

Guidelines for Establishing Project Key Performance
Parameters (KPPs)

Contact: Johnnie Newson, EM-53, 202-586-8849

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Statement:

Project teams must carefully establish Key Performance Parameters (KPPs) which define the minimum scope requirements for project success. Poorly defined KPPs have resulted in otherwise successfully projects being categorized as failures by the DOE Office of Acquisition and Program Management (MA-60) as experienced in some EM projects. Some KPPs referred to the overall programmatic goals. A Key Performance Parameter is defined by CD-2 and is a characteristic, function, requirement or design basis that if changed would have a major impact on the system or facility performance, schedule, cost and/or risk. In some cases, a minimum KPP or threshold value should be highlighted for CD-4 (project completion) realizing in many instances full operational capabilities may take years to achieve. The minimum KPPs and facility mission must stay intact for the duration of the project since they represent a foundational element within the original PB. KPPs should be completed within a contractor period.

Discussion:

In its report, *Most DOE Cleanup Projects are Complete, but Project Management Guidance Could be Strengthened* (GAO-13-23), the Government Accountability Office highlighted the need to develop supplemental guidance to the Department of Energy (DOE) Order (O) 413.3B, *Program and Project Management for the Acquisition of Capital Assets*, to explain how EM develops KPPs. In its response to the report, EM committed to "...develop guidance to supplement DOE O 413.3B to explain how EM should develop scope targets - KPPs - for capital asset cleanup projects and include specific examples for such parameters to help ensure that scope is always defined in a way that it would help officials and others accurately assess project performance, including cleanup projects."

In order to clearly define the requirements for KPPs, the Acting Principal Deputy Assistant Secretary for Environmental Management published guidance on January 31, 2014 to support the development of high quality KPPs for all Capital Asset Projects. This guidance, in accordance with DOE Order 413.3B, define the characteristics of high quality KPPs as those that express performance in terms of accuracy, capacity, throughput, quantity, processing rate, purity, reliability, sustainability, or others that define how well a system, facility or other project will perform. Finally, in order to develop high quality KPPs, the discreet scope of the project must be clearly identified, to include start and end points, quantities, and applicable qualitative measurements to define project success.

Analysis:

EM Acquisition Executives must ensure that the project team has established minimum KPPs at CD-2 (Approve Performance Baseline) that must be achieved at Critical Decision (CD)-4 (Start of Operations or Project Completion). These KPPs must be representative and include quantifiable, measureable descriptions of planned project scope; and be consistent with the KPP definition in DOE O 413.3B, as follows:

"A vital characteristic, function, requirement or design basis, that if changed, would have a major impact on the facility or system performance, scope, schedule, cost and/or risk, or the ability of an interfacing project to meet its mission requirements. A parameter may be a performance, design, or interface requirement. Appropriate parameters are those that express performance in terms of accuracy, capacity, throughput, quantity, processing rate, purity, reliability, sustainability, or others that define how well a system, facility or other project will perform. In aggregate, KPPs comprise the scope of the project."

The attachment provides examples of KPPs to assist the FPO in establishing KPPs.

Actions:

New projects must pay particular attention to the development of the project's KPPs. Use the guidance in attachment 1, "Examples of Key Performance Parameters for EM Capital Asset Projects" as guidelines for KPPs for specific project types, including demolition, facility construction, waste disposal, and groundwater treatment. Ensure KPPs are:

- Scheduled to be wholly complete within the project period;
 - Specific to the scope of the applicable project, not site-wide or programmatic goals.
 - Appropriately specific to define the minimum criteria for project success;
 - Quantifiable (when possible), and in aggregate, represent the scope of the project;
 - Include both quantitative and qualitative measures when appropriate; and
 - Not redundant with project cost and scope targets.
- Finally, when defining project KPPs, follow guidance included in Reference 1.

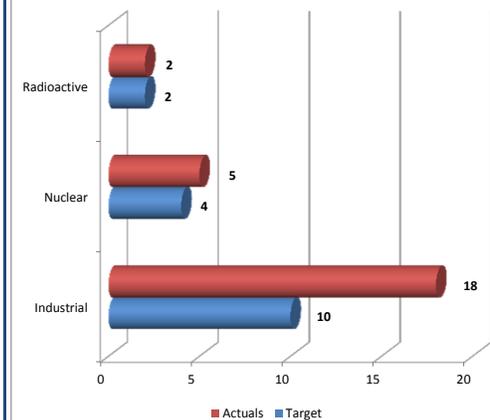
Critical Decision(s): CD-2

Facility Type(s): All

Work Function(s): Project Management

Technical Discipline(s): N/A

Facility D&D KPPs - U Plant Project



Workers safely demolished a 175-foot-high exhaust stack at the Hanford Site in Washington state, a project supported by \$420,000 in Recovery Act funds. (retrieved from <https://www.flickr.com/photos/departmentofenergy/7644718810/in/set-72157630196027076/> March 27, 2014). The target KPPs displayed in the chart to the left were met or exceeded in each case.

REFERENCES:

1. Jan 31, 2014 memo from James Owendoff titled, "Expectations Regarding Development of Key Performance Parameters for Environmental Management Capital Asset Projects"

Questions about the EM Lessons Learned program? Contact Johnnie Newson at johnnie.newson@em.doe.gov.