Safeguards and Security Limited-Notice Performance Testing - A Systems Approach

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Introduction

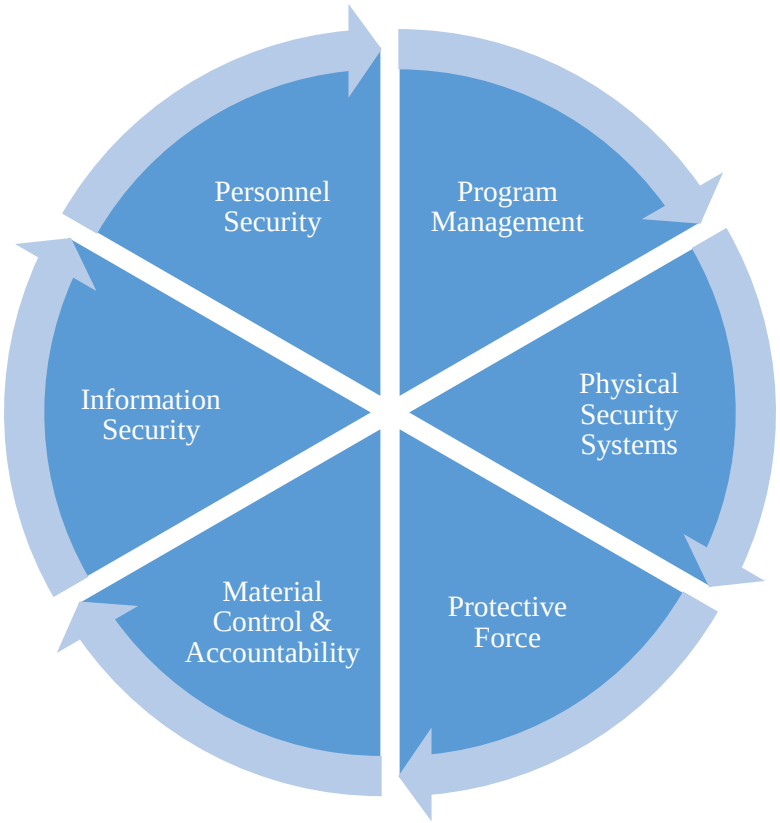
- Traditional appraisal processes
- Benefits of limited-notice testing
- Lessons Learned – Systems Approach
- Summary

Traditional Appraisal Processes

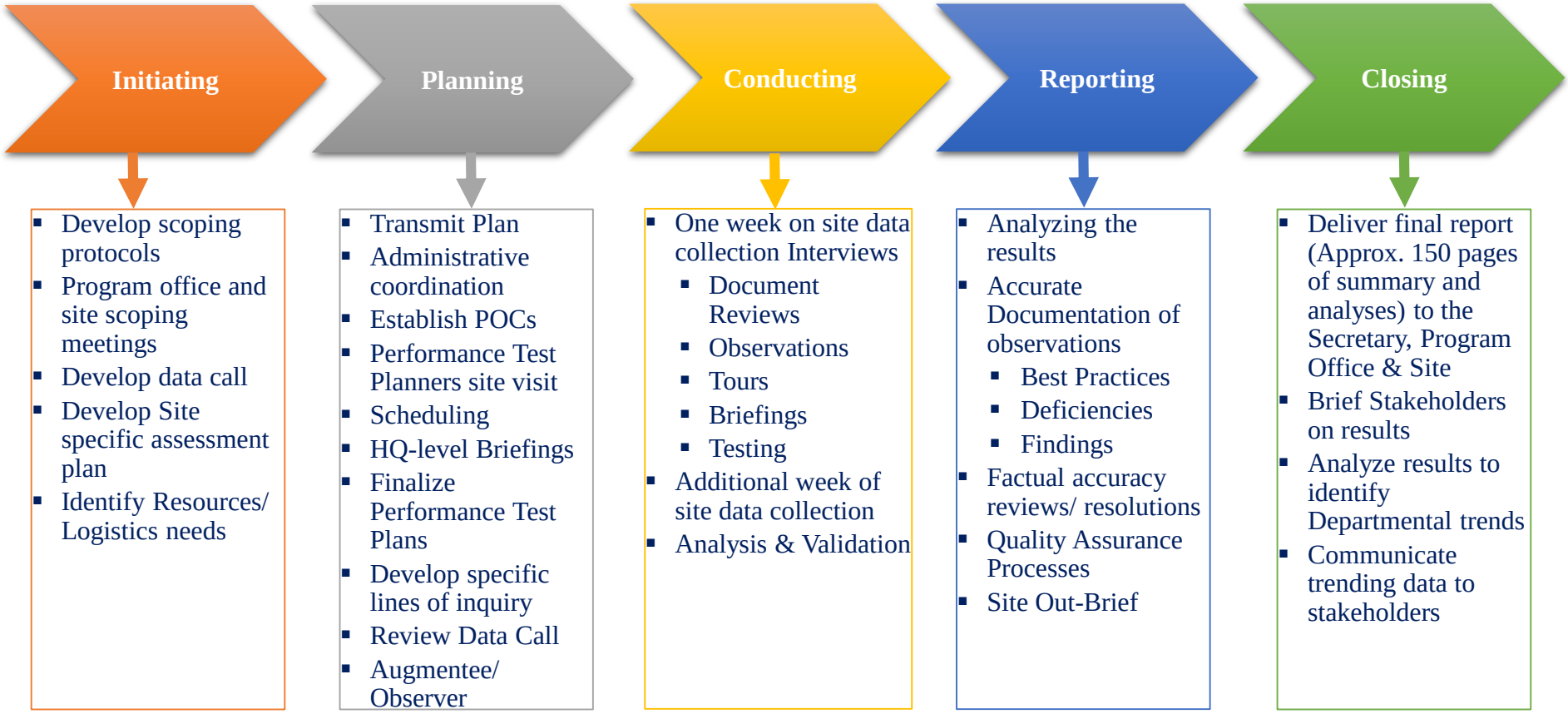
- Internal
  - Government surveys
  - Contractor self-assessments
- External
  - Government independent appraisals
    - Multi-topic large scale assessments
    - Focused assessments
    - Targeted reviews

Multi-topic Assessments

- Comprehensive systems-level evaluation using a component level approach



Assessment Process and Timelines



Multi-topic Assessments

- Announced months in advance
- 25-30 subject matter experts/15 days on site
- Multiple performance tests (i.e., firearms qualification, physical fitness, alarm response, and rigorous force-on-force exercises)
- Requires extensive planning and resources
- Typically conducted only at locations with high-valued assets
- Conducted at a 30-36 month periodicity
- Assesses a location typically at its best

DOE Security Event

- Enterprise stand-down and years of operational impacts
- Numerous critiques identified:
  - Multiple system failures
  - Poor maintenance of critical security equipment
  - Delayed response to alarms
  - Lack of understanding of security protocols

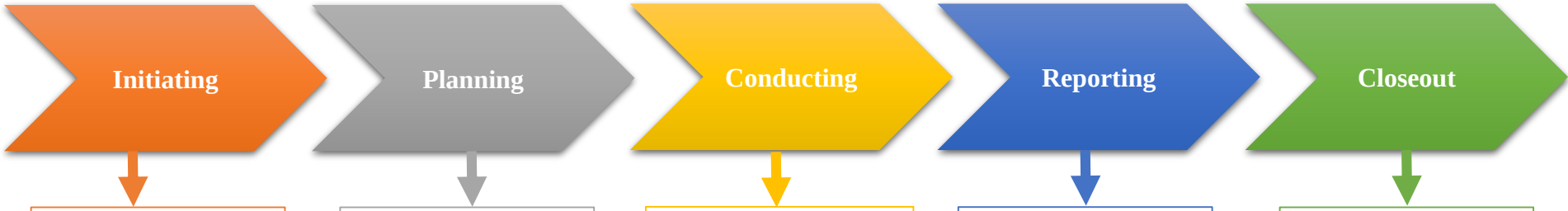
Departmental Response

- Acknowledged value of independent appraisals and continued need for conduct
- Identified need to augment traditional processes with real-time evaluation of security program "readiness"
- Secretary of Energy directed EA to evaluate a no-notice performance testing program

Limited-Notice Performance Testing Program

- No-Notice Testing
  - Could not be executed because of safety concerns
- Limited-Notice Testing
  - Less complicated
  - Requires fewer resources and less time on site
  - Supports the ability to safely collect data under real time conditions
  - Minimal advanced notice to tested personnel
  - Minimal impact to mission operations

Assessment Process and Timelines



Initiating

- Develop scoping protocols
- Identify Resources / Logistics needs

Planning

- Program & Field Office Notification
- Identify Trusted Agent(s) (TA)
- Obtain Essential Element list
- Provide TA test objectives and evaluation criteria
- TA develops test plans in accordance with local processes

Conducting

- 3-5 person team on site (typically limited no more than 2 days)
- TA conducts tests / EA observers evaluate results and conduct Analysis & Validation

Reporting

- Analyzing the results
- Accurate Documentation of observations
  - Best Practices
  - Deficiencies
  - Findings
- Factual accuracy reviews / resolutions
- Quality Assurance Processes
- Site Out-Brief

Closeout

- Deliver final report (Approx. 10 pages of summary and analyses) to the Secretary, Program Office & Site
- Brief Stakeholders on results
- Analyze results to identify Departmental trends

Days

-60 -45 0 1 14

Limited-Notice Performance Testing Program Lessons Learned

- Planning
  - Continuous process that begins 60 days prior to testing
  - Includes identification of team assignments, test selection with associated evaluation criteria, and site coordination
  - Lessons Learned:
    - Use of "the right" Trusted Agent(s) to safely plan and conduct performance testing at their facility
  - Clearly communicate defined objectives, tasks, conditions, standards, and evaluation criteria
  - Leverage sites' existing performance testing programs/processes
  - Integrated testing covering all topical areas

Limited-Notice Performance Testing Program Lessons Learned

- Conduct
  - Two-day testing and one-day report writing
  - Final review of test plans and safety risk assessments
  - Strict adherence to defined scope
  - If testing does not achieve desired objectives, a review of site procedures and previous performance testing can indicate a single data point, or it can be indicative of a systemic deficiency
  - Communication and Transparency
  - Senior managers' involvement is important to success of test conduct
  - Element of surprise lost after first iteration of testing
    - **Changed component testing to a systems-level integrated testing approach**

Component-level test example

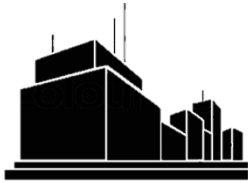
Alarm Sounds

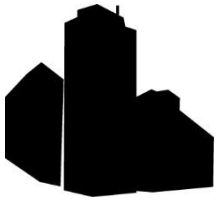
Does Protective Force respond, assess, and respond to any threats?

Systems Approach Lessons Learned

Systems-Level Test Example
Missed Shipment Deadline (Internal)

Summary:





Areas Assessed:

- Effectiveness of shipment timeline controls
- Operations response
- Material Control & Accountability response – inventory, TID checks, nuclear measurements, accounting
- Physical Security Systems detection
- Protective Force Response
- Management response to an incident

Systems-Level Testing Benefits

- Unique opportunity to bring all the pieces together to ensure that the system performance is in practice, as intended in design
- Observation of the system from multiple perspectives, including consideration of insider threats
- Input from multiple subject matter experts (i.e., protective force, material control and accountability, etc.) to determine the effectiveness of the system
- Examination of the dynamics of the interactions between processes
- Assessment of the performance of the entire system when there may be no inherent weaknesses in individual system elements

Considerations

Personnel

- The number of actions to be observed may require staging evaluation of personnel and controllers at multiple locations

Process

- Systems and PF response may require locking down a facility, so planning must consider controls to minimize operations' impact
- PF activities may be extensive so controls must be implemented such as a time limit on actions or controller injects to expedite the process
- Controller injects may be necessary for other parts of testing also to ensure that objectives are achieved

Limited-Notice Performance Testing Program Lessons Learned

- Reporting
  - Letter report, typically 7-8 pages issued within 7 days
  - Validate information with trusted agents
  - Identify deficiencies, strengths, and possible best practices
  - Supportable conclusion on effectiveness of the security program

Limited-Notice Performance Testing Program Lessons Learned

- Closeout
  - Stakeholder briefings (site, program office, and Secretary of Energy)
  - Library of test documents
  - Lessons Learned

Summary

- Limited-Notice Performance Testing provides realistic performance testing
- Trusted agents are vital to successful testing
- Employing a systems approach provides the most information in one iteration of testing
- Need to focus on process to identify improvements in efficiencies and effectiveness through conduct of after-action reviews and evaluation of lessons learned

Thank you
Questions?

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