

**PROJECT HANFORD MANAGEMENT SYSTEM
PROCEDURE**

PERFORMANCE INDICATOR PROCESS

HNF-PRO-4294, Rev. 2

Technical Authority Approval:	Original signed	Date 5/5/00
	K. A. Strong	
Functional Area Manager Approval:	Original signed	Date 5/16/00
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Performance Indicator Process

1.0 PURPOSE

This procedure implements portions of the requirements of HNF-MP-599, *Quality Assurance Program Description*, Part 2, Section 3, "Quality Improvement." It provides the methodology for developing and analyzing performance indicators (PIs), reporting analysis results, and identifying the need for corrective or improving actions.

Statistical control chart methodology required by this procedure applies to statistical trend analyses to be reported to the Fluor Hanford (FH) Office of the President, to councils such as the President's Zero Accident Council (PZAC) and President's Quality Council, and to the U.S. Department of Energy (DOE), Richland Operations Office (RL) or other organizations external to the initiating organization/facility. Included are trended performance measures associated with any of the following:

- HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*
- The Project Hanford Management Contract (PHMC) Environment, Safety and Health and Quality Assurance Performance Indicator Plan
- Corrective Action Management and Deficiency Tracking System
- The Voluntary Protection Program
- Other trend analyses that are "externally reported" per the above paragraph.

This procedure does not apply to PIs driven by DOE requirements mandating other analysis and reporting methods.

For the purpose of this procedure, PIs are developed from data presented such that statistically significant changes indicate either improvement or degradation of process performance. Control chart methodology is used to determine statistical significance in accordance with HNF-4931, *Generating and Using Control Charts*. Performance measure is a more general term that includes both data that show process performance (e.g., PIs) and data that show quantifiable outputs/outcomes such as progress in meeting objectives and expectations. Objectives are statements of desired nearer-term outcomes or results of particular project(s) that contribute to the strategic outcome. Expectations are the desired condition or target level of performance for each performance measure. They indicate the specific quantity or milestone date that is expected from successful execution of the project baseline for a given performance period.

2.0 REQUIREMENTS

2.1 Developing Performance Indicators

1. PIs shall be developed and analyzed to provide responsible management with visibility to system/process performance improvement or degradation.
2. PIs shall be chosen based on facility/project management needs and with consideration given to those indicators as committed in the PHMC Environment, Safety and Health and Quality Assurance Performance Indicator Plan.
3. Data needed to support the development and maintenance of PIs shall be identified, obtained, and maintained in accordance with this procedure.

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2.2 Establishing FH ES&H and Quality Assurance Performance Indicators

1. The Vice Presidents of ES&H and Performance Assurance (PA) shall determine top-level performance indicators in their respective areas based on review of the following:
 - Integrated Environment, Safety, and Health Management System (ISMS) performance measures established by DOE,
 - Input from FH Projects and RL,
 - Requirements of the PHMC and DOE budget execution guidance,
 - Performance and assessment of areas needing attention.
2. The Environment, Safety and Health, and Quality Assurance Performance Indicator Plan specifies the performance indicators to be delivered to RL. The Plan also specifies reporting periodicity for each indicator. The Plan shall be reviewed annually with RL to determine if changes are needed.

NOTE: The PI Plan referenced above applies only to PIs developed, analyzed, and reported by FH ES&H and QA, and has not been assigned a document number under the Hanford Document Control System. Copies are available from ES&H or Performance Assurance (see Section 7 of this procedure).

3. At a minimum, FH ES&H PIs shall cover Occupational Safety (accidents, injuries, and cost index), Radiation Protection (contamination events), Nuclear and Criticality Safety, and Environmental events and occurrences. The indicator data shall encompass FH and its subcontractors.
4. QA PIs shall cover performance relative to the criteria of Title 10, Code of Federal Regulations, Section 830.120, "Quality assurance requirements," to the extent that performance data is available.
5. Individual facilities and projects may request additional specific indicators be provided from site-wide reporting systems, such as the Occupational Safety and Health Administration (OSHA) 200 log and Occurrence Reporting and Processing System. Such indicators shall be provided by ES&H Planning and Performance, Radiation Protection or QA as resources are available.

2.3 Analyzing and Reporting Performance Indicators

1. Data needed for identified performance indicators shall be obtained and analyzed for trends in accordance with HNF-4931. If, in the analysis of certain types of performance measures, it is not required to separate "trends" from random fluctuations of data, HNF-4931 does not apply. Data for causal analyses and distribution analyses should be analyzed using Pareto charts, histograms, or other appropriate means. For trend charts, i.e., where HNF-4931 applies, a minimum of 25 data points shall be included if available. If 25 points are not available, then available data shall be included.
2. A system shall be developed to maintain analysis data. For PIs governed by the ESH&QA PI Plan, the system, at a minimum, shall contain current and historical data for a total of four years, when data is available. In cases where the current chart data and available historical data do not meet the required four years, available data shall be maintained. Traceability to original data shall be maintained, with traceability to individual line item records. For example, indicators based upon the Occurrence Reporting and Processing System shall be traceable to individual report serial numbers.
3. PIs shall be updated monthly if possible and analyzed and reported at least quarterly, or as otherwise

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established in approved PI plans or documented direction from management.

4. Project, facility, or other responsible management shall be notified of statistically significant adverse trends. When such trends are identified, the responsible manager or director shall evaluate the contributing factors to confirm that it is (or is not*) an adverse trend. (*In certain cases, in-depth analysis of an apparent adverse trend may reveal it is not "adverse.") Results of analyses shall be documented.
5. Appropriate improvement actions shall be taken by responsible management when statistically significant adverse trends are identified and confirmed. Actions and action assignments to correct significant adverse trends falling within the requirements of HNF-PRO-052, Corrective Action Management, shall be documented accordingly, and tracked to completion in accordance with HNF-PRO-653, *Deficiency Tracking System*.
6. Responsible project/facility management shall determine distribution of project/facility-specific performance indicators.
7. ES&H and QA PI reports shall be submitted to RL in accordance with the schedule established in the Environment, Safety and Health and Quality Assurance Performance Indicator Plan. Occupational Illness and Injury PIs shall also be presented monthly at PZAC. Project-specific data and analyses shall be provided to Site Planning and Integration (SP&I) for use in "Project Review." These indicators may be the same as those provided to RL, or may include additional indicators as requested by SP&I and/or the PZAC.

2.4 Establishing Performance Objectives

Performance objectives and actions shall be established. The Vice Presidents of ES&H and PA and their Directors, in conjunction with the FH Projects, are responsible for deciding if current performance is acceptable, or if improvement is needed for statistically stable indicators. DOE ES&H and QA benchmark data shall be retrieved as appropriate to assist in these improvement decisions.

3.0 PROCEDURE

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| ES&H and PA
VPs
Project/Facility/
Functional Area
Managers | <ol style="list-style-type: none">1. Determine PIs to be developed. Consider input from Centers of Expertise (COEs) and RL counterparts, as appropriate. |
| Data Analyst/
Statistician | <ol style="list-style-type: none">2. Identify the data and data sources necessary to develop the identified PIs.3. Obtain current and historical data from identified data systems or other sources. Obtain benchmark comparison data where available and appropriate.4. Check accuracy and completeness of the data.5. Establish trend chart in accordance with HNF-4931, or procedure meeting |

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requirements of HNF-4931.

6. Establish supporting Pareto and histogram or other charts as needed.
 7. Enter data in analysis data system.
 8. Update PIs monthly or as appropriate.
 9. Analyze PIs.
 10. Identify statistically significant changes and document results.
 11. Compile PI charts and analysis results and forward to the manager responsible for review and issuance.
 12. Review and evaluate PIs per 2.3.4. Ensure confirmed adverse trends, if any, are documented in accordance with 2.3.4 and 2.3.5. For other than ESH and QA PIs go to step 3.0.14.

ES&H and PA
VPs/Directors &
Responsible
Management/
COEs
 13. For ESH and QA PIs, review results with appropriate COE, President's Zero Accident Council and/or President's Quality council. Make recommendations or changes, as appropriate.
 - a. Submit ESH and QA PI letter(s) and associated PI charts to RL, in accordance with the ESH and QA Performance Indicator PI Plan.
 - b. Review ESH and QA PIs with the Senior Management Team at least quarterly.
 - c. Review ESH and QA PI list in the ESH and QA PI Plan with RL counterparts at least annually.
 14. If PI data is stable (i.e., no trend), determine if current level is acceptable. If current level is not acceptable, implement actions necessary to improve the underlying process.

Responsible
Management/
COEs
- NOTE: The management responsible for action may be the management of the issuing organization or the management of other recipient organizations. This step applies in either case.
15. Review ESH and QA PI results and provide direction as necessary to produce goals and incentives for Projects. This review is performed in conjunction with FDH-5096, Feedback and Improvement Process.

Senior
Management
Team
 16. Work with Projects on the ESH and QA performance indicators to be incorporated in the next fiscal year planning process in accordance with HNF-PRO-522, *Multi-Year Work Planning*. Inform Projects of performance objectives determined from step 15.

ES&H and PA
VPs

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4.0 FORMS

Not applicable.

5.0 RECORD IDENTIFICATION

Type of Document	Submittal Responsibility	Retention Responsibility
Performance Indicator Report	Issuing Organization	IRM

6.0 REFERENCES

6.1 Source Requirements

Title 10, Code of Federal Regulations, Section 830.120, *Quality assurance requirements*

HNF-MP-003, *Integrated Environment, Safety, and Health Management System Description*

HNF-MP-599, *Quality Assurance Program Description*

6.2 Working References

HNF-PRO-052, *Corrective Action Management*

HNF-PRO-522, *Multi-Year Work Planning*

HNF-PRO-653, *Deficiency Tracking System*

Environment, Safety and Health and Quality Assurance Performance Indicator Plan

HNF-4931 *Generating and Using Control Charts*, Rev. 1, 12-1-99

FDH-5096, *Feedback and Improvement Process*

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7.0 POINTS OF CONTACT

Name	Company	Organization	Phone Number
FUNCTIONAL AREA MANAGER			
B. R. Hill	FH	Performance Assurance	376-5352
TECHNICAL AUTHORITY			
K. A. Strong	FH	QA Programs	376-1309
TECHNICAL OWNER			
S. S. Prevette	FH	ES&H	373-9371
J. E. VanArsdale	FH	QA Programs	376-9688
OTHER POINTS OF CONTACT			