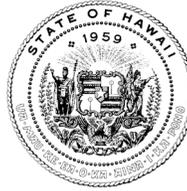JOSH GREEN, M.D.
GOVERNOR

DOUGLAS MURDOCK
CHIEF INFORMATION
OFFICER

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

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ETS.HAWAII.GOV

November 30, 2023

The Honorable Ronald D. Kouchi
President of the Senate
 and Members of the Senate
Thirty-Second State Legislature
State Capitol, Room 409
Honolulu, Hawai'i 96813

The Honorable Scott K. Saiki
Speaker and Members of the
 House of Representatives
Thirty-Second State Legislature
State Capitol, Room 431
Honolulu, Hawai'i 96813

Aloha Senate President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation (IV&V) reports to the Legislature within 10 days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawai'i, Department of Attorney General (AG), Child Enforcement Agency (CSEA).
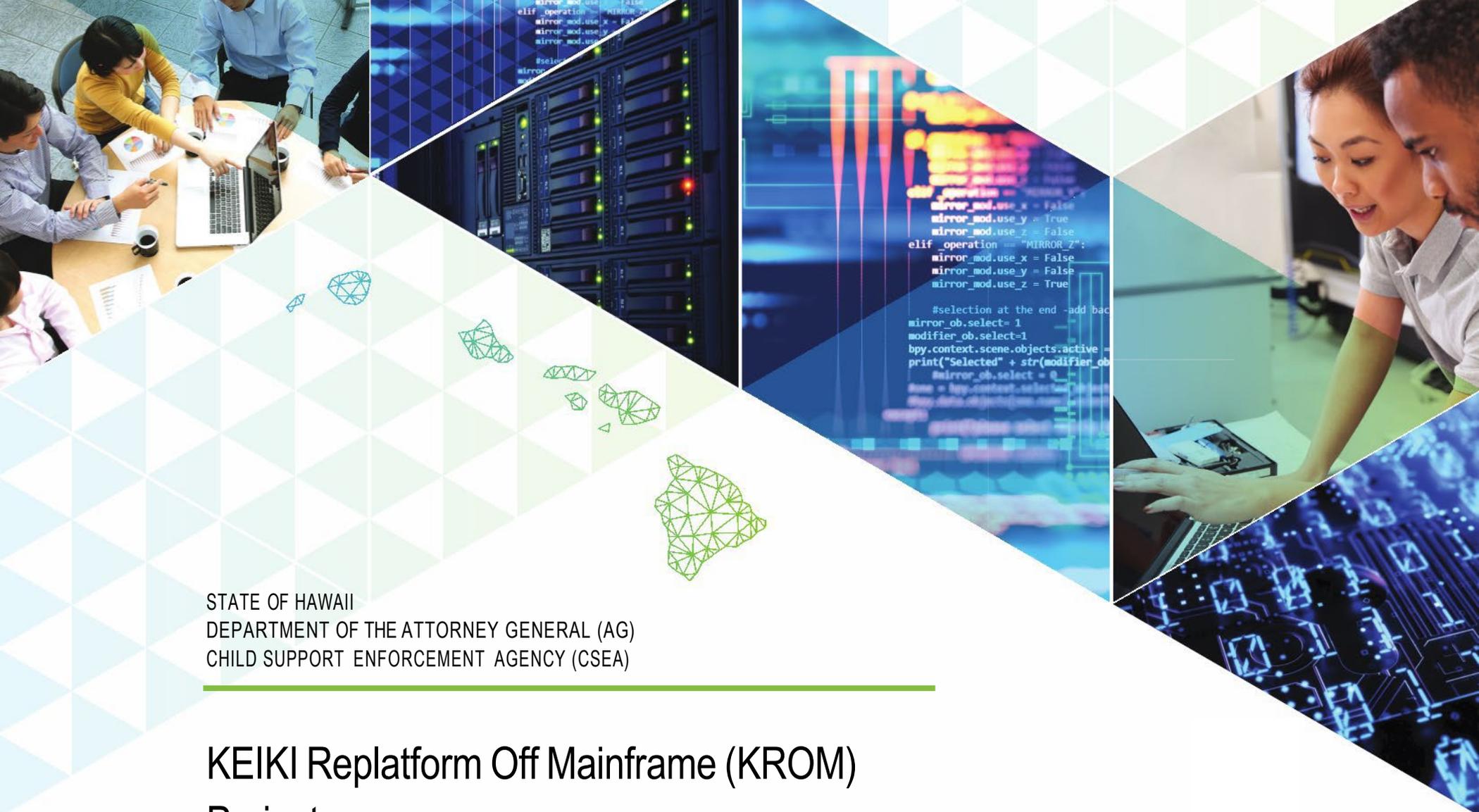
In accordance with HRS section 93-16, this report may be viewed electronically at http://ets.hawaii.gov (see "Reports").

Sincerely,

Douglas Murdock (Nov 30, 2023 09:12 HST)

Douglas Murdock
Chief Information Officer
State of Hawai'i

Attachment

STATE OF HAWAII
DEPARTMENT OF THE ATTORNEY GENERAL (AG)
CHILD SUPPORT ENFORCEMENT AGENCY (CSEA)

KEIKI Replatform Off Mainframe (KROM) Project

MONTHLY IV&V REVIEW REPORT

October 31, 2023 | Version 1.0

Table of Contents

Document History

DATE	DESCRIPTION	AUTHOR	VERSION
11/09/23	Monthly IV&V Review Report Draft created.	Julia Okinaka	0.0
11/20/23	Report draft was updated for minor edits and to make corrections on pages 3 and 5 which are also reflected in the Comment Log. Additional comments and responses were included in Appendix C which did not result in changes to the report.	Julia Okinaka	1.0

BACKGROUND

The State of Hawaii (State), Department of Attorney General (AG), Child Enforcement Agency (CSEA) contracted Protech Solutions, Inc. (Protech) on October 2, 2023 to replatform the Keiki System and provide ongoing operations support. Protech has subcontracted One Advanced and DataHouse to perform specific project tasks related to code migration, replatforming services, and testing. Department of AG contracted Accuity LLP (Accuity) to provide Independent Verification and Validation (IV&V) services for the project.

The goal of IV&V is to increase the probability of project success. The benefits of IV&V include identification of high-risk areas early and actionable recommendations. Our IV&V approach includes conducting interviews, observing project activities, reviewing project artifacts, and utilizing IV&V checklists based on industry standards and best practices (refer to Appendix B: Industry Standards and Best Practices).

This is the first Monthly IV&V Review Report which provides an initial assessment of project health as of October 31, 2023. Periodic IV&V review reports will be issued on a monthly basis through September 2024 to update and evaluate continual project progress and performance. The focus of our IV&V activities for this initial assessment was to quickly assess the project's implementation approach, understand the proposed technical solution, and evaluate the early project execution to date. Our IV&V Assessment Areas include People, Process, and Technology.

The IV&V Dashboard and IV&V Summary provides a quick visual and narrative snapshot of both the project status and project assessment as of October 31, 2023. Ratings are provided monthly for each IV&V Assessment Area (refer to Appendix A: IV&V Criticality and Severity Ratings). The overall rating is assigned based on the criticality ratings of the IV&V Assessment Categories and the severity ratings of the underlying observations.

PROJECT SUCCESS

"Coming together is a beginning; keeping it together is progress; working together is success."

-Henry Ford

PROJECT ASSESSMENT

SUMMARY RATINGS

OVERALL RATING

G

Minimal deficiencies were observed. Oversight may be needed to ensure risks stay low and project remains on track.

PEOPLE — G

PROCESS — G

TECHNOLOGY — G

CRITICALITY RATINGS

R — HIGH
Y — MEDIUM
G — LOW
NA — N/A

IV&V OBSERVATIONS

PEOPLE: 1 (1)
PROCESS: 1 (1)
TECHNOLOGY

HIGH | MED | LOW | PRELIM | OPPOR | POSITIVE

2 NEW OBSERVATIONS
2 OPEN OBSERVATIONS
0 CLOSED OBSERVATIONS
OPEN RECOMMENDATIONS

PROJECT BUDGET *

MILLIONS

$6.4M

$- | $2 | $4 | $6

INVOICED | TOTAL
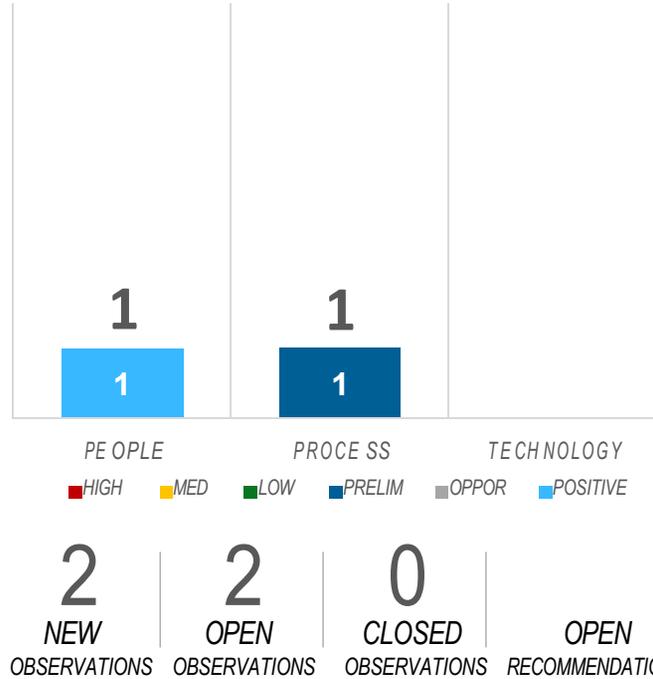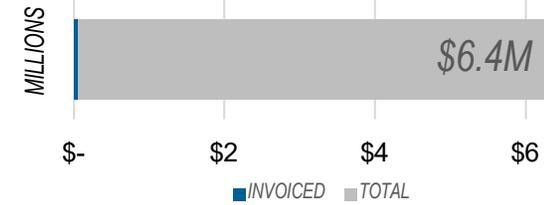
* Only includes contracts. IV&V unable to validate total budget.

PROJECT PROGRESS **

2%

ACTUAL PROGRESS
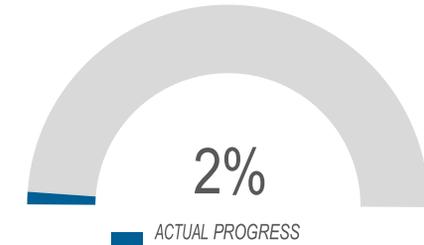
** Detailed project schedule pending approval.

KEY PROGRESS & RISKS

- The project team members are engaged and the environment between Protech and CSEA is collaborative.
- The project is on track with the Assessment Phase and initial code collection; however, is slightly delayed with project planning activities and deliverables.
- Untimely project management responsibilities may impact effective project execution.
- Recurring project management and technical meetings have been established.
- The first monthly Steering Committee Meeting was held at the end of October.

ORIGINAL | ACTUAL | REVISED | DELAYED

PLAN
ASSESSMENT AND REQUIREMENTS
DEVELOPMENT & TESTING
DATA CONVERSION
SYS INSTALL
IMPLMNTN
GO-LIVE TBD ***

PLAN
ASSMT

OCT 2023 | MAR 2024 | AUG 2024 | JAN 2025

*** High-level timeline pending the detailed project schedule.

4

OCT	NOV	DEC	IV&V ASSESSMENT AREA	IV&V SUMMARY
G	NA	NA	*Overall*	The project held a kick-off meeting on October 2, 2023, and is starting to define key project activities and artifacts such as recurring meetings, project status reporting, and project deliverables. *Project Schedule*: The project is on track with the Assessment Phase and slightly delayed with the Project Planning Phase. Although the draft project schedule was provided and is under CSEA review, some preliminary due dates were already missed for several deliverables (2023.10.002). Furthermore, the feasibility of the aggressive 18-month timeline is under review. *Project Costs*: Major project costs were finalized for the system implementor (Protech) and IV&V (Accuity) contracts. *Quality*: The Quality Management Plan will be incorporated as part of the Project Management Plan due in November 2023. *Project Success*: Project success criteria will also be included in the Project Management Plan.
G	NA	NA	*People* *Team, Stakeholders, & Culture*	• The project team members are engaged and the environment between Protech and CSEA is collaborative (2023.10.001). • The Protech team organization and roles and responsibilities were presented at the project kickoff meeting. • CSEA and Protech have Project Managers dedicated to the project; however, the need for additional project support for Protech's Manager should be assessed (2023.10.002). • The CSEA SMEs appear to be engaged in ongoing application assessment sessions and accountable for timely completing required tasks, providing information, and responding to questions. • The first monthly Steering Committee Meeting was held at the end of October. The project governance including the Change Control Board (CCB) and Steering Committee roles and responsibilities are under development. • The KEIKI system migration and replatforming will utilize familiar functionality minimizing the need for user training and organizational change management (OCM) activities.

OCT	NOV	DEC	IV&V ASSESSMENT AREA	IV&V SUMMARY
G	NA	NA	*Process* *Approach & Execution*	• Protech presented high-level project processes and a general timeline during the project kickoff meeting. The feasibility of the aggressive 18-month timeline is under review. • Untimely project management responsibilities, such as schedule and resource management, may impact effective project execution (2023.10.002). • Drafting of the formal project management plan and detailed project schedule is currently in progress and scheduled to be completed at the end of the Planning stage in November 2023. • Protech is in the process of drafting deliverable expectation documents (DED) for the various project management and technical management deliverables. • The CSEA SharePoint site was launched for project documents and collaboration. • Recurring project management and technical meetings have been established. Other recurring meetings are being planned between the project managers. • The first monthly Steering Committee Meeting was held at the end of October reviewing project status, timeline of activities, and project risks. • Weekly status reports are being produced, with more detailed monthly status reports with key metrics to start in November. • Key project processes and metrics will be defined in the Project Management Plan due in November 2023.
G	NA	NA	*Technology* *System, Data, & Security*	• The project scope is to replatform the main KEIKI system from the State of Hawaii's mainframe computer to the Amazon Web Service (AWS) FedRAMP cloud environment. The project's goal is to also refactor the existing programs and data from the older, existing code to current code sets. • The application assessment to define the requirements needed to convert the code, batch applications and data into the new environment is progressing timely. A report identifying missing and duplicate data components was delivered. • During the assessment, one risk was identified related to the user interface and customization that needs to be evaluated for conversion requirements.* *Accuity is not reporting this individual risk as a formal IV&V observation as it is already being appropriately tracked and monitored by the project team. The rating for this IV&V Assessment Area reflects the cumulative risks.

IV&V ASSESSMENT AREAS

People

Process

Technology

OBSERVATION #: **2023.10.001**	STATUS: **N/A**	TYPE: **POSITIVE**	SEVERITY: **N/A**

TITLE: **COLLABORATIVE TEAM ENVIRONMENT**

Observation: The project team members are engaged and the environment between Protech and CSEA is collaborative.

Industry Standards and Best Practices: PMI Project Management Body of Knowledge (PMBOK) Chapter 2.2 and PMI The Standard for Project Management (SPM) Chapter 3.2 state the importance and benefits of creating a collaborative project team environment.

Analysis: The CSEA SMEs appear to be engaged in ongoing Assessment sessions and accountable for timely completing required tasks, providing information, and responding to questions. The project team members regularly seek feedback, input, and clarification in an open and respectful manner. The experience and knowledge of Protech team members combined with the dedication and high level of engagement from CSEA SMEs support the positive project team environment.

Recommendation: N/A for positive observation.

OBSERVATION #: 2023.10.002 | **STATUS: N/A** | **TYPE: PRELIMINARY** | **SEVERITY: N/A**

TITLE: UNTIMELY PROJECT MANAGEMENT RESPONSIBILITIES

Observation: Untimely project management responsibilities may impact effective project execution.

Industry Standards and Best Practices: PMI PMBOK describes the best practices for project planning, schedule, cost, quality, and resource management.

Analysis: The Protech Project Manager provided a draft project schedule; however, it was incomplete and listed due dates that were already missed for several deliverables. The implementation of strong schedule and resource management practices early will help the project start off right and stay on track. Protech's Project Manager is experienced with similar implementations and is working collaboratively with the project team to address feedback provided on the initial draft schedule.

Possible root causes or contributing factors are turnover of project managers, an aggressive project timeline, and need for additional project management support. CSEA and Protech's Project Manager are working closely to define deliverables and develop a realistic and achievable timeline.

Recommendation: N/A for preliminary concerns.

Appendix A: IV&V Criticality and Severity Ratings

IV&V CRITICALITY AND SEVERITY RATINGS

Criticality and severity ratings provide insight on where significant deficiencies are observed and immediate remediation or risk mitigation is required. Criticality ratings are assigned to the overall project as well as each IV&V Assessment Area. Severity ratings are assigned to each risk or issue identified.

Criticality Rating

The criticality ratings are assessed based on consideration of the severity ratings of each related risk and issue within the respective IV&V Assessment Area, the overall impact of the related observations to the success of the project, and the urgency of and length of time to implement remediation or risk mitigation strategies. Arrows indicate trends in the project assessment from the prior report and take into consideration areas of increasing risk and approaching timeline. Up arrows indicate adequate improvements or progress made. Down arrows indicate a decline, inadequate progress, or incomplete resolution of previously identified observations. No arrow indicates there was neither improving nor declining progress from the prior report.

<table>
<tr><td>

TERMS

RISK
An event that has not happened yet.

_____

ISSUE
An event that is already occurring or has already happened.

</td></tr>
</table>

A **RED**, high criticality rating is assigned when significant severe deficiencies were observed and immediate remediation or risk mitigation is required.

A **YELLOW**, medium criticality rating is assigned when deficiencies were observed that merit attention. Remediation or risk mitigation should be performed in a timely manner.

A **GREEN**, low criticality rating is assigned when the activity is on track and minimal deficiencies were observed. Some oversight may be needed to ensure the risk stays low and the activity remains on track.

A **GRAY** rating is assigned when the category being assessed has incomplete information available for a conclusive observation and recommendation or is not applicable at the time of the IV&V review.

Severity Rating

Once risks are identified and characterized, Accuity will examine project conditions to determine the probability of the risk being identified and the impact to the project, if the risk is realized. We know that a risk is in the future, so we must provide the probability and impact to determine if the risk has a Risk Severity, such as Severity 1 (High), Severity 2 (Moderate), or Severity 3 (Low).

While a risk is an event that has not happened yet, an issue is something that is already occurring or has already happened. Accuity will examine project conditions and business impact to determine if the issue has an Issue Severity, such as Severity 1 (High/Critical Impact/System Down), Severity 2 (Moderate/Significant Impact), or Severity 3 (Low/Normal/Minor Impact/Informational).

Observations that are positive, preliminary concerns, or opportunities are not assigned a severity rating.

1   **SEVERITY 1:** High/Critical level

2   **SEVERITY 2:** Moderate level

3   **SEVERITY 3:** Low level

TERMS

POSITIVE
Celebrates high performance or project successes.

_____

PRELIMINARY CONCERN
Potential risk requiring further analysis.

Appendix B: Industry Standards and Best Practices

STANDARD	DESCRIPTION
ADA	Americans with Disabilities Act
ADKAR®	Prosci ADKAR: Awareness, Desire, Knowledge, Ability, and Reinforcement
BABOK® v3	Business Analyst Body of Knowledge
DAMA-DMBOK® v2	DAMA International's Guide to the Data Management Body of Knowledge
PMBOK® v7	Project Management Institute (PMI) Project Management Body of Knowledge
SPM	PMI The Standard for Project Management
PROSCI ADKAR®	Leading organization providing research, methodology, and tools on change management practices
SWEBOK v3	Guide to the Software Engineering Body of Knowledge
IEEE 828-2012	Institute of Electrical and Electronics Engineers (IEEE) Standard for Configuration Management in Systems and Software Engineering
IEEE 1062-2015	IEEE Recommended Practice for Software Acquisition
IEEE 1012-2016	IEEE Standard for System, Software, and Hardware Verification and Validation
IEEE 730-2014	IEEE Standard for Software Quality Assurance Processes
ISO 9001:2015	International Organization for Standardization (ISO) Quality Management Systems – Requirements
ISO/IEC 25010:2011	ISO/International Electrotechnical Commission (IEC) Systems and Software Engineering – Systems and Software Quality Requirements and Evaluation (SQuaRE) – System and Software Quality Models
ISO/IEC 16085:2021	ISO/IEC Systems and Software Engineering – Life Cycle Processes – Risk Management
IEEE 16326-2019	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Project Management
IEEE 29148-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Requirements Engineering

STANDARD	DESCRIPTION
IEEE 15288-2023	ISO/IEC/IEEE International Standard – Systems and Software Engineering – System Life Cycle Processes
IEEE 12207-2017	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Software Life Cycle Processes
IEEE 24748-1-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 1: Guidelines for Life Cycle Management
IEEE 24748-2-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 2: Guidelines for the Application of ISO/IEC/IEEE 15288 (System Life Cycle Processes)
IEEE 24748-3-2020	IEEE Guide: Adoption of ISO/IEC TR 24748-3:2011, Systems and Software Engineering – Life Cycle Management – Part 3: Guide to the Application of ISO/IEC 12207 (Software Life Cycle Processes)
IEEE 14764-2021	ISO/IEC/IEEE International Standard for Software Engineering – Software Life Cycle Processes – Maintenance
IEEE 15289-2019	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Content of Life Cycle Information Items (Documentation)
IEEE 24765-2017	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Vocabulary
IEEE 26511-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Requirements for Managers of Information for Users of Systems, Software, and Services
IEEE 23026-2015	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Engineering and Management of Websites for Systems, Software, and Services Information
IEEE 29119-1-2021	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 1: Concepts and Definitions
IEEE 29119-2-2021	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 2: Test Processes
IEEE 29119-3-2021	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 3: Test Documentation
IEEE 29119-4-2021	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 4: Test Techniques
IEEE 1484.13.1-2012	IEEE Standard for Learning Technology – Conceptual Model for Resource Aggregation for Learning, Education, and Training
ISO/IEC TR 20000-11:2021	ISO/IEC Information Technology – Service Management – Part 11: Guidance on the Relationship Between ISO/IEC 20000-1:2011 and Service Management Frameworks: ITIL®
ISO/IEC 27002:2022	Information Technology – Security Techniques – Code of Practice for Information Security Controls

STANDARD	DESCRIPTION
FIPS 199	Federal Information Processing Standard (FIPS) Publication 199, Standards for Security Categorization of Federal Information and Information Systems
FIPS 200	FIPS Publication 200, Minimum Security Requirements for Federal Information and Information Systems
NIST 800-53 Rev 5	National Institute of Standards and Technology (NIST) Security and Privacy Controls for Federal Information Systems and Organizations
NIST Cybersecurity Framework v1.1	NIST Framework for Improving Critical Infrastructure Cybersecurity
LSS	Lean Six Sigma

Appendix C: Comment Log on Draft Report

Comment Log on Draft Report

KROM Project: IV&V Document Comment Log				

ID #	Page #	Comment	Commenter's Organization	Accuity Resolution
1	3	The sentence "This is the first Monthly IV&V Review Report which provides an initial assessment of project health as of October 31, 2022." Please update year to 2023.	ETS	Report updated to reflect the correct year.
2	6	The Project Management Plan and Project Schedule have been submitted.	Protech	Statements and status from Protech related to the Project Management Plan and Project Schedule. Progress made on these deliverables will be reflected in future IV&V reports. No changes made to the October IV&V Report.
3	5/6	IVV Assessment Area: Overall/Project Schedule: Deliverables were under negotiation as allowed by the contract/SOW as such dates were not yet established	Protech	Statements and status from Protech related to the deliverable due dates and ability to negotiate changes. IV&V noted that the schedule was still in draft form and due dates were preliminary. IV&V's understanding that the dates were not yet established is also reflected in the green rating. No changes made to the October IV&V Report.
4	5/6	IVV Assessment Area: Overall/Project Costs: The implementor contract does not include long-term operational support costs. These costs will be included in a future contract, based on CSEA decision on the optional M&O services.	Protech	The Overall/Project Costs section updated to reflect correction. The sentence was removed to avoid confusion regarding the future contract for M&O services.

ACCUITY

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