

# Earth Venture Instrument - 6 Solicitation Evaluation Plan

*~~May 26, 2022, September 12, 2022, Revised September 15, 2022~~*

# Outline

## EVI-6 Solicitation Evaluation Plan

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# Introduction

## **EVI-6 Evaluation Plan**

This package includes the Third Stand Alone Mission of Opportunity Notice (SALMON-3) Announcement of Opportunity (AO) NASA Science Mission Directorate (SMD) Evaluation Plan and the Earth Venture Instrument – 6 (EVI-6) Program Element Appendix (PEA) Evaluation Plan.

The SALMON-3 AO (NNH17ZDA040O) is an omnibus solicitation for Principal Investigator (PI)-led Missions of Opportunity (MOs) that is updated by PEAs. The SALMON-3 AO NASA SMD Evaluation Plan covers the evaluation information from the SALMON-3 AO and from the NASA SMD evaluation processes conducted by the Science Evaluation Panel and Technical Management and Cost (TMC) Evaluation Panel. The “SALMON-3 AO Evaluation Plan” designation in the top right-hand corner of a page indicates that the information refers to the SALMON-3 AO NASA SMD Evaluation Plan.

The EVI-6 PEA Evaluation Plan covers any updates to the evaluation information from SALMON-3 AO and from the NASA SMD evaluation processes that will be conducted by the Science Evaluation Panel and TMC Evaluation Panel. The “EVI-6 Solicitation Evaluation Plan” designation in the top right-hand corner of a page indicates that the information refers to the EVI-6 PEA updates.

# **SALMON-3 AO EVALUATION PLAN**

## **SALMON-3 AO Evaluation Plan Outline**

SALMON-3 Evaluation Plan Introduction

SALMON-3 AO Compliance Checklist: Appendix F

SALMON-3 AO NASA SMD Evaluations: General

Science Evaluation

TMC Evaluation

Categorization

Selection

Approval

## **SALMON-3 AO Evaluation Plan Introduction**

The Third Stand Alone Missions of Opportunity Notice (SALMON-3) Announcement of Opportunity (AO) NASA Science Mission Directorate (SMD) Evaluation Plan covers the evaluation information from the SALMON-3 AO, which is the omnibus solicitation that is updated by each Program Element Appendix (PEA), and from the NASA SMD evaluation processes conducted by the Science Evaluation Panel and Technical, Management, and Cost (TMC) Evaluation Panel.

The Evaluation Plan for a specific PEA is found in the PEA-specific Acquisition Homepage.

## **SALMON-3 AO Compliance Checklist: Appendix F**



## **Compliance Checklist (1 of 3)**

Checklist with the list of items that NASA checks for compliance before releasing a proposal for evaluation. All other requirements are checked during evaluation.

### **Administrative:**

1. Electronic proposal received on time
2. Proposal on CD\_ROMs received on time
3. Original signatures of PI and of authorizing official included
4. Meets page limits
5. Meets general requirements for format and completeness (maximum 55 lines text/page, maximum 15 characters/inch – approximately 12 pt. font, 1-inch margins)
6. Required appendices included; no additional appendices
7. Budgets are submitted in required formats
8. All individual team members who are named on the cover page indicate their commitment through NSPIRES
9. All export-controlled information has been identified
10. Complied with restrictions Involving China

## **Compliance Checklist (2 of 3)**

### Science, Exploration, or Technology:

11. Addresses solicited science, exploration, or technology programs
12. Requirements traceable from objectives to Mission
13. Plan to calibrate, analyze, publish, and archive the data returned
14. Baseline Investigation and Threshold Investigation defined

### Technical:

15. Complete spaceflight mission (Phases A-F) proposed
16. Team led by a single PI (Principal Investigator)
17. PI-Managed Mission Cost within the PEA-specific Cost Cap (if a PEA-specific Cost Cap is stated in the applicable PEA)
18. Contributions within contribution limit (if PEA specifies a contribution limit)
19. Co-Investigator costs in budget
20. Launch/Commitment date prior to launch deadline (if PEA specifies a deadline)
21. Includes table describing non-U.S. participation
22. Includes letters of commitment from funding agencies for non-U.S participating institutions

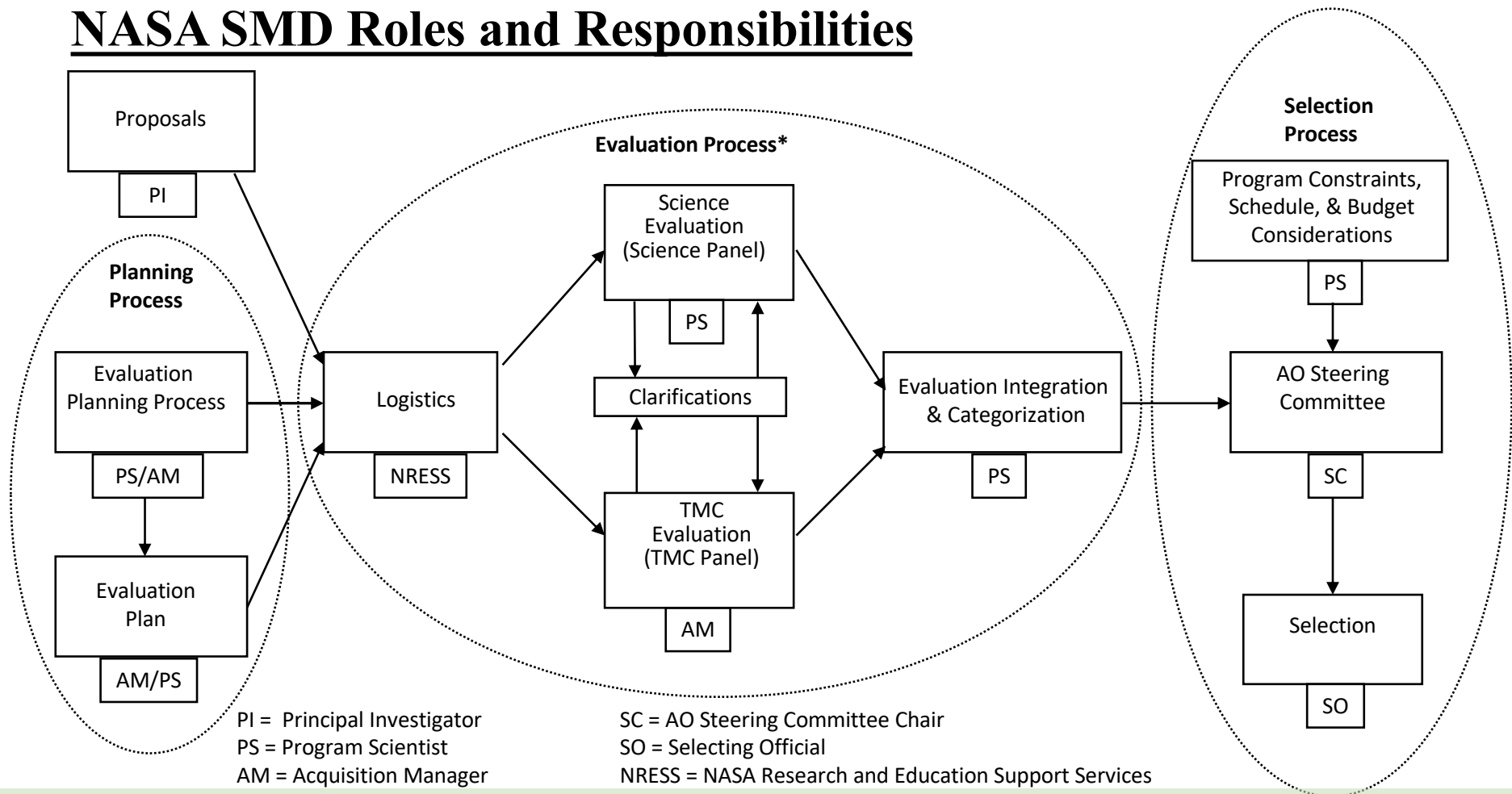
## **Compliance Checklist (3 of 3)**

- 23. Includes letters of commitment from all U.S. organizations offering contributions
- 24. Includes letters of commitment from all major partners and non-U.S. institutions providing contribution of efforts of anyone on the Proposal Team.\*

\*Note: SALMON-3 Section 5.9.1.2 states “Major partners are the organizations, other than the proposing organization, responsible for providing research leadership, project management, system engineering, major hardware elements, science instruments, integration and test, mission operations, and other major products or services as defined by the proposer.”

## **SALMON-3 AO NASA SMD Evaluations: General**

## NASA SMD Roles and Responsibilities



\* The Evaluation Process is addressed in this document.

## **Pre-Evaluation Steering Committee Meeting**

As part of the evaluation planning process, before the evaluation process begins, an AO Steering Committee will be convened. This Committee is composed of the SMD Deputy Associate Administrator for Research (DAAR) and a small number of SMD Program Scientists/Executives.

The AO Steering Committee will conduct an independent assessment of the planned evaluation and associated processes regarding their compliance to established policies and practices, completeness, and self-consistency. They may provide recommendations to the Program Scientist and Acquisition Manager on potential adjustments to the evaluation team and the planned processes.

## **Conflict of Interest Prevention Requirements (1 of 2)**

- The Science Panel members will be on-boarded through NASA Research and Education Support Services (NRESS), and the non-Civil Servants be provided an honorarium for their participation. The TMC Panel members will be on-boarded through the NASA Science Office for Mission Assessments (SOMA) support contractor, and the non-Civil Servants will be hired as contractors.
- NRESS cross-checks all the Science Panel members against the lists of personnel and organizations identified in each proposal submitted to determine whether any organizational Conflict of Interest (COI) exists.
- The SOMA support contractor cross-checks all TMC Panel members against the lists of personnel and organizations identified in each proposal submitted to determine whether any organizational COI exists.
- All evaluators must divulge any other financial, professional, or potential personal COI, and whether they work for a profit-making company that directly competes with any profit-making proposing organization.
- All Civil Service evaluators must self certify confirming that no COI exists.
- The TMC evaluators must notify the NASA SOMA Acquisition Manager, in case there is a potential COI. The Science evaluators must notify the Program Scientist, in case of a potential COI.

## **Conflict of Interest Prevention Requirements (2 of 2)**

- All known potential conflict of interest issues are documented, and a COI Mitigation Plan is developed to minimize the likelihood that an issue will arise in the evaluation process. In the case of science evaluators recruited through the NRESS contract, standard mitigations have been defined (See SPD-01A) and will be applied. The results of the mitigations will be recorded in a log to be appended to the COI Mitigation Plan. For science evaluators not recruited through the NRESS contract, any potential COI issue is discussed with the Program Scientist and the NASA SMD Deputy Associate Administrator for Research and documented in the COI Mitigation Plan. All determinations regarding possible COIs that arise will be logged as an appendix to the COI Mitigation Plan.
- If any previously unknown potential COI arises during the evaluation, the conflicted member(s) will be notified to stop evaluating proposals immediately, and the Panel Chair will be notified immediately. If a COI is confirmed, the conflicted member(s) will be immediately removed from the evaluation process, and steps will be taken expeditiously, to remove, mitigate, or accept any actual or potential bias imposed by the conflicted member(s). The steps will be documented in the COI Mitigation Plan.
- Members of the Science and TMC panels are prohibited from contacting anyone outside their panel for scientific/technical input, or consultation, without the prior approval of the Program Scientist.



## **Proprietary Data Protection Requirements**

- All proposal and evaluation materials are considered proprietary.
- Viewing of proposal materials are only on a need-to-know basis.
- Each evaluator signs a Non-Disclosure Agreement (NDA) that must be on file at NRESS prior to any proposals being distributed to that evaluator.
- The proposal materials that each evaluator has access to is recorded.
- Evaluators are not permitted to discuss proposals with anyone outside their Science or TMC Panel.
- All proprietary information that must be exchanged between evaluators will be exchanged *via* the secure NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES), *via* the secure Remote Evaluation System (RES), secure WebEx or *via* encrypted email, FedEx, fax, or regular mail. Weekly Web conferences among TMC Panel evaluators will be conducted *via* secure lines.
- Evaluators' electronic and paper evaluation materials will be deleted/destroyed when the evaluation process is complete. Archival copies will be maintained in the NASA SOMA vault.

## **Principles of the Evaluation**

- All proposals are to be treated fairly and equally.
- Merit is to be assessed on the basis of material in the proposal and clarification process (if applicable).
- Evaluation Ratings reflect the written strengths and weaknesses.
- Everyone involved in the evaluation process is expected to act in an unbiased objective manner; advocacy for particular proposals is not appropriate.

## **General Evaluation Ground Rules**

- All proposals are evaluated to uniform standards established in the solicitation, and without comparison to other proposals.
- All evaluators are experts in the areas that they evaluate.
- Non-panel/mail-in evaluators (to provide special science expertise to the Science Panel) and specialist evaluators (to provide special technical expertise to the TMC Panel) may be utilized, respectively, based on need for expertise in a specific science or technology/engineering area that is proposed.

## **Evaluation Criteria and Selection Factors**

Evaluation Criteria from Section 7.2 of the SALMON-3 AO:

1. Intrinsic Science, Exploration, or Technology Merit of the Proposed Investigation (Evaluated by the Science Panel);
2. Experiment Science, Exploration, or Technology Implementation Merit and Feasibility of the Proposed Investigation (Evaluated by the Science Panel);
3. TMC Feasibility of the Proposed Investigation Implementation (Evaluated by the TMC Panel).

Weighting: the first criterion is weighted approximately 40%; the second and third criteria are weighted approximately 30% each.

Other Selection Factors from Section 7.3 of the SALMON-3 AO:

- Programmatic factors
- PI-Managed Mission Cost

## **Science Evaluation**

## **Science Panel Composition and Organization**

- The Program Scientist leads the Science Panel.
- Science evaluators are typically, but not exclusively, recruited from the academic, governmental, and industrial research communities.
- The Science Panel evaluates the Intrinsic Science Merit of the Proposed Investigation and the Experiment Science Implementation Merit and the Feasibility of the Proposed Investigation.
- The science evaluation is conducted *via* one Science Panel, however sub-panels may be employed, depending on the number and variety of proposed investigations.
  - Any sub-panel is led by a NASA Civil Servant and may be co-chaired by a member from the scientific community.
  - Sub-panels may have an Executive Secretary.
- Each proposal is evaluated by assigned panel members.
  - The Lead Evaluator for each proposal leads the discussion.
  - The Lead Evaluator may assign another Evaluator to take notes on the discussion.
- The TMC Panel may provide comments and questions to the Science Panel.

## **Science Panel Procedures (1 of 2)**

- Each Science Panel member evaluates proposals as directed by the Chair.
  - If special science expertise is required, the Science Panel may utilize non-panel/mail-in evaluators to assist with one or more proposals.
  - Non-panel/mail-in evaluators evaluates only those parts of proposals pertinent to their scientific specialties.
- Each proposal may be discussed by the evaluators in teleconferences.
  - Findings in the form of Strengths and Weaknesses form the basis for initial panel discussions.
  - Each panel member provides an individual evaluation prior to the teleconference.
  - During the teleconference, proposals and the individual evaluations including non-panel/mail-in evaluations are discussed.
  - Following the teleconference, the Lead Evaluator captures/synthesizes individual evaluations including discussions and generates the Draft Evaluation Forms including draft findings.

## **Science Panel Procedures (2 of 2)**

- A Science Panel Meeting is held to refine and finalize the science evaluation forms.
  - The Science Panel compiles all of the findings for each proposal.
  - For each proposal, the Chair or designated Lead Evaluator leads the discussion, summarizes the proposed investigation, and documents the results.
  - If warranted, the Panel may reconsider evaluations at the Meeting.
  - Evaluations of all proposals are reviewed during the Science Panel Meeting to ensure that standards have been applied uniformly and in an appropriate and fair manner.
  - The Lead Evaluator synthesizes and documents Panel evaluations.

## **Science Panel Evaluation Factors (1 of 2)**

Factors A-1 to A-6. Intrinsic Science, Exploration, or Technology Merit of the Proposed Investigation: Please refer to Section 7.2.2 of the SALMON-3 AO for details.

- Factor A-1. Compelling nature and priority of the proposed investigation's science, exploration, or technology goals and objectives.
- Factor A-2. Programmatic value of the proposed investigation.
- Factor A-3. Likelihood of science, exploration, or technology success.
- Factor A-4. Science, exploration, or technology value of the Threshold Investigation.
- Factor A-5. Merit of any Science-Exploration-Technology Enhancement Options (SEOs), if proposed.
- Factor A-6. Merit of any PI-developed Technology Demonstration Opportunities (TDOs), if proposed.



## **Science Panel Evaluation Factors (2 of 2)**

Factors B-1 to B7. Experiment Science, Exploration, or Technology Implementation Merit and Feasibility of the Proposed Investigation: Please refer to Section 7.2.3 of the SALMON-3 AO for details.

- Factor B-1. Merit of the instruments and investigation design for addressing the science, exploration, or technology goals and objectives.
- Factor B-2. Probability of technical success.
- Factor B-3. Merit of the data analysis, data availability, and data archiving plan and/or sample analysis plan.
- Factor B-4. Science, exploration, or technology resiliency.
- Factor B-5. Probability of investigation team success.
- Factor B-6. Merit of any Science-Exploration-Technology Enhancement Options (SEOs), if proposed.
- Factor B-7. Merit of PI-developed Technology Demonstration Opportunities (TDOs), if proposed.

## **Science Evaluation Findings**

**Major Strength:** A facet of the implementation response that is judged to be of superior merit and can substantially contribute to the ability of the project to meet its scientific objectives.

**Major Weakness:** A deficiency or set of deficiencies taken together that are judged to substantially weaken the project's ability to meet its scientific objectives.

**Minor Strength:** A strength that is worthy of note and can be brought to the attention of Proposers during debriefings, but is not a discriminator in the assessment of merit.

**Minor Weakness:** A weakness that is sufficiently worrisome to note and can be brought to the attention of Proposers during debriefings, but is not a discriminator in the assessment of merit.

## **Factor A and B Rating Definitions**

**Excellent:** A comprehensive, thorough, and compelling proposal of exceptional merit that fully responds to the objectives of the AO as documented by numerous and/or significant strengths and having no major weaknesses.

**Very Good:** A fully competent proposal of very high merit that fully responds to the objectives of the AO, whose strengths fully outbalance any weaknesses.

**Good:** A competent proposal that represents a credible response to the AO, having neither significant strengths nor weakness and/or whose strengths and weaknesses essentially balance.

**Fair:** A proposal that provides a nominal response to the AO, but whose weaknesses outweigh any perceived strengths.

**Poor:** A seriously flawed proposal having one or more major weaknesses (e.g., an inadequate or flawed plan of research or lack of focus on the objectives of the AO).

## **Science Panel Products: Form A**

For each proposal, the Science evaluation will result in two forms, Forms A and B:

### Form A

- Proposal title, PI name, and submitting organization;
- Proposal summary;
- The Intrinsic Science Merit of the Proposed Investigation adjectival ratings from each evaluator, ranging from “Excellent” to “Poor”;
- Summary rationale for the median rating;
- Narrative findings supporting the adjectival rating in the form of specific major or minor strengths or weaknesses;
- Comments to PI, Comments to NASA (optional)

## **Science Panel Products: Form B**

For each proposal, the Science evaluation will result in two forms, Forms A and B:

### **Form B**

- Proposal title, PI name, and submitting organization;
- The Experiment Science Implementation Merit and Feasibility of the Proposed Investigation adjectival ratings from each evaluator, ranging from “Excellent” to “Poor”;
- Summary rationale for the median rating;
- Narrative findings supporting the adjectival rating in the form of specific major or minor strengths or weaknesses;
- Comments to PI, Comments to NASA (optional)

## **TMC Evaluation**

## **TMC Panel Composition and Organization**

The Acquisition Manager, who is a Civil Servant from the NASA Science Office for Mission Assessments (SOMA) at NASA Langley Research Center (LaRC), leads the TMC panel. NASA SOMA works directly for NASA Headquarters and is firewalled from the rest of NASA LaRC.

TMC Panel evaluators are a mix of the best non-conflicted contractors, consultants, and Civil Servants who are experts in their respective fields.

- Evaluators read their assigned proposals.
- Evaluators provide findings on their assigned proposals.
- Evaluators provide ratings of proposals that reflect the findings.

Specialist evaluators may be called upon when technical expertise is needed that is not represented in the panel. They evaluate only those parts of a proposal that are specific to their particular expertise.

## **TMC Panel Evaluation Factors**

Factors C1 – C5: TMC Feasibility of the Proposed Investigation Implementation: Please refer to Section 7.2.4 of the SALMON-3 AO for details. These factors are evaluated as applicable for each proposed investigation.

- Factor C-1. Adequacy and robustness of the instrument implementation plan.
- Factor C-2. Adequacy and robustness of the investigation design and plan for operations.
- Factor C-3. Adequacy and robustness of the flight systems.
- Factor C-4. Adequacy and robustness of the management approach and schedule, including the capability of the management team.
- Factor C-5. Adequacy and robustness of the cost plan, including cost feasibility and cost risk.



## **TMC Cost Analysis: Step 1 of a Single Step Competitive Process**

- Initial cost analyses is accomplished on the basis of information provided in the proposals (consistency, completeness, proposed basis of estimate, contributions, use full cost accounting, maintenance of reserve levels, cost management, etc.).
- One or more cost models are utilized to validate the proposed cost.
- Implementation threats are identified.
- Cost threat impacts to the proposed unencumbered reserves are assessed (see Cost Threat Matrix page 35). The remaining unencumbered reserves are compared to the minimum required in the PEA.
- The entire panel participates in Cost deliberations. All information from the entire evaluation process is considered in the final cost assessment.
- Cost Risk is reported as an adjectival rating, ranging from “LOW Risk” to “HIGH Risk” on a five-point scale.
- Significant findings are documented in the Cost Factor on Form C and considered in the TMC Risk Rating.

## **TMC Cost Analysis: Step 1 of a Two-Step Competitive Process**

- Initial cost analyses is accomplished on the basis of information provided in the proposals (consistency, completeness, proposed basis of estimate, contributions, use full cost accounting, maintenance of reserve levels, cost management, etc.).
- One or more cost models are utilized to validate the proposed cost.
- Implementation threats are identified.
- Cost threat impacts to the proposed unencumbered reserves are assessed (see Cost Threat Matrix page 35). The remaining unencumbered reserves are compared to the minimum required in the PEA.
- The entire panel participates in Cost deliberations. All information from the entire evaluation process is considered in the final cost assessment.
- Significant findings are documented in the Cost Factor on Form C and considered in the TMC Risk Rating.

## TMC Cost Analysis: Cost Threat Matrix

- The *likelihood* and *cost impact*, if any, of each weakness is stated as “This finding represents a cost threat assessed to have an Unlikely/Possible/Likely/Very Likely/Almost Certain likelihood of a Very Minimal/Minimal/Limited/Moderate/Significant/Very Significant cost impact being realized during development and/or operations.”
- The *likelihood* is the probability range that the *cost impact* will materialize.
- The *cost impact* is the current best estimate of the range of costs to mitigate the realized threat.
- The cost threat matrix below defines the adjectives used to describe the *likelihood* and *cost impact*.
- The minimum cost threat threshold for Phases A/B/C/D and Phase E will be set at a X% or a \$Y as stated in the applicable PEA.

|                   |                             | Cost Impact (CI, % of PI-Managed Mission cost to complete Phases A/B/C/D or % of Phase E not including unencumbered cost reserves) |                             |                            |                              |                                 |                                |
|-------------------|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------|------------------------------|---------------------------------|--------------------------------|
|                   |                             | Very Minimal<br>(1% < CI ≤ 2.5%)                                                                                                   | Minimal<br>(2.5% < CI ≤ 5%) | Limited<br>(5% < CI ≤ 10%) | Moderate<br>(10% < CI ≤ 15%) | Significant<br>(15% < CI ≤ 20%) | Very Significant<br>(CI > 20%) |
| Likelihood (L, %) | Almost Certain (L > 80%)    |                                                                                                                                    |                             |                            |                              |                                 |                                |
|                   | Very Likely (60% < L ≤ 80%) |                                                                                                                                    |                             |                            |                              |                                 |                                |
|                   | Likely (40% < L ≤ 60%)      |                                                                                                                                    |                             |                            |                              |                                 |                                |
|                   | Possible (20% < L ≤ 40%)    |                                                                                                                                    |                             |                            |                              |                                 |                                |
|                   | Unlikely (L ≤ 20%)          |                                                                                                                                    |                             |                            |                              |                                 |                                |

Note: For each proposal the percentages in the above table will be converted to dollars by the cost estimator.

## **TMC Panel Evaluation Findings Definitions**

**Major Strength:** A facet of the implementation response that is judged to be well above expectations and can substantially contribute to the ability of the project to meet its technical requirements on schedule and within cost.

**Minor Strength:** A strength that is worthy of note and can be brought to the attention of Proposers during debriefings, but is not a discriminator in the assessment of risk.

**Major Weakness:** A deficiency or set of deficiencies taken together that are judged to substantially weaken the project's ability to meet its technical objectives on schedule and within cost.

**Minor Weakness:** A weakness that is sufficiently worrisome to note and can be brought to the attention of Proposers during debriefings, but is not a discriminator in the assessment of risk.

## **TMC Risk Ratings**

Based on the narrative findings, each proposal is assigned one of three risk ratings, defined as follows:

**LOW Risk:** There are no problems evident in the proposal that cannot be normally solved within the time and cost proposed. Problems are not of sufficient magnitude to doubt the proposer's capability to accomplish the investigation well within the available resources.

**MEDIUM Risk:** Problems have been identified, but are considered within the proposal team's capabilities to correct within available resources with good management and application of effective engineering resources. Investigation design may be complex and resources tight.

**HIGH Risk:** One or more problems are of sufficient magnitude and complexity as to be deemed unsolvable within the available resources.

## **TMC Panel Products: Form C**

For each proposal, the TMC evaluation results in a Form C that contains:

- Proposal title, PI name, and submitting organization;
- The TMC Feasibility of the Proposed Investigation Implementation adjectival risk rating from each evaluator of “LOW Risk”, “MEDIUM Risk” or “HIGH Risk”;
- Summary rationale for the median risk rating;
- Narrative findings supporting the adjectival risk rating in the form of specific major or minor strengths or weaknesses;
- Comments to the PI, Comments to the Selection Official (optional)

## **Categorization**

## **Categorization Process and Proposal Categories (1 of 2)**

Upon completion of the evaluations, the results are presented to the Categorization Committee, composed wholly of Civil Servants and Intergovernmental Personnel Act appointees (some of whom may be from Government agencies other than NASA) and appointed by the Associate Administrator(s) for the appropriate Mission Directorate(s).

The Categorization Committee considers the evaluation results and, based on the evaluations, categorize the proposals in accordance with procedures required by NFS 1872.403-1(e). The categories are defined as:

**Category I.** Well-conceived, meritorious, and feasible investigations pertinent to the goals of the program and the AO's objectives and offered by a competent investigator from an institution capable of supplying the necessary support to ensure that any essential flight hardware or other support can be delivered on time and that data can be properly reduced, analyzed, interpreted, and published in a reasonable time.

Investigations in Category I are recommended for acceptance and normally will be displaced only by other Category I investigations.



## **Categorization Process and Proposal Categories (2 of 2)**

**Category II.** Well-conceived, meritorious, and feasible investigations that are recommended for acceptance, but at a lower priority than Category I, whatever the reason.

**Category III.** Meritorious investigations that require further development. Category III investigations may be funded for further development and may be reconsidered at a later time for the same or other opportunities.

**Category IV.** Proposed investigations that are recommended for rejection for the particular opportunity under consideration, whatever the reason.

## **Evaluation Conclusion and AO Steering Committee**

Once Categorization has been completed, the Evaluation is considered complete unless any issue is questioned by a subsequent AO Steering Committee review.

The AO Steering Committee will conduct an independent assessment of the evaluation and categorization processes regarding their compliance to established policies and practices, as well as the completeness, self- consistency, and adequacy of all supporting materials.

## **Selection**

## **Selection Factors**

The results of the proposal evaluations based on the criteria described in the SALMON-3 AO and the applicable PEA and the categorizations will be considered in the selection process.

The Selection Official(s) may take into account a wide range of programmatic factors in deciding whether or not to select any proposals and in selecting among top-rated proposals, including, but not limited to, planning and policy considerations, available funding, programmatic merit and risk of any proposed partnerships, and maintaining a programmatic balance across the mission directorate(s). While NASA develops and evaluates its program strategy in close consultation with the NASA community through a wide variety of advisory groups, NASA programs are evolving activities that ultimately depend upon the most current Administration policies and budgets, as well as programs' objectives and priorities that can change quickly based on, among other things, new discoveries from ongoing missions.

## **SALMON-3 AO Evaluation Plan Approvals**

## **SALMON-3 AO Evaluation Plan Approvals**

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Dr. Cindy L. Daniels  
Director  
NASA Science Office for Mission Assessments

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Dr. Michael New  
Deputy Associate Administrator for Research  
NASA Science Mission Directorate

## **Earth Venture Instrument – 6 Evaluation Plan**

## **EVI-6 Evaluation Plan**

This Evaluation Plan, together with the SALMON-3 AO NASA SMD Evaluation Plan is a general guide to the evaluation of proposals submitted as a result of the Earth Venture Instrument-6 (EVI-6) PEA solicitation. This Evaluation Plan is the companion to the overall SALMON-3 AO NASA SMD Evaluation Plan, covers evaluation information specific to the EVI-6 PEA, and points out areas where there are differences between the SALMON-3 AO and the EVI-6 PEA. These differences include proposal requirements and evaluation criteria.

In the case of differences between the SALMON-3 AO and the EVI-6 PEA, and their respective evaluation plans, the EVI-6 PEA language takes precedence.

The EVI-6 PEA only solicits “science” investigations, so wherever the phrase “Science, Exploration, or Technology” appears in the AO or Evaluation Plan, it should be interpreted to only indicate “Science.” Science Evaluation Factors A-6 and B-7 will not be evaluated under this solicitation.

The “EVI-6 Solicitation Evaluation Plan” label in the top right-hand corner indicates that the page addresses the EVI-6 Evaluation Plan.



## **EVI-6 Solicitation**

The National Aeronautics and Space Administration (NASA) Science Mission Directorate (SMD) has released the EVI-6 PEA R under the SALMON-3 AO to solicit Principal Investigator (PI)-led science investigations under the Earth Venture Instrument element of the Earth System Science Pathfinder (ESSP) Program.

All investigations proposed in response to this solicitation must support the goals and objectives of the Earth Venture program element (Section 1.1 of the EVI-6 PEA), must be implemented by Principal Investigator (PI) led investigation teams (Section 1.3 of the EVI-6 PEA), and must be implemented through the provision of complete PI-led science investigation (EVI-6 PEA Section 1.3, Section 4.5.1. Requirement R-8).

The EVI-6 solicitation includes requirements that have been simplified as compared to those in the SALMON-3 (see Section “EVI-6 PEA Simplification” of this document).

## **EVI-6 PEA Simplification**

## **Purpose of Simplification**

To reduce the workload on investigation teams generating Pre-Phase A proposals, NASA SMD has developed the EVI-6 solicitation with several requirements simplified. Evaluators of EVI-6 proposals will be directed to perform the evaluation based on these requirement simplifications and associated page reductions.

## **Overall**

Proposal page limits reduced by at least 25 pages (EVI-6 PEA Requirement R-38).

## **Investigation Implementation**

EVI-6 PEA Section 5.1.1, Requirements R-39 and R-40.

- Systems Engineering: Requirement for a description of overall systems engineering approach eliminated; only the description of systems engineering aspects unique to the mission, if any, is required (EVI-6 PEA Requirement R-39).
- Schedule: Two schedule foldouts do not count against the page limit instead of three; narrative for the schedule foldout is not required (EVI-6 PEA Requirement R-40).

## **Management**

EVI-6 PEA Section 5.1.2, Requirements R-41 to R-45

- Requires only the management organization chart to be provided and the decision-making authority, and the teaming arrangement and responsibilities to be briefly discussed.
- Only investigation unique roles and responsibilities of the key management team are required. Eliminates explanation of traditional roles for key personnel.
- Eliminates naming Project Manager (PM).
- Project risk and potential mitigation strategies in the form of a table only.
- Requires waivers to NASA Procedural Requirements (NPRs) only to be listed. Eliminates need for a description.

## **Cost and Cost Estimating Methodology**

EVI-6 PEA Section 5.1.3, Requirements R-46 to R-47.

- Requires a Basis of Estimate table and a brief description of the methodologies and assumptions used to develop the proposed cost estimate.
- Only requires a brief discussion of cost reserves.
- Only requires a brief discussion of cost risk.
- Eliminates presenting a rationale for the costing methodology.
- Eliminates description/evaluation of any independent cost estimates performed outside the proposing organizations.
- Eliminates description of cost management tools.

## **Proposal Appendices**

EVI-6 PEA Section 5.1.4, Requirements R-48 to R-55.

- Resumes – eliminates requirement for the resume of the PM.
- Eliminates appendix for Summary of Proposed Program Cooperative Contributions.
- International Participation – reduced to one page for a table and brief narrative.
- Eliminates appendix for Discussion of Limiting the Generation of Orbital Debris and End of Mission Spacecraft Disposal Requirements. However, selected investigations will have to fulfill these requirements after selection.
- Heritage – reduced page count from 30 to 15 pages. This reduction also applies to the Classified Appendix Regarding Heritage.

## **Scientific/Technical Evaluation Factors**

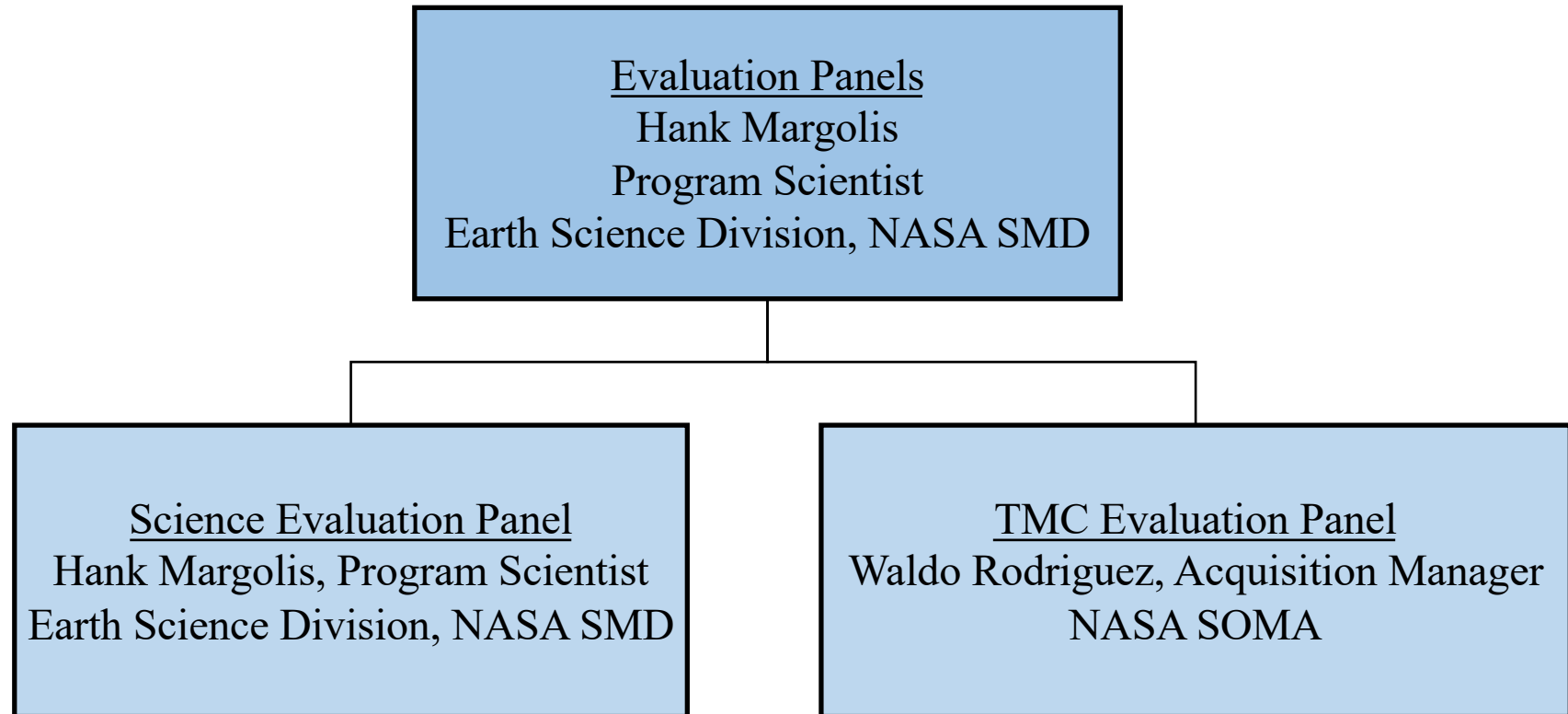
TMC Evaluation Criteria Updates – Rewording reflects simplified requirements. Refer to EVI-6 PEA Section 6.1 and pages 69 to 71 of this Evaluation Plan.

## **EVI-6 Proposal Evaluation**

# EVI-6 Proposal Evaluation

EVI-6 Solicitation  
Evaluation Plan

## Evaluation Organization

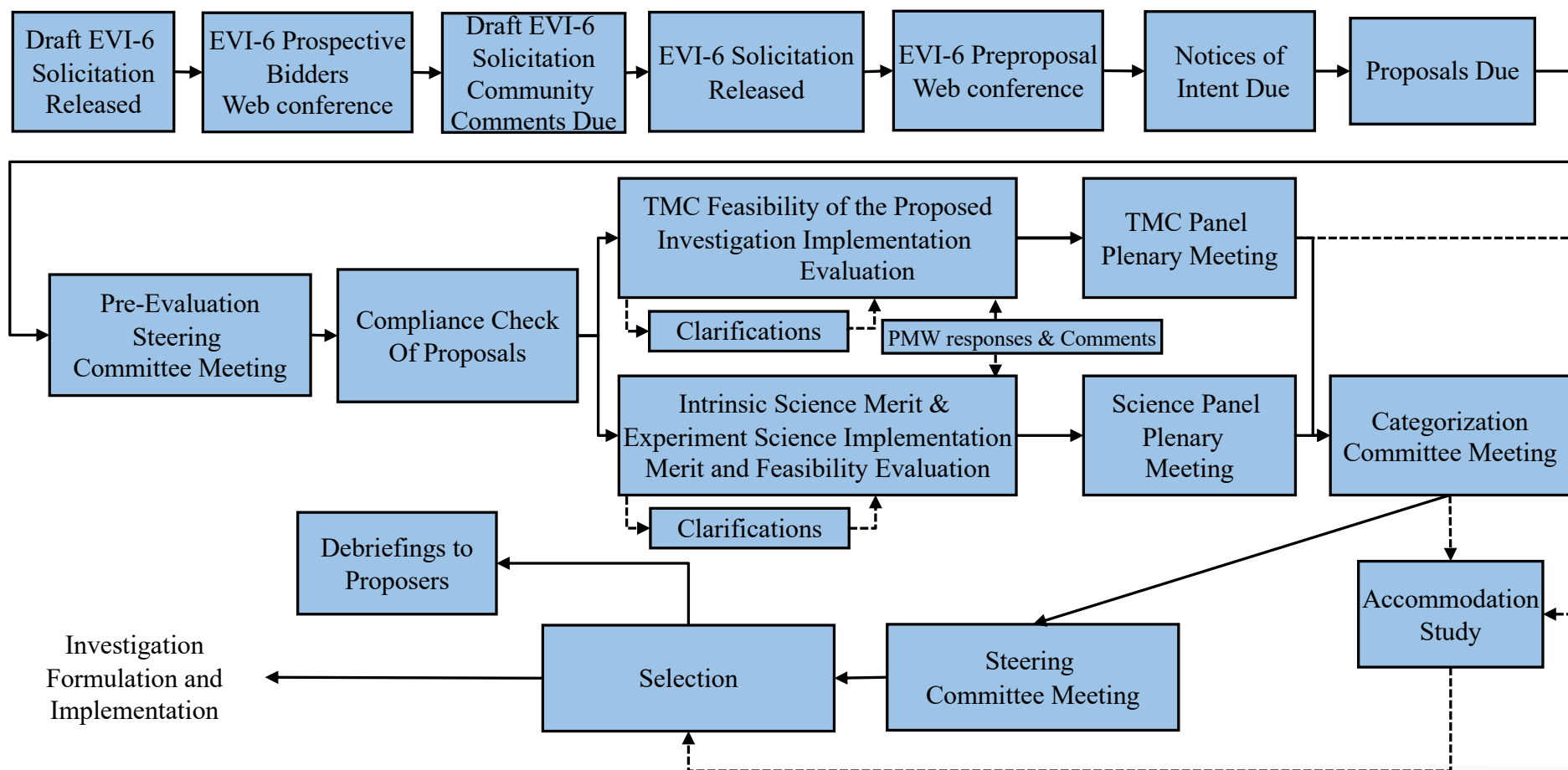




# EVI-6 Proposal Evaluation

EVI-6 Solicitation  
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## EVI-6 AO Solicitation, Evaluation and Selection Flow\*



\*Refer to the SALMON-3 AO Evaluation Plan section pages 12-38 for proposal evaluation details. 57

## **EVI-6 Proposal Evaluation Updates**

## PMW Clarification Process

Section 6.1 of the EVI-6 PEA states that “During the evaluation process, NASA will request written clarification on Potential Major Weaknesses (PMWs) associated with the *Intrinsic Science Merit of the Proposed Investigation*, the *Experiment Science Implementation Merit and Feasibility of the Proposed Investigation* and the *TMC Feasibility of the Proposed Investigation Implementation* criteria specified in Section 7.2.1 of the SALMON-3 AO and in this PEA. Proposers will be allowed up to eight combined pages in total (with some restrictions) for clarifications of the PMWs associated with the *Intrinsic Science Merit of the Proposed Investigation* (A-factors) plus *Experiment Science Implementation Merit and Feasibility of the Proposed Investigation* (B-Factors) evaluation criteria. Up to six pages in total (with some restrictions) will be allowed for clarifications of the PMWs associated with the *TMC Feasibility of the Proposed Investigation Implementation* (C-factors) evaluation criterion. These clarifications may include text, tables and figures to address the PMWs and to provide additional information. .”

PIs whose proposals have no PMWs are informed that no PMWs have been identified.

The full set of clarification responses to the factors above will be considered by the Science Panel and the Technical Management and Cost (TMC) panel. Only the responses will be provided to the other panel but not the PMWs. [Revised September 15, 2022].

## **PMW Clarification Requirements (1 of 5)**

Clarifications Responses must conform to the following requirements:

Requirement 1: Proposers shall submit only one Clarification Response Document that addresses each PMW for the A and B factors (combined). Proposers shall submit only one Clarification Response Document that addresses each PMW for the C-factors.

Requirement 2: The Clarification Response Documents shall be a single unlocked (e.g., without digital signatures) searchable Adobe Portable Document Format (PDF) file, composed of the response text, figures, and/or tables. Images (e.g., figures and scans) shall be converted into machine-encoded text using optical character recognition. Animations shall not be included. Links to materials outside of the response are not permitted. Do not insert any comment fields.

## **PMW Clarification Requirements (2 of 5)**

Requirement 3: The Clarification Response Documents shall be presented in 8.5 x 11 inch paper (or A4). Text shall not exceed 5.5 lines per vertical inch and page numbers shall be specified. Margins at the top, both sides, and bottom of each page shall be no less than 1 inch if formatted for 8.5 x 11 inch paper; no less than 2.5 cm at the top and both sides, and 4 cm at the bottom if formatted for A4 paper. Type fonts for text, tables, and figure captions shall be no smaller than 12-point (i.e., no more than 15 characters per horizontal inch; six characters per horizontal centimeter). Fonts used within figures shall be no smaller than 8-point.

Requirement 4: For the A- and B- factors PMWs combined, the Clarification Response Documents shall not exceed eight pages. For the C-factor PMWs, the Clarification Response Documents shall not exceed six pages. Text, table(s) and figure(s) are permitted; however, all material shall be within the page limits specified above and limitations in Requirements 2, 3 and 9. Response files shall not exceed 10MB.

## **PMW Clarification Requirements (3 of 5)**

Requirement 5: The Clarification Response Documents shall not contain International Traffic in Arms Regulations (ITAR), Export Administration Regulations (EAR), or classified material.

Requirement 6: Each PMW shall be addressed, and each clarification response labelled with the PMW number provided. Each PMW clarification response shall contain only information specific to the PMW. Although your clarification response may point back to references in your proposal, please note that there are already references to locations on your proposal with the PMWs, which indicates that the evaluation team is familiar with and has already evaluated that data, therefore they are not obliged to re-consider them. When making references to the material in your proposal in your clarification responses, refer to the proposal page number on the bottom of the page, as opposed to the electronic PDF file page number.

## **PMW Clarification Requirements (4 of 5)**

Requirement 7: In the Clarification Response Document, the proposers are free to provide any additional information on any criteria or requirements relevant to the proposed investigation, e.g. for *TMC Feasibility of the Proposed Investigation Implementation*, advances in proposed technologies since proposal submission. However, this response together with the PMW clarification responses shall not exceed the total page limitation per Clarification Response Document.

Requirement 8: In addition to the references in the proposal, in support of each PMW clarification response, proposers may provide up to two references; references are restricted to peer reviewed literature. In support of any additional information response in Requirement 7, proposers may provide up to two additional references; references are restricted to peer reviewed literature. References with a publication or release date after the proposal due date are allowed. Proposers shall not provide URLs with any of the responses.



## **PMW Clarification Requirements (5 of 5)**

Requirement 9: Proposers may append to the page-limited response complete versions of a modified Science Traceability Matrix (STM; Table B1, SALMON-3 AO) or Mission Traceability Matrix (MTM; Table B2, SALMON-3 AO) or Total Mission Cost Profile table (Table B3a and B3b, SALMON-3 AO) or Master Equipment List (MEL; Table B4, SALMON-3 AO) or schedule foldout (Requirement R-40 of the EVI-6 PEA). These modified fold-out(s)/table(s) shall have modifications clearly marked by the use of a different color font or by a colored-bordered box (labeled “PMW Clarification”). Proposers shall provide the description of the updates and changes to the modified fold-out(s)/table(s) as text in the page limited document. The complete versions of the modified STM, MTM, Total Mission Cost Profile table, MEL and schedule will not count against the page limit. Any new or other fold-out(s) will count as two pages against the response page limit.



## **EVI-6 Science Evaluation Updates**

## **Science Merit Evaluation Criteria Updates**

In addition to the evaluation criteria given in Section 7.2 of the [SALMON-3 AO](#), the evaluation of the *Intrinsic Science Merit of the Proposed Investigation* criteria also includes the following additions to Factors A-1 and A-2 (Section 6.1 of the EVI-6 PEA):

Factor A-1. Compelling nature and scientific priority of the proposed investigation's science goals and objectives. For this PEA, this evaluation factor also includes the extent to which the proposed science investigation addresses national applications objectives for proposals that include an applications dimension.

Factor A-2. Programmatic value of the proposed investigation. For this PEA, this evaluation factor also includes the extent to which the proposed science investigation addresses unique science and application areas that are not being addressed by other missions (both NASA and non-NASA missions) expected to be in operation five to ten years from the start of the proposed investigation.

## **Science Implementation Merit & Feasibility Criteria Updates**

In addition to the evaluation criteria given in Section 7.2 of the [SALMON-3 AO](#), the evaluation of the *Experiment Science Implementation Merit and Feasibility of the Proposed Investigation* criteria also includes the following additions to Factor B-3 and Factor B-5 (Section 6.1 of the EVI-6 PEA):

Factor B-3. Merit of the data analysis, data availability, and data archiving and/or sample analysis plan. For this PEA, this evaluation factor also includes the quality of the plans for calibration and development of a data pipeline as well as the capacity to serve and support any identified applications communities.

Factor B-5. Probability of investigation team success. For this PEA, this evaluation factor also includes an evaluation of the Diversity and Inclusion Plan. The Science Panel will evaluate the Diversity and Inclusion Plan focusing on how executable and effective the Plan is expected to be. Additional reviewers with expertise in diversity and inclusion initiatives may also provide comments to NASA on the Diversity and Inclusion Plans. Also, for this PEA, the *scientific* expertise of the PI will be evaluated but not their *experience* with NASA missions.

## **EVI-6 TMC Evaluation Updates**

## TMC Evaluation Criteria Updates (1 of 3)

As an update to the evaluation criteria given in Section 7.2 of the [SALMON-3 AO](#), the *TMC Feasibility of the Proposed Mission Implementation* evaluation criteria Factor C-4 of the SALMON-3 AO is superseded by Factor C-4a below and Factor C-5 of the SALMON-3 AO is superseded by Factor C-5a below.

Factor C-4a. Adequacy and robustness of the management approach and schedule. This factor includes the: adequacy of the proposed organizational structure and WBS; management approach including roles; the commitment, qualifications, and experience of any named Key Management Team members, the implementing organization, and the known partners; the spaceflight experience of any named Key Management Team members (PI excepted), the implementing organization, and the known partners against the needs of the investigation; prior working relationships of the implementing organization and known partners; commitments of partners and contributors; and the scope of work covering all elements of the investigation, including contributions. The capability of the management team will be evaluated as a whole, as opposed to assessing the capabilities of each of the Key Team Members independently. Also evaluated under this factor is the

## **TMC Evaluation Criteria Updates (2 of 3)**

adequacy of the proposed risk management approach, including any risk mitigation plans for new technologies, any long-lead items, and the adequacy availability of any required manufacturing, test, or other facilities. The approach to any proposed descoping of investigation capabilities will be assessed against the potential science impact to the proposed Baseline Science Mission. The management of the risk of contributed critical goods and services will be assessed, including the plans for any international participation, the commitment of partners and contributors, as documented in Letters of Commitment, and the technical adequacy of contingency plans, where they exist, for coping with the failure of a proposed cooperative arrangement or contribution. This factor also includes assessment of elements such as the relationship of the work to the project schedule, the project element interdependencies, the associated schedule margins, and an assessment of the likelihood of meeting the proposed or required delivery date.

## **TMC Evaluation Criteria Updates (3 of 3)**

Factor C-5a. Adequacy and robustness of the cost plan, including cost feasibility and cost risk. This factor includes elements such as cost, cost risk, cost realism, and cost completeness including assessment of the basis of estimate, the adequacy of the approach used to develop the estimated cost, the discussion of cost risks, the adequacy and allocation of cost reserves by phase, and the team's understanding of the scope of work (covering all elements of the mission, including contributions). This factor also includes an assessment of the proposed cost relative to estimates generated by the evaluation team using parametric models and analogies.



## **TMC Cost Analysis: Single Step Competitive Process\***

- Initial cost analyses are accomplished on the basis of information provided in the proposals (e.g., consistency, completeness, basis of estimate, contributions, use of full cost accounting, maintenance of reserve levels).
- An independent cost verification of the proposed cost is performed using at least two independent cost models. The independent cost models utilized in the evaluation are compared against as-flown actual cost of missions similar to those proposed to determine appropriate error bars.
- The cost threat for each major weakness is assessed.
- The cost threats impact to the proposed unencumbered cost reserves is determined.
- The adequacy of the remaining unencumbered cost reserves is assessed.
- The entire panel participates in the Cost deliberations.
- All information from the TMC evaluation is considered in the cost assessment.
- The panel is polled for Cost Risk Rating (refer to pages 75-79).
- Cost findings are documented in the Form C.
- Major findings and the Cost Risk Rating are considered in the TMC Risk Rating.

\*This page replaces pages 33 in the SALMON-3 AO Evaluation Plan section; page 34 does not apply. 72



## **TMC Evaluation Cost Analysis: Cost Threats (1 of 2)**

A cost threat (the *likelihood* and *cost impact*), if any, associated with a weakness is stated as “This finding represents a cost threat assessed to have an Unlikely/Possible/Likely/Very Likely/Almost Certain likelihood of a Very Minimal/Minimal/Limited/ Moderate/Significant/Very Significant cost impact being realized during development and/or operations, which results in a reduction from the proposed unencumbered cost reserves.”

- The *likelihood* is the probability range that the *cost impact* will materialize.
- The *cost impact* is the current best estimate of the range of costs to mitigate the threat.
- The cost threat matrix defines the adjectives that describe the *likelihood* and *cost impact*.
- The minimum cost threat threshold is \$1M for Phases A-D and \$250K for Phase E [Revised September 12, 2022].

# TMC Evaluation Updates

EVI-6 Solicitation  
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## TMC Evaluation Cost Analysis: Cost Threats (2 of 2)

| TMC Cost Threat Matrix |                             |          | Cost Impact (CI) % of PI-Managed Mission Cost to complete Phases B/C/D or % of Phase E not including unencumbered cost reserves or contributions |                                                                                               |                                                                                                  |                                                                                                     |                                                                                |
|------------------------|-----------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Likelihood<br>(L, %)   | Likelihood of Occurrence    | Weakness | Minimal<br><br>2.5% < CI ≤ 5%<br>(\$0M < CI ≤ \$0M)<br><br>2.5% < CI ≤ 5%<br>(\$0M < CI ≤ \$0M)                                                  | Limited<br><br>5% < CI ≤ 10%<br>(\$0M < CI ≤ \$0M)<br><br>5% < CI ≤ 10%<br>(\$0M < CI ≤ \$0M) | Moderate<br><br>10% < CI ≤ 15%<br>(\$0M < CI ≤ \$0M)<br><br>10% < CI ≤ 15%<br>(\$0M < CI ≤ \$0M) | Significant<br><br>15% < CI ≤ 20%<br>(\$0M < CI ≤ \$0M)<br><br>15% < CI ≤ 20%<br>(\$0M < CI ≤ \$0M) | Very Significant<br><br>CI > 20%<br>(CI > \$0M)<br><br>CI > 20%<br>(CI > \$0M) |
|                        | Almost Certain (L > 80%)    |          |                                                                                                                                                  |                                                                                               |                                                                                                  |                                                                                                     |                                                                                |
|                        | Very Likely (60% < L ≤ 80%) |          |                                                                                                                                                  |                                                                                               |                                                                                                  |                                                                                                     |                                                                                |
|                        | Likely (40% < L ≤ 60%)      |          |                                                                                                                                                  |                                                                                               |                                                                                                  |                                                                                                     |                                                                                |
|                        | Possible (20% < L ≤ 40%)    |          |                                                                                                                                                  |                                                                                               |                                                                                                  |                                                                                                     |                                                                                |
|                        | Unlikely (L ≤ 20%)          |          |                                                                                                                                                  |                                                                                               |                                                                                                  |                                                                                                     |                                                                                |

Note: Each “\$0M” is converted to dollars according to the associated percentage depending on the proposed PIMMC.

## **TMC Evaluation: Cost Risk Ratings (1 of 5)**

The three criteria below are indicators of Cost Risk. Evaluators must consider these criteria and other relevant information (e.g., cost model applicability, uncertainty of the cost models error bars, effect of cost issues that fall below the minimum cost threat threshold, likelihood of cost impacts, mitigating factors such as major strengths, etc.) together with their judgement in determining the appropriate Cost Risk for a particular investigation.

Three criteria are considered for the determination of the Cost Risk for a proposed investigation; 1) The level of unencumbered reserves after any reduction by TMC identified cost threats; 2) The comparison of proposed cost with the TMC Base Independent Cost Estimate considering the appropriate error bars; and 3) The proposed cost, including reserves, supported by material in the proposal.

## **TMC Evaluation: Cost Risk Ratings (2 of 5)**

Appropriate Cost Reserves are defined as the minimum unencumbered reserves required by the AO, or higher as judged by the TMC evaluation panel based on the justification provided by the PI. Unencumbered cost reserves higher than the minimum AO requirement may be necessary for some investigations, such as those requiring specific technology maturation.

### **Low Risk**

- No cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost and the cost of all modelled lower Work Breakdown Structure (WBS) levels are greater than or equal to the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is very well supported by the information in the proposal.

## **TMC Evaluation: Cost Risk Ratings (3 of 5)**

### **Low/Medium Risk**

- No cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost and the cost of most modelled lower WBS levels are greater than or equal to the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is well supported by the information in the proposal.

### **Medium Risk**

- Cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost or the cost of most modelled lower WBS levels are greater than or equal to the lower bounds of the TMC Base Independent Cost Estimate error bars.

## **TMC Evaluation: Cost Risk Ratings (4 of 5)**

- The proposed investigation cost estimate is mostly supported by the information in the proposal.

### **Medium/High Risk**

- Cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves below the Appropriate Cost Reserves.
- The proposed investigation cost or the cost of most modelled lower WBS levels are lower than the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is not well supported by the information in the proposal.

## **TMC Evaluation: Cost Risk Ratings (5 of 5)**

### **High Risk**

- Cost threats have been identified by the TMC evaluation panel that reduce the proposed unencumbered cost reserves significantly below the Appropriate Cost Reserves.
- The proposed investigation cost and the cost of most modelled lower WBS levels are significantly lower than the lower bounds of the TMC Base Independent Cost Estimate error bars.
- The proposed investigation cost estimate is not supported by the information in the proposal.

## **TMC Evaluation Panel: Other Considerations (1 of 2)**

The panel evaluating the third evaluation criterion, *TMC Feasibility of the Proposed Investigation Implementation*, will also provide comments to NASA regarding the bulleted items below. While these comments will not be considered in the evaluation, they may be considered during selection.

- The managerial and spaceflight experience of the PI, and whether appropriate mentoring and support tools are in place when necessary.
- The extent to which the proposed investigation provides career development opportunities to train the next generation of engineering and management leaders.
- The extent to which the proposed instrument is compatible with potential satellite platform interfaces and operations or the SmallSat investigation is compatible to potential launch opportunities.
- Any deviations from NPR 7120.5F, NPR 7123.1C, and any other NASA procedural requirements that will need a waiver during formulation.



## **TMC Evaluation Panel: Other Considerations (2 of 2)**

- Programmatic risks (e.g., stability and reliability of proposed partners and their contribution).

Student Collaboration proposals, if any, are evaluated only for the impact they have on overall investigation implementation to the extent that they are not separable; Student Collaboration proposals are not penalized for any inherent higher cost, schedule, or technical risk, as long as the Student Collaboration is shown to be clearly separable from the implementation of the Baseline Investigation.

## Observers

## **Observers Approval and Compliance**

Under special circumstances, Civil Servants, IPAs, and/or contractors with downstream implementation responsibilities may be invited to participate as observers to panel meetings.

- Observer participation must be approved by the Program Scientist and the Deputy Associate Administrator for Research.
- Observers must comply with SMD Policy Document SPD-17, Statement of Policy on Observers at Panel Reviews of Proposals. This policy is provided to all approved observers who have implementation responsibilities.

Approved Observers (this list will be updated as Observers are approved)

- Amanda Whitehurst - EVI-6 Program Executive, Earth Science Division, NASA SMD
- Michael Kaszyca – EVI-6 Mission Manager, ESSP Program Office [Revised September 12, 2022]

# Approval

# Approval

EVI-6 Solicitation  
Evaluation Plan

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Waldo J. Rodriguez, PhD  
Acquisition Manager, NASA SOMA

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Hank A. Margolis, PhD  
Program Scientist, Earth Science Division,  
NASA Science Mission Directorate

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Cindy L. Daniels, PhD  
Director, NASA SOMA

---

Karen M. St Germain, PhD  
Director, Earth Science Division,  
NASA Science Mission Directorate

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Michael H. New, PhD  
Deputy Associate Administrator for Research,  
NASA Science Mission Directorate

Electronically approved copy on file.

## Change Log

# Change Log

EVI-6 Solicitation  
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| Rev # | Date               | Change                                                                                                                                      |
|-------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | September 12, 2022 | Page 73 – The minimum cost threat threshold for Phases A-D was changed to \$1M.<br>Page 83 – A new observer was added.                      |
| 2     | September 15, 2022 | Page 59 – Changed language to state that the full set of clarification responses will be considered by both the Science and the TMC panels. |

