DEPARTMENT OF ENERGY EM-50

FY-98 TECHNICAL TASK PLAN FORMAT

(Amended for the Mixed Waste Focus Area)

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5.0 Technical Task Plan Format

GENERAL INSTRUCTIONS

All FY-98 proposals are to be written for the full effort of the project life-cycle in long form Technical Task Plan (TTP) format. These life -cycle proposals/TTPs are required for all tasks/subtasks to be funded in FY-98 (these include continuing work from FY-97).

Each proposal/TTP will include a clear and concise statement of objectives, schedule of key milestones, and identification of the customer and customer need date. The cost, schedule, and scope of the life-cycle of the proposed project/TTP must be fully described, and a schedule of events provided. The proposal/TTP must be tied to the Office of Science and Technology (OST) Project Baseline Summary (PBS) and the FY-99 Internal Review Budget (IRB). To ensure that all OST activities support the Ten Year Plan, the tasks/subtasks in each TTP must clearly identify the relevant Office of Waste Management, Office of Environmental Restoration, and the Office of Facility Transition PBS milestone, the corresponding Site Technology Coordination Group needs, and technical requirements supported through the accomplishments of the project.

The TTP is divided into three sections: the Task Summary which will be entered into TTP 3.2C database that will be used for statistical reports on the program, the Task Justification which provides the rationale for funding the work, and the Task Execution Plan which will be the life-cycle/annual contract for doing the work. All three sections must be completed for a proposal/ long form TTP.

Proposal content should be of high technical quality and also describe work and costs for the life-cycle of the proposed project. The intent is that once proposals are accepted, only the Task Summary (budget and milestones) and the Task Execution Plan need be revised or updated in response to Program Execution Guidance (PEG) to create the final TTP.

Content descriptors are included in each section. Address all points as directly and completely as possible. The appropriate level of detail is a function of the type and status of the technical work. These details should be worked with the appropriate Point-of-Contact (POC) and Waste Type Manager (WTM). If needed, detailed information on elements in the Part I header information is available in the EM-50 TTP Software System Users Manual. Technical Program Managers contact Bob Schreiber at (301) 903-7622 for disk copies of TTP 3.2C database and/or for copies of the manual if needed. These instructions revise the format in that manual. The content of the Task Summary includes specific instructions for FY-98.

ALL ACRONYMS ARE TO BE SPELLED OUT THE FIRST TIME USED.

Milestones/Deliverables: Milestones should be identified as a significant EVENT (not an activity) in the project: 1) a point in time, of a key item/event, that if missed will have a definite impact on the program; 2) allows the Headquarters (HQ) Program Manager and/or WTM to clearly track the progress of his/her program. Milestones should be for planned achievements toward task objectives rather than periodic reports.

Report major milestones at Operations Office (OO) level.* Include as a minimum completed test plans/completion of tests/issuance of technical reports, such as, the Technology Performance Report/regulatory documentation/completion of activities impacting go/no go decisions/completion of Performance Measures is paramount. [The Technology Performance Report is an ongoing process, but completed only once, at the end of the project. Even if a project is multi-year, only complete this document at the completion of the project. The Principal Investigator (PI) will submit the appropriate data to the MWFA POC for generation of the Technology Performance Report]. Contractor level milestones will be decided by PI and his/her management.

*Note: High level programmatic milestones (HQ level) will be decided by the MWFA management team and reported in the MWFA Technical and/or Management TTPs to HQ.

PART I: TASK SUMMARY

Header Information

1. Title: (Type in All Caps)
2. Product Line: (Use Pick List in TTP 3.2C Database; this will indicate the appropriate Focus Area identification)
3. TTP No: (Use Pick List in TTP 3.2C Database when entering number)
4. Revision: (Start at 0, number in sequence when TTP is modified/ revised for changes in scope, funding or schedule. Increase over life of TTP.)
5. Date: (Date TTP is created or revised)
6. Subtask No.: (A, A1)
7. Contractor: (Automatically entered - based on first three digits of TTP number)
8. HQ Office: (Use Pick List in TTP 3.2C Database)
9. Fiscal Year; (FY targeted for funding)
10. HQ Focus Area Team Lead: Caroline Purdy, EM-53 (301) 903-7672
11. Partner Focus Area Team Lead: Bill Owca, Acting, DOE-ID (208) 526-1983
12. HQ Financial Officer: Vicki Barden, EM-131, (301) 903-8129
13. Technical Program Officer: DOE TPO at respective sites
14. Principal Investigator: Name, company, phone number
15. Joint Participants: (Other labs, industry, universities, other)
16. Jointly-Funded Program: (Use Pick List in TTP 3.2C Database)
17. Primary Technology Area: (Use Pick List in TTP 3.2C Database)
18. Secondary Technology Area(s): (Use Pick List in TTP 3.2C Database)
19. Primary Focus Area: (Use Pick List in TTP 3.2C Database)
20. Secondary Focus Area: (Use Pick List in TTP 3.2C Database)
21. Budget and Reporting (B&R) Code: (Use Pick List in TTP 3.2C Database)
22. Joint B&R Code: (Use Pick List in TTP 3.2C Database)

Task/Subtask Summary

The Task/Subtask Summary is a narrative section limited to 250 lines of text and should include the following information: summary description of targeted problem, summary description of proposed work, summary of expected benefits, and any key issues for all tasks associated with the TTP. To ensure guidance is comprehensive, this narrative section must address or identify the following:

1. Task Title
2. Requested New FY-98 Funding; Schedule Duration
3. Task Statement of Work and Task Funding
4. Crosswalk of FY-97 TTPs
5. Progress Tracking System (PTS) Variance Thresholds in

Dollars and Percents (upper and lower limits)
6. Description of Deliverables and Milestones
7. Joint Participant Data

Example (with explanation/direction)--This allows each technology development/ demonstration activity to be subdivided into manageable units.)

TASK A: Title of Task A
Value: $xxx K
Principal Investigator: (Name, Company Affiliation, Phone/Fax Number)
Schedule Duration: October 1997 thru September 1998

State description of Task A scope of work.

SUBTASK A1: Title of Subtask A1
Value: $xx K
Principal Investigator: (Name, Company Affiliation, Phone/Fax Number)
Schedule Duration: October 1997 thru January 1998

State description of Subtask A1 scope of work.

CROSSWALK TABLE: State if this TTP is linked with other TTPs.

PROJECT/VARIANCE REPORTING: The MWFA PIs are expected to provide accurate data to the monthly Progress Tracking System (PTS) reports. Recommended corrective actions will be supplied when project cost and schedule variances exceed a threshold of +/- 10%, or $50K, with a minimum threshold variance of +/- $10K. The PIs should pay additional attention to the following areas:

- @ Funding
- @ Baseline
- @ Cost and Schedule Variance Analysis
- @ Milestone Reporting
- @ Project Narrative
- @ Managers' Ratings

DELIVERABLES AND MILESTONES: Refer to explanation found on page 2 of this guidance.

JOINT PARTICIPANT DATA: Partner information should include data such as: Partner name; type (i.e., Private Industry, universities, Interagency Agreement, other labs); how the Partner will be funded [i.e., subcontract, vendor procurement, contract, program research and development announcement (PRDA), etc.]; prior year and current year funding status.

TECHNOLOGY GATE INFORMATION: Each PI will review and determine with the MWFA POC and WTM the maturity level (present technology gate).

PERFORMANCE MEASURE METRICS: To be determined.

-- End of Example --

Budget Summary

TTP funding information in the Budget Summary should identify the anticipated carryover to be used as well as the New life-cycle BA requirements. Indicate number of Full Time Employees (FTEs).

Milestone Summary

This summary should include current-year Operations Office (OO) and Contractor (CNTR) milestones for <u>each</u> work element. All milestones are to be coded "NO" in the PTS database. Milestone titles should reflect an action (initiate, evaluate, deliver, treat, etc.).

Drivers

Identify applicable drivers from list in TTP 3.2C Database.

Waste Types

Identify all applicable waste types from list in TTP 3.2C Database.

Program Management and Points-of-Contact (POC)

Type in all appropriate information.

Spending Plan

Spread the funding throughout the fiscal year, including any carryover funds from prior years.

Budget Expense Summary Sheet

Fill out for each FY of requested funding; include FTE information, subcontracts, materiel, etc.

Specific MWFA requirements for Parts II and III: include either a header or footer indicating the TTP number, revision number of the TTP, and page number (page XX of XX--of Parts II and III).

PART II: TASK JUSTIFICATION

TTP No.:
Revision No:

Purpose

In a few sentences concisely describe the purpose and scope of this work.

Target Problem

The problem definition should include the need from the Focus Area and details on related site-specific problems, if available. Details can include contaminants, media, extent of problem inside and outside of DOE, operational or other constraints, performance requirements, and any unknowns. Clearly defend appropriateness for EM funding. Cite references with more information on the need, such as Site Technology Coordination Group (STCG), Site Treatment Plans, Ten Year Plan/Project Baseline Summary. Describe tie to the OST PBS and the FY-99 IRB; identify the relevant Office of Waste Management, Office of Environmental Restoration, and the Office of Facility Transition PBS milestone.

Technology Description

This is the key section of the TTP. Describe, in detail, the proposed technology and how it will work to solve the problem defined above. Technical detail which justifies belief in the potential success of the proposed approach or technology is expected. Technical drawings and photos may be submitted as an appendix. Drawings and photos should not substitute for quality narrative description; they should augment it.

A non-technology proposal should describe the proposed solution and how it will solve the problem defined above. Non-technology proposals should name this section **Solution Description.**

Describe the functional objectives or performance indicators of the solution or proposed technical work, the basic approach to meeting those objectives, and how accomplishment of them will be measured. Details on work elements should be included in Part III, Work Element Descriptions.

Identify key prior work by performer and others, cite key references, describe relationships and interfaces with other ongoing work, describe how this work differs from other work, list past sponsors and dollars spent to date.

Benefits

Discuss the merits and benefits to the proposed technology or solution. For technology tasks, this section should address benefits relative to current or competing technologies that perform the same function. For support tasks, such as technology integration, this should describe the expected benefits.

Quantification of benefits should follow a graded approach. For new technologies projection within the available data should be made on expected benefits (e.g., lower cost, faster, simpler, etc.). For mature technologies, quantitative information should be provided on the cost of using this technology versus baseline technologies. A technology can be considered mature if it is within one year of full-scale demonstration.

Describe the solutions flexibility or range of applicability. This is, can this solution be applied to only a narrow problem type (e.g., an aqueous organic stream) or is it broadly applicable to other problem types (e.g., sludges, solids, etc.) in addition to the one targeted in this TTP? If possible estimate the number and extent of opportunities to use this solution within DOE and beyond. (For example, DOE has two hundred sites, totaling 6 million kg, needing treatment. DOD and private industry sites include another 5 million kg.)

MWFA specific: waste volume information should be included. The benefits should be written specific to each end-user. Except in the early gates, one or more specific end-users should be defined (this can be found in the applicable Technology Development Requirements Document (TDRD).

Technology Transfer

Discuss how the technology or results will be transferred to private industry EM-30, EM-40, EM-60 or other users. If users are currently involved in this task, describe.

Describe issues that users may face in using this new technology. For example, regulatory concern, special training, availability from suppliers, etc.

Describe the product delivery form (e.g., data, design drawings, hardware, procedures, etc.)

Address whether an industrial partner is needed for implementation by the users. For tasks where this is not applicable, so note with an explanation. Not applicable does NOT mean that there should be no industrial partners. Examples might include tasks generating data or technologies with very limited application, e.g., one time procurement of a tank waste retrieval arm. If an industrial partner is needed, address when in development industrial partnership should be sought and preferred means.

If industry is involved in either commercializing this new technology or supplying it to Department of Energy (DOE) users, explain method, e.g., Cooperative Research and Agreement (CRADA), a license to use a patent, or some other vehicle?

MWFA specific: This section should be tied to the specific end-users. Describe how the end-user is currently planning to treat the waste that this technology is applicable to (i.e., privatized treatment or DOE treatment). If the end-user is privatizing, the technology transfer should be keyed to that action.

Staff/Organization Qualifications

List any included resumes here. In an attachment to this TTP, include resumes of one page or less for each principal staff person, summarizing their experience related to this proposal. Also attach, if applicable, a list of their publications related to the proposed work.

Describe the organization's qualifications for conducting this work: co-location with the problem, extensive past DOE investment in work in this area, unique facilities, related work funded by EM or others, beyond one page should be included in an attachment.

References for Part II

List all references cited in this TTP.

PART III: TASK EXECUTION PLAN

TTP No.:
Revision No.:

Prior-Year Progress

Summarize progress achieved during the prior year. This could include statements of technical accomplishments, major decisions made, new links with users or partners, or new data on benefits. This is "Not Applicable" for new proposals.

Work Element Descriptions

Summarize progress achieved during the prior year. This could include statements of technical accomplishments, major decisions made, new links with users or partners, or new data on benefits. This is "Not Applicable" for new proposals.

Work Element Descriptions

Address all five items for each work element expected over the life of the project. Some work elements may start in outyears or may be performed solely by task partners.

The first work element should be for task management and should address how the overall effort will be managed.

Each work element should be noted by a letter, e.g. "A", "B", etc. Each associated milestone is labeled by work element letter and a number, e.g. "A1", "B1".

Work Element Letter and Title

1. Performance Goals/Deliverables

   Describe what will be produced over the life of this work element, e.g., a design, data, Test Plan, Technology Performance Report, Technology Development Plan, a report, a management plan, software, a public meeting, etc.

2. Technical Description of Work

   Identify what will be done, and discuss why this work contributes to the overall goal of the project, the needed facilities, etc. Clearly indicate what will be done in each FY, with more detail for current FY. Describe relationship to other work elements or tasks, EM-50 or other, if any.

3. Milestones (Decision Points/Major Accomplishments)

   List milestones for major accomplishment and decision points. Proposer should recommend milestone level. Current-year milestones will be repeated in Part I, Milestone Summary.

   The best milestones are those that mark an event and not an activity. Milestones should be for planned achievements toward task objective rather than periodic reports. Also note critical points such as regulatory approval.

4. Cost/Duration of Work Element

   Show for each FY if appropriate. Include, separately, the dollars coming through this task and any outside dollars.

5. Collaborators and Principal Performers

   List all collaborating organizations and principal staff performing this work in this element. Show distribution of dollars in Cost/Duration above. Clearly indicate if EM 30, 40, or 60 staff are participating or if work is being done jointly with a 30/40/60 project.

Consolidated Funding and Basis

Use a table to show funding for each work element over the life-cycle of the task; break out Operational versus Capital Equipment expenditures. Include any prior-year carryover. Clearly explain how the costs were determined/validated and why they should be believed.

<u>MWFA specific:</u> Consider ad hoc requests from DOE and MWFA (i.e., preparation for and/or attendance at Mid-Year/Start/End of Year meetings; Stakeholder activities; Public and Tribal activities; DOE-HQ ad hoc requests, etc.). It is suggested each PI budget $15K for these ad hoc requests.

Key Issues

Discuss issues that could impede successful completion of this work, such as: dependencies on other tasks, dependency on joint funds from other sources, technical uncertainties, end-users' schedule (i.e., when this work needs to be done to be useful to the end user), etc.

NEPA/Regulatory Compliance Approach

Describe approach to determine and respond to requirements for National Environmental Policy Act of 1969 (NEPA)-compliance and other regulations. If not applicable, so state.

Budget Expense Schedule

Refer to Budget Expense Schedule in Part I.

Attachments

List Resumes/PI Publications/Organizational Qualifications/ Drawings/Photos/Requirements Matrix