract Team
Process Review – External	TSGi Program Manager	Validation and verification team
Product Review – Walkthroughs (Internal Peer Review)	Task Order Project Manager	End users, TSGi Program Manager, and team members as appropriate
Risk Management Reviews	TSGi Program Manager	SeaPort-e Project Mangers, TSGi Program Manager

Table 6. Types of Reviews for the SeaPort-e Contract Program.

3.2 Process Audits

TSGi Program Manager will conduct periodic audits to evaluate our processes. The purpose of these audits is to ensure that a particular process and its end products comply with the program. Checklists will be generated from the process and will be used as a guide when conducting an audit. Audit results will be recorded and studied to identify trends.

When non-conformance is identified, a CAR will be issued to the responsible individual. A CAR due date will be assigned and agreed upon by both TSGi Program Manager, and the responsible individual. If the due date of the CAR has expired, upon the discretion of TSGi Program Manager, the CAR may be granted an extension, not to exceed five (5) working days, or escalated to a higher level of management.

4. Problem Reporting and Corrective Action

4.1 Problem/Issue Documentation

TSGi Program Manager will work closely with the identified individuals to discuss and resolve issues.

4.2 Reporting Schedule

The status of the quality program and its findings are communicated to TSGi Chief Executive Officer and others through reports and metrics. The following constitutes the core of the QA communication:

- QA Reports
- Communication of findings
- Resolution of findings

Table 7 represents the types of reports generated by TSGi Program Manager.

REPORT	RECIPIENT	FREQUENCY
QA Monthly Status Report	TSGi Program Manager	5 th workday of Month for preceding month’s activity
QA Monthly Metric Report	TSGi Program Manager, Project Managers, and the appropriate GTM	5 th workday of Month for preceding month’s activity
QA Audit Report	Identified POC in Audit Report	As identified in the Audit Schedule

Table 7. TSGi Program Manager Reports for the SeaPort-e Contract Program.

4.3 QA Reports

The following may be included in the Quality Assurance Status Review Report:

- Summary of accomplishments
- List of scheduled meetings
- Summary of audits or product evaluations

- Activities to be completed within the next 7 days
- Upcoming activities and events within the next 30-60 days
- Summary of risks and concerns
- Summary of innovations and process improvements
- Summary of miscellaneous items of interest

TSGi Program Manager includes activities, findings, and resolutions to non-compliant items in this report to provide managers with visibility into the processes and products. TSGi Program Manager also provides an enclosure that is the monthly QA metrics report. An example of a QA metrics report appears in **Table 8**.

QA AUDIT SUMMARY BY REVIEW AREA								
REVIEW AREA	ACTUAL VS. PLANNED	UNPLANNED AUDIT	COMPLIANT	PARTIALLY COMPLIANT	NON-COMPLIANT			
Task order name								
Processes								
Work Products								
Total								
QA TIME METRICS FOR PRODUCT EVALUATION DOCUMENTATION								
DELIVERABLE	# OF PAGES	EVAL. HOURS	REPORT HOURS	STATUS	OVERALL DOC.	TOTAL PAGES	TOTAL EVAL. HOURS	TOTAL REPORT HOURS
QA TIME METRICS FOR PROCESS AREA AUDITS								
DELIVERABLE	# OF PAGES	EVAL. HOURS	REPORT HOURS	STATUS	OVERALL PA	TOTAL PAGES	TOTAL EVAL. HOURS	TOTAL REPORT HOURS

Table 8. Sample QA Monthly Metric Report.

4.4 Tools/Practices

The operating system, programming languages, databases, communications, and other protocols used on the Task Order will be documented in the Project Management Plan. TSGi Program Manager will use:

- MS Project or equivalent to create the Audit Schedule.
- MS Access or equivalent to create a Program Audit Database and Program Action Item Database.

- MS Excel or equivalent to create a QA Metric spreadsheet to identify trends on the program.
- MS Word or equivalent to create various reports for managers
- MS PowerPoint to create presentations for required reviews, if applicable.

4.5 Quality Records

TSGi Program Manager will review and audit the following records to ensure compliance with the requirements of the program. These records will be under Configuration Management control and will be made available upon request by SeaPort-e or external auditing organizations.

Table 9 represents the types of quality records that will be reviewed and audited by TSGi Program Manager and external auditing organizations.

DOCUMENT FILE ID	RESPONSIBLE DISCIPLINE
Agendas and Minutes of Program Reviews	Program Management
Agendas and Minutes of Technical Reviews	Engineering/QA
Risk Management reviews	Program Management
QA Audits/Product Evaluations	Quality Assurance
AI Listing	Program Management
Corrective and Preventative Action Listing	QA
Test Reports	Test/Engineering
Problem Reports and Log	Help Desk Support

Table 9. Types of Quality Records.

4.6 Defect Control and Corrective Action

TSGi Program Manager will implement TSGi’ Corrective and Preventive Action Process to report, track, and resolve problems found in the products or in the software development processes. By using this process, TSGi Program Manager will ensure detection and resolution of problems or defects while enhancing continuous process improvement.