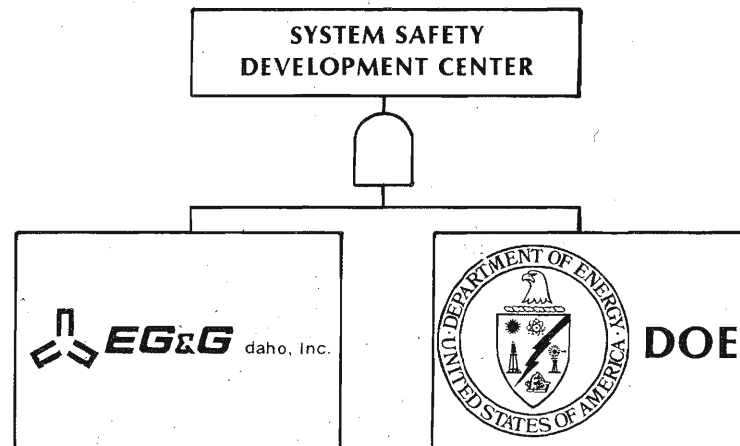


## SAFETY APPRAISAL GUIDE



**EG&G Idaho, Inc.**

P.O. Box 1625  
Idaho Falls, Idaho 83415

August 1982

**UNITED STATES  
DEPARTMENT OF ENERGY**

Office of the Deputy Assistant  
Secretary for Environment,  
Safety and Health

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SAFETY  
APPRAISAL GUIDE  
FOR USE WITH  
DOE ORDER 5482.1A

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## ACRONYMS

ASAP	As soon as possible
CEO	Chief Executive Officer, i.e., General Manager, President, Director, etc.
DOE	Department of Energy
ES&H	Environment, Safety and Health
F.O.	Field Office
H.Q.	Headquarters
MORT	Management Oversight and Risk Tree
SPMS	Safety Performance Measurement System





## INTRODUCTION

It is the policy of the Department of Energy (DOE) to:

1. Assure protection of:
  - a. The environment,
  - b. The safety and health of employees and the public, and
  - c. DOE property from accidental loss and damage.
2. Assure compliance with applicable requirements, i.e., codes, standards and regulations.

These assurances are provided, in part, by the DOE Environmental, Safety and Health (ES&H) appraisal program, consisting of:

1. Internal audits
2. Confirmatory management and functional appraisals
3. Program reviews and assessments
4. Independent overview reviews and appraisals

The objectives of the ES&H appraisal program are to:

1. Determine that ES&H policies and requirements are appropriately interpreted and implemented.
2. Evaluate the effectiveness of their implementation.

3. Provide management with:

- (a) Accurate information on ES&H performance
- (b) Recommendations for performance improvement.

4. Determine adequacy of ES&H requirements in meeting DOE policy and goals.

There are three important and inter-related considerations involved in meeting these objectives:

1. Compliance with DOE policies, orders and guidelines relating to ES&H program requirements and to the appraisal process itself.
2. Prevention of oversights (i.e., failures to notice or consider any significant factors) in performing appraisal.
3. Standardization of the appraisal process to permit comparison of appraisals performed:
  - (a) By different appraisers and/or
  - (b) At different facilities.

The purpose of this Guide is to apply methodology developed in References 1 and 2 to a direct one-on-one implementation of the appraisal factors of DOE Order 5482.1A, "Environmental Protection, Safety, and Health Protection Appraisal Program."

It thereby provides a basis for appraisal in accordance with the DOE Order 5482.1A, (Objective 1), which is free of oversights (Objective 2), and which has a well defined, standardized structure (Objective 3).

Finally, this Guide is used as a primary text and workbook in the DOE Appraisal Training Workshop, as well as in actual field appraisals which are an integral part of the total DOE Safety Performance Measurement System (SPMS).

Following are applicable definitions from DOE Order 5482.1A. Then Part I of this Guide describes the methods for using the appraisal trees and appraisal outline of Part II and the guidelines and worksheets of Appendices A through D.

## DEFINITIONS

### o Management Appraisal

A determination of managerial effectiveness in establishing and implementing ES&H program plans which conform to DOE policy requirements. It is based on an analysis of functional appraisals, internal audits, and other information, and on the application of appropriate criteria. This is a review and evaluation of management performance covering all ES&H disciplines and management responsibilities to assure proper ES&H program balance.

### o Functional Appraisal

A documented review of an ES&H specialty discipline performed in accordance with written guidance and criteria to verify, by examination and evaluation of objective evidence (including visits to sites of activity), that applicable elements of the ES&H program have been developed, documented, and effectively implemented in accordance with specific ES&H requirements and/or needs.

### o Internal Audit

An examination and evaluation by the first operating level (either Federal or contractor) of those portions of its internal ES&H program, program plan implementation, and operations retained under its direct control.

[Table 1 (page 8) compares implementation procedures for external management appraisals and functional appraisals and internal audits.]

o Environmental Protection, Safety, and Health Protection Program

Those DOE requirements, activities, and functions in the conduct of all DOE and DOE-controlled operations that are concerned with: controlling air, water, and soil pollution; limiting to acceptably low levels, risks to the well-being of both operating personnel and the general public; and protecting property adequately against accidental loss and damage. Typical activities and functions related to this program include, but are not limited to, the following: environmental protection, occupational safety, fire protection, industrial hygiene, health physics, occupational medicine, process and facilities safety, nuclear safety, and quality assurance.

o Criteria

Rules or tests against which the quality of performance can be measured. They are most effective when expressed quantitatively. Fundamental criteria are contained in policies and objectives, as well as codes, standards, regulations and recognized professional practices that DOE and DOE contractors are required to observe. [ES&H appraisal factors from DOE Order 5482.1A are defined in Table 2 (page 9).]

o Finding

A statement of fact concerning a condition in the ES&H program that was investigated during an appraisal or internal audit. It may be a simple statement of proficiency, or a description of a deficiency--a variance from procedures or criteria. Both severity and potential consequences should be addressed in describing a deficient condition.

o Program Secretarial Officer

An outlay program manager, and includes the Assistant Secretaries for: Conservation and Renewable Energy (CE-1); Fossil Energy (FE-1); Nuclear Energy (NE-1); Defense Programs (DP-1); Environmental Protection, Safety, and Emergency Preparedness (EP-1); and the Director for Energy Research (ER-1).

o Line Organization

Includes the Program Secretarial Officer, the program office, and the field organization responsible for the management of a given DOE operation.

o DOE Contractor

Includes any DOE prime contractor or subcontractor subject to the contractual provisions of PR 9-50.704.2 or other contractual provisions (e.g., cost-shared) where DOE has elected to enforce ES&H regulations by specific negotiated contract requirements.

o The Operating Level

The organization performing the actual work or job related tasks. It may be a contractor performing work for DOE or it may be an element of DOE itself, such as an energy technology center or a power administration.

o The Second Line Organizational Level

That element of DOE that is contractually or organizationally responsible for the work or job tasks being performed by an operating level. It may be an operations office, or an assistant secretary responsible for an energy technology center or a power administration.

o An Assessment

An examination and evaluation by a program Secretarial Officer of those portions of its internal ES&H program, program plan implementation, and operations retained under its control.

o The Federal Employee Occupational Safety and Health Program

That program mandated by Executive Order 12196 and implemented through 29 CFR 1960 and DOE 3790.1.

TABLE 1. IMPLEMENTATION OF DOE ORDER 5482.1A APPRAISALS AND AUDITS

Factor	Management Appraisal	Functional Appraisal	Internal Audit
Purpose	Review and evaluation of management performance	Review of ESH specialty	Evaluation of internal ESH program
Scope	All ESH disciplines and management responsibilities	Specific discipline	ESH factors under operating level direct control
Frequency	As appropriate (HQ) At least every 3 years (FO)	As appropriate for level and nature of risk	Sufficient to assure desired performance. DOE Order 5480.1A requires independent review of each facility at least annually.
Appraisers	Team of senior staff	Qualified ESH specialists	Inhouse multidisciplinary independents
Protocol	Opening and closing meetings with CEO <sup>a</sup> and senior staff	Involve CEO and staff	Advisory to designated management
Activities	Appropriate depth and continuity	Selected activities in depth	Overall operation of each facility and review of ESH functions
Emphasis	Strengths and deficiencies ES&H Program balance.	Immediate corrective action reported promptly to ESH head. Emphasis on needed corrective action from previous appraisals. ESH elements developed, documented and implemented.	Acceptable performance Review systems existence and quality for proposals, modifications, experiments, procedures, organization and staffing, safety limits, training, accidents and occurrences, facility conditions, and recordkeeping. ESH program, implementation and operations.
Reporting	Post-appraisal briefing with management on findings and clarifications Report within 45 days to appraisee CEO on findings. Respond within 30 days on intended corrective action.	Post-appraisal briefing with CEO on findings and clarifications  Report within 30 days to appraisee CEO on findings Respond within 30 days on intended corrective action.	To designated management for corrective action   Respond as required by audit system
Followup	Followup visits by mgmt rep. on corrective action, with confirmation memo of add'l action required or closeout.	Followup in writing prior to next appraisal, but ASAP for expeditious closeout.	Followup as required by audit system. Audit system defined in writing, auditable, and reviewed by mgmt. at least every 3 years for adequacy.

a. CEO - Chief Executive Officer (General Manager, President, Director, etc.).



TABLE 2. DOE ORDER 5482.1 APPRAISAL FACTORS

---

- a. Management Directives. Extent to which contract safety clauses, ES&H program plans, codes, regulations, and directives are compiled with and the degree of interest, initiative, and participation of management in their enforcement. Determination of the effectiveness of the system used to keep management informed, and the degree that management is active in the decisions and operations.
- b. Policies, Standards, Permits, and Licenses. Extent to which, and how adequately, DOE and contractor ES&H policies and standards are written, published, transmitted, kept current, and carried out. Determination of the effectiveness of local organizations in implementing Federal, State, and local requirements.
- c. Organization and Administration. Structure and effectiveness of the organization for achievement of its mission including ensuring comprehensive, continuous, preventive, and protective ES&H programs in all activities. Assignment of ES&H line and staff responsibilities to the various organizational components. Determination of the effectiveness of liaison, coordination, and communications between the various organizational components with regard to ES&H program continuity.
- d. Staffing. Adequacy in technical skill and numbers of staff assigned to carry out the ES&H program. In determining adequacy of staff, consideration should be given to:
  - (1) Acceptable norm in terms of quality and quantity of staff, consultants, per major action and per level of operation, and
  - (2) Principal changes effected or anticipated in organization programs (i.e., major new construction or transfer of programs into or out of the organization).
- e. Training. Extent and adequacy of training, promotion, and education in the areas of ES&H for both ES&H staff and operating personnel. Determination of the degree to which training records are complete and auditable.
- f. Communication. Extent to which experience and accumulated knowledge in DOE preventive techniques are disseminated. The auditability of information flow on ES&H matters up, down, and horizontally in the organization to the decision level.

TABLE 2. (Continued)

- 
- g. Documentation. Extent and adequacy of documentation covering ES&H activities, including internal instruction, procedures, management guidance and policy, appraisal and corrective action files, and all other documentation enhancing auditability of ES&H assurance.
  - h. Incident and Accident Reporting. Extent and adequacy of a system established to implement requirements. Determination of the adequacy of trend and risk analyses including followup on accidents, incidents, and occurrences.
  - i. Planning, Budgeting and Spending. Extent to which long-range planning includes ES&H goals. Determination of the adequacy of ES&H input to the budget formulation and review processes. Adequacy of expenditures of available funding provided to meet ES&H needs.
  - j. ES&H Appraisal Programs. Frequency, adequacy, and records of formal appraisals, including timely notification of finding with an effective follow-up system.
  - k. ES&H Evaluation of Current and Planned Facilities and Programs. Extent and adequacy of measures established to ensure that applicable requirements are correctly translated into specifications, drawings, procedures, and instructions. Determination of effectiveness of identification and evaluation of risks and reducing known risks to acceptably low levels.
  - l. Performance. Comparison of overall experience in ES&H areas and results of the individual programs with related general experience of similar DOE operations. Significant aspects of the ES&H program performance will be reviewed taking into consideration the management support of the program and the extent to which sound technical and professional judgment is exercised in implementing the programs.

PART I

DESCRIPTION AND USE OF APPRAISAL METHOD

## A. USE OF THIS GUIDE IN APPRAISAL

Use of the appraisal outline, analytical trees, guidelines and worksheets in this Guide can enable ES&H appraisers and internal auditors to systematically evaluate program performance with consistency and without oversights. As appraisers use the systematic methods and appraisals aids herein described, they will also be able to meet the four appraisal objectives stated in the introduction.

Further, this Guide will assist appraisers in meeting the requirements for efficient and effective appraisal by:

1. Keying on and complying with the requirements of DOE Order 5482.1A.
2. Preventing or minimizing oversights (i.e., failures to notice or consider any significant factors) in conducting the appraisal by examining specific needs within each element of the Order's "12 Factors for ES&H Appraisal" (Table 2).
3. Employing a standardized method for grading individual program elements and major program factors, and for "rolling up" those findings into an overall evaluation of the appraisee's ES&H program.

Although this Guide is keyed specifically to the DOE Order 5482.1A appraisal factors, the methods used are applicable to any appraisal order, standard or directive that appraisers may use. Additionally, an appraisal guide based upon generic evaluation factors, entitled Safety Assurance System Summary Manual for Appraisal (Reference 2) is available from SSDC.

## B. PROGRAM EVALUATION

### 1. General Considerations

The Part II analytical appraisal tools consist of evaluative checklists in analytical tree form (Section A) and outline form (Section B). Both identify the 12 major program appraisal factors from DOE Order 5482.1A, and the program elements or basic criteria that make up each major appraisal factor. Evaluation is accomplished by comparing the elements of the appraisee's program or system with the "checklisted" factors and elements or criteria, to determine actual program status in the areas being appraised.

A simple "adequate/less-than adequate" status designation (as used in MORT analysis) does not give sufficient discrimination among the program elements being appraised, so a more detailed, 5-category grading system has been devised (Table 3). Use of this grading system is not required within DOE, but it is suggested as a representative method for grading the quality of safety programs and their constituent elements.

The same evaluative procedure for grading ES&H program elements can be used whether the appraisal being performed is a management appraisal or a functional appraisal. They differ only in scope, focus and depth of evaluation. All aspects of the ES&H program are broadly considered in the management appraisal; while in a functional appraisal, emphasis is placed on in-depth evaluation of specific processes and functions within a designated ES&H discipline. Additionally, more detailed specialized appraisal checklists, in analytical tree or outline form, may be developed to supplement this Guide in specialized functional areas. A Health Physics example of such a appraisal tree is found in Reference 3.

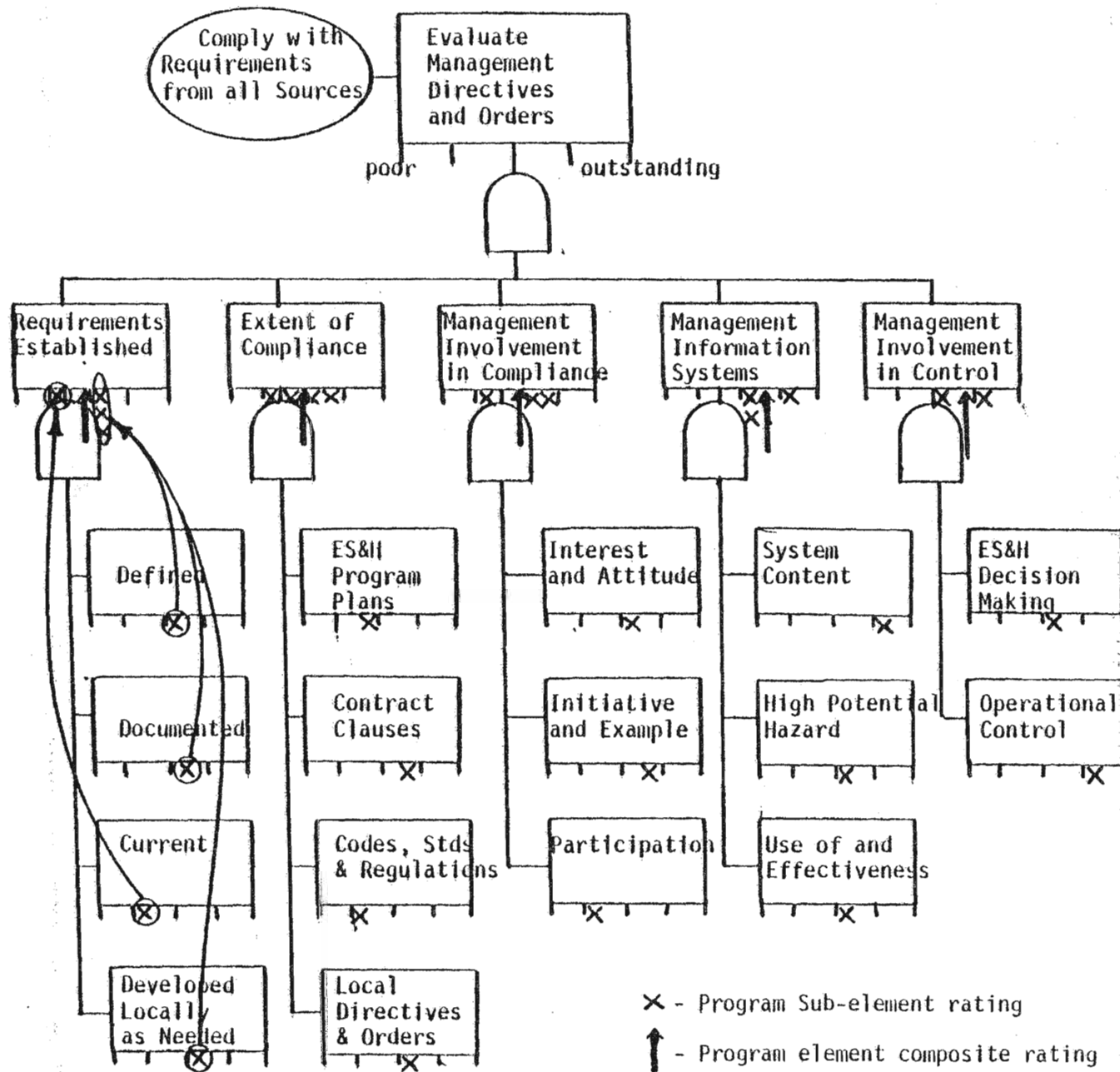
TABLE 3. GRADING SYSTEM (MORT ?)

Grade	Criteria for Judgment
"1"	Performance is <u>POOR</u> (no effort has been made in this area).
"2"	Performance is <u>SUBSTANDARD</u> (some efforts have been made in this area, however, performance is inadequate) and some immediate corrective action is required. Areas of adequate or better performance are offset significantly by poor performance in other areas.
"3"	Performance is <u>SATISFACTORY</u> (applicable elements of this program have been developed, documented and effectively implemented). Areas requiring improvement are approximately offset by better performance in other areas.
"4"	Performance is <u>GOOD</u> (more than minimal efforts have been made in this area and it has desirable qualities with only a few minor areas requiring improvement).
"5"	Performance is <u>OUTSTANDING</u> . There are no significant areas of poor performance and there are factors indicating creativity, ingenuity and initiative and/or excellent performance.

## 2. Procedure

Evaluate current ES&H program status by comparing elements of the appraiser's system with the "checklisted" DOE Order 5482.1A factors and elements in Part II of this Guide.

- a. Use the appraisal tree checklists in Section A, Part II (alone or in conjunction with the appraisal outline in Section B) to evaluate each of the 12 appraisal factors in terms of their component program elements.
- b. Rate each program element on a scale of "poor" (1) to "outstanding" (5) in accordance with Table 3 criteria. Base these ratings on evaluation of program subelements in terms of:
  - o Compliance with current criteria
  - o Development of local criteria where necessary
  - o Organizational and functional coverage in required program areas.
  - (1) Mark the rating for each program sub-element on the scale at the bottom of the appropriate box on the appraisal factor tree, as illustrated in Figure 1.
  - (2) "Roll-up" program sub-element ratings to the program element level, marking each on that scale, as in Figure 1.
  - (3) Determine the appropriate composite or consensus program element rating.





This may involve reconciling differences in rating of the program elements, which result from:

- (a) Differences of opinion among appraisal team members
- (b) Differences of opinion between appraisers and appraisees
- (c) Differences between functional discipline appraisers, i.e., industrial safety, fire protection, radiation safety, industrial hygiene, etc.
- (d) Differences in geographic and organizational units, i.e., plant-to-plant, process-to-process, "new" operations vs "old" operations, etc.

These differences are normally handled in one of two ways:

- (a) Combining individual ratings into a consensus or composite rating by using some measure of central tendency, i.e., average or median rating, or
- (b) Recognizing the unique factors involved and indicating the differences explicitly.

Generally, small differences in ratings of program effectiveness can be reconciled through averaging processes. This would include minor grading disagreements between several individuals on an appraisal team.

On the other hand, definite polarization reflecting differences in risk level from one activity to another should be dealt with individually. This would include significant differences between "old" processes and "new" ones, differences in effectiveness from one ES&H disciplinary area to another, differences in ES&H emphasis from one organization unit to another, etc.

c. Rate each major appraisal factor by:

- (1) "Rolling up" the program element ratings within each factor category to the factor level, as illustrated in Figure 2, and
- (2) Selecting an appropriate measure of central tendency to arrive at a consensus/composite factor rating, also shown in Figure 2. The considerations for reconciliation of differences previously discussed is also applicable here. Also, the matrix of Figure 3(a) may be helpful in determining and organizing "rollups" and factor ratings.

d. Finally, rate the overall ES&H program by a similar "rollup" of factor ratings and central tendency composite rating determination, using Figures 3(b) and 4 as illustrative guides.

### 3. Weighting

Present state-of-the-art does not provide adequate information or guidance on the relative significance of each of the 12 appraisal factors in preventing accidents and controlling losses. The appraiser or appraisal team, therefore, is normally confronted with a choice of two ways of dealing with appraisal factor weighting considerations:

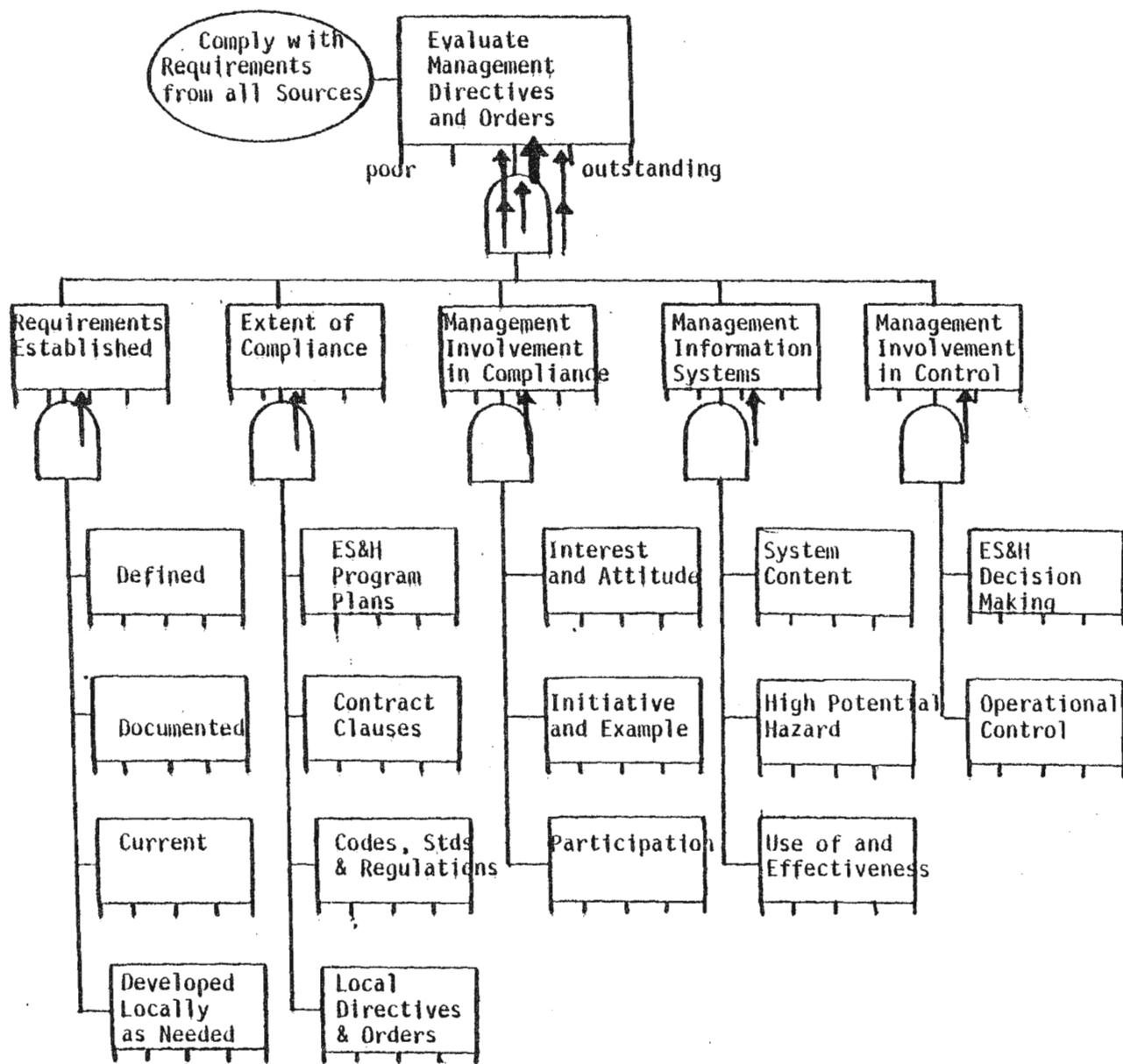
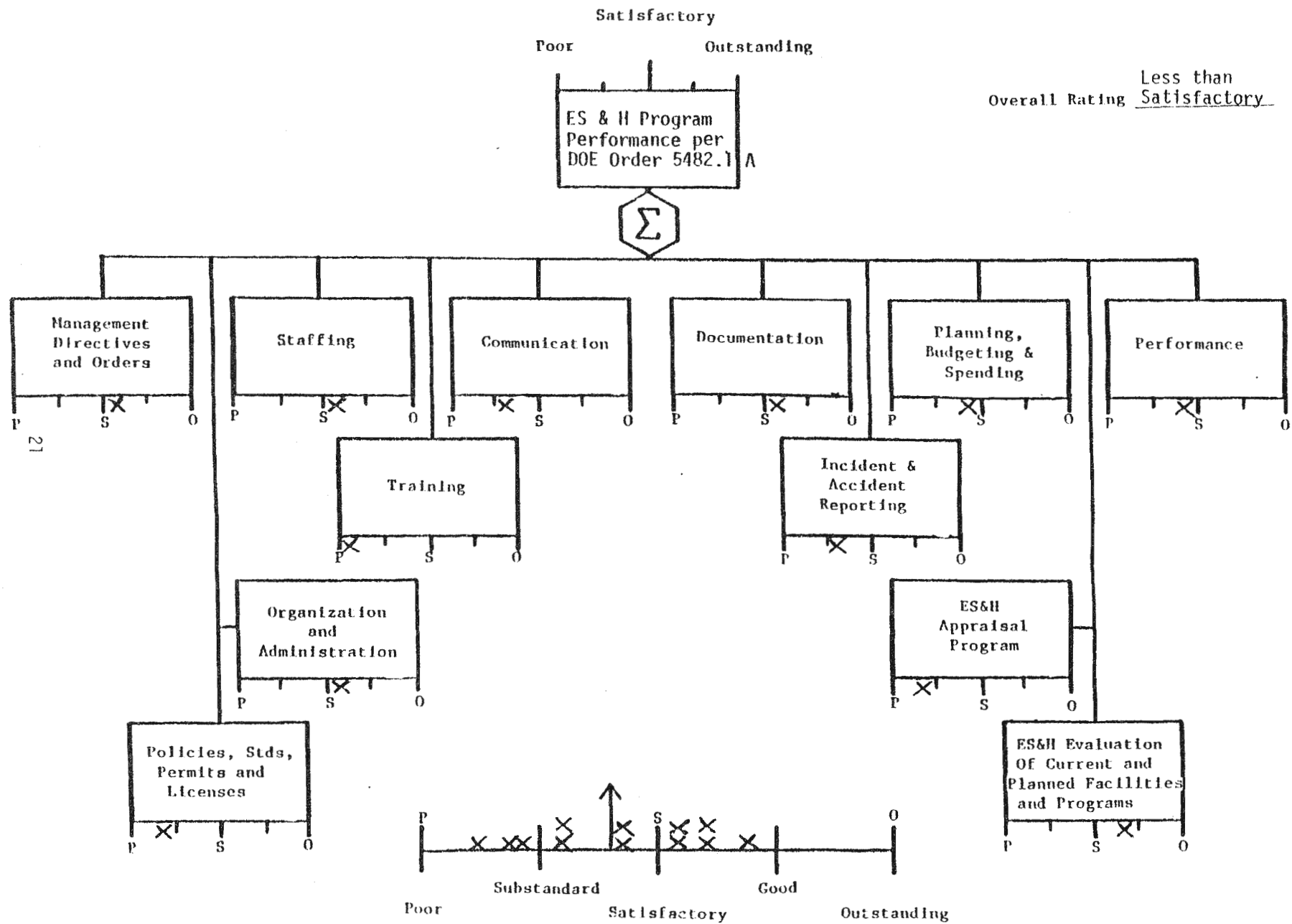


Figure 2. Appraisal Factor Rating



Figure 4. Program Performance Rating



- a. Weight all appraisal factors equally, i.e., do no weighting, or
- b. Subjectively weight, prioritize, or highlight specific appraisal factors on a case-by-case basis, as dictated by the perceived needs of the appraisee organization.

In either case, care must be taken to assure that accident provocative deficiencies at the program element/subelement levels are not lost or diluted as ratings are "rolled up" to provide factor and program ratings. In particular, all "poor" and "substandard" items should be dealt with on an individual basis, regardless of the total program rating.

#### C. USE OF APPENDED INFORMATION

Appendix A, "Guideline to Good Practices" presents considerations, techniques and advice on conducting ES&H field appraisals.

Additional guidance and specific training concerning steps of the total appraisal process (i.e., selection, notification, agenda preparation, inbriefing, fact finding, analysis of facts, findings, outbriefing, report preparation, appraisal protocol, corrective action commitment, follow-up, etc.) are provided at five-day DOE Appraisal Workshops.

Appendix B, "Appraisal Report Format", is a copy of the format required for the reporting of functional appraisals performed by DOE Headquarters ES&H personnel. Use of this format for appraising at the Field Office level is not mandatory, however its use is encouraged to promote uniformity in DOE appraisal reports.

Appendix C, "ES&H Appraisal Summary Questionnaire", is Appendix II of Reference 5. Its use is required by DOE-HQ ES&H appraisers performing

functional appraisals. It is included in this Appraisal Guide to illustrate the type of generic questions that should be considered when conducting specific discipline functional appraisals.

Appendix D, "Safety Appraisal Worksheets", illustrates the use of a structured method for extending the generic questions and criteria provided by the analytical tree and outline of Part II and the Summary Questionnaire of Appendix C to include questions and criteria appropriate to specific appraisal "lines of inquiry".

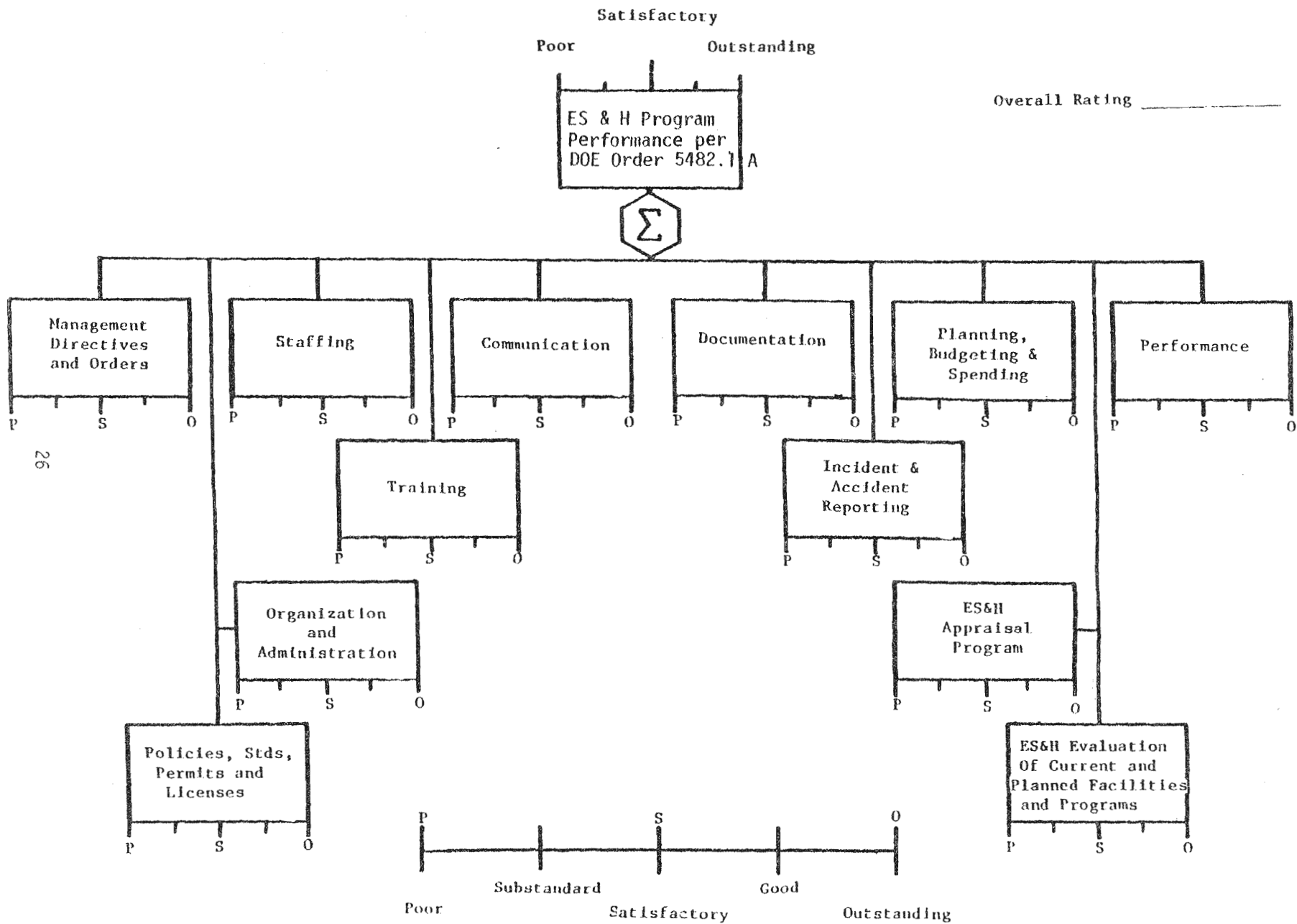
PART II

ANALYTICAL TOOLS FOR APPRAISAL



#### A. APPRAISAL ANALYTICAL TREES

ES&H Program Performance per DOE Order 5482.1A



Comply with  
Requirements  
from all Sources

Evaluate  
Management  
Directives  
and Orders

poor

outstanding

Requirements  
Established

Extent of  
Compliance

Management  
Involvement  
in Compliance

Management  
Information  
Systems

Management  
Involvement  
in Control

Defined

Documented

Current

Developed  
Locally  
as Needed

ES&H  
Program  
Plans

Contract  
Clauses

Codes, Stds  
& Regulations

Local  
Directives  
& Orders

Interest  
and Attitude

Initiative  
and Example

Participation

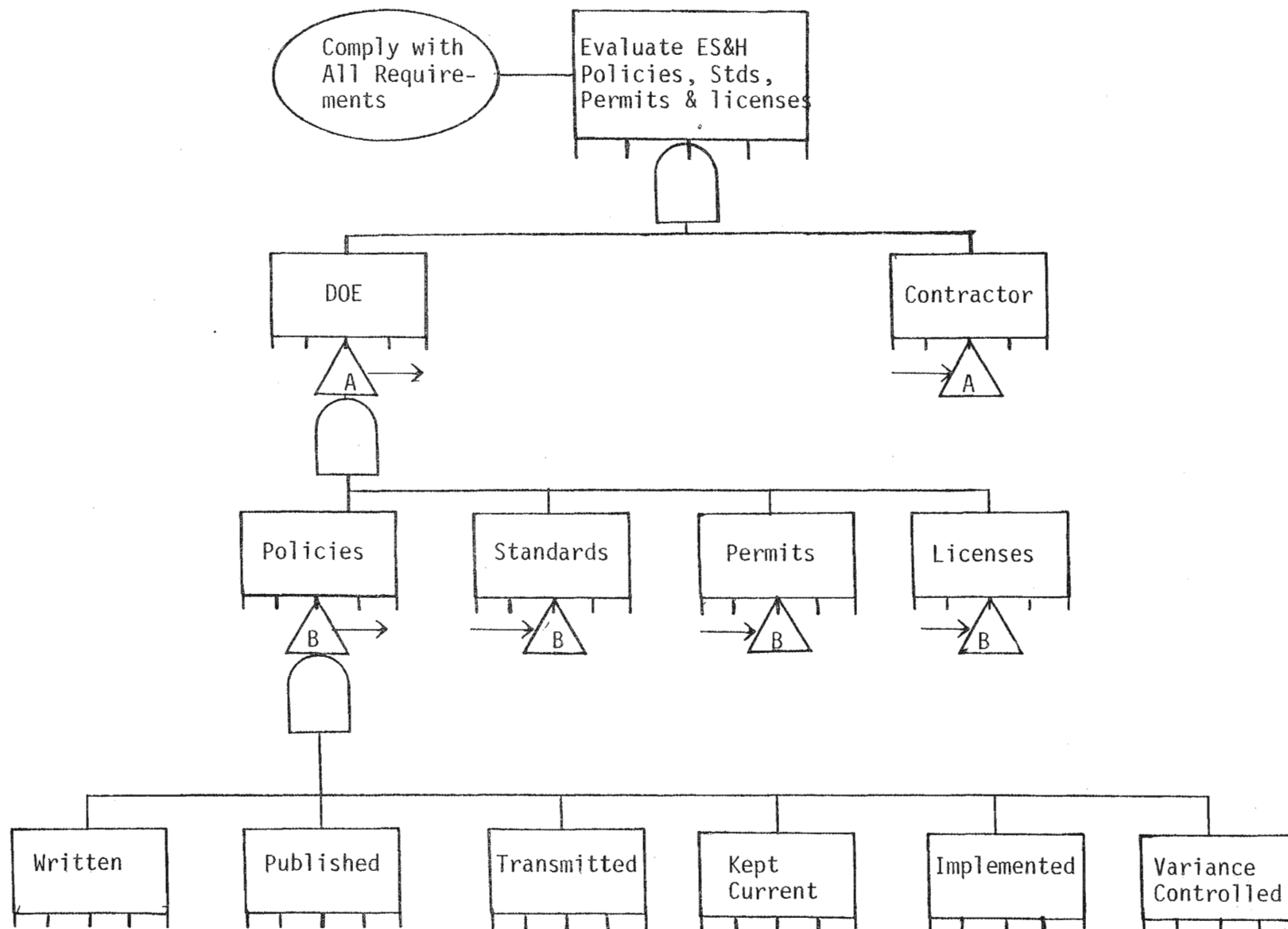
System  
Content

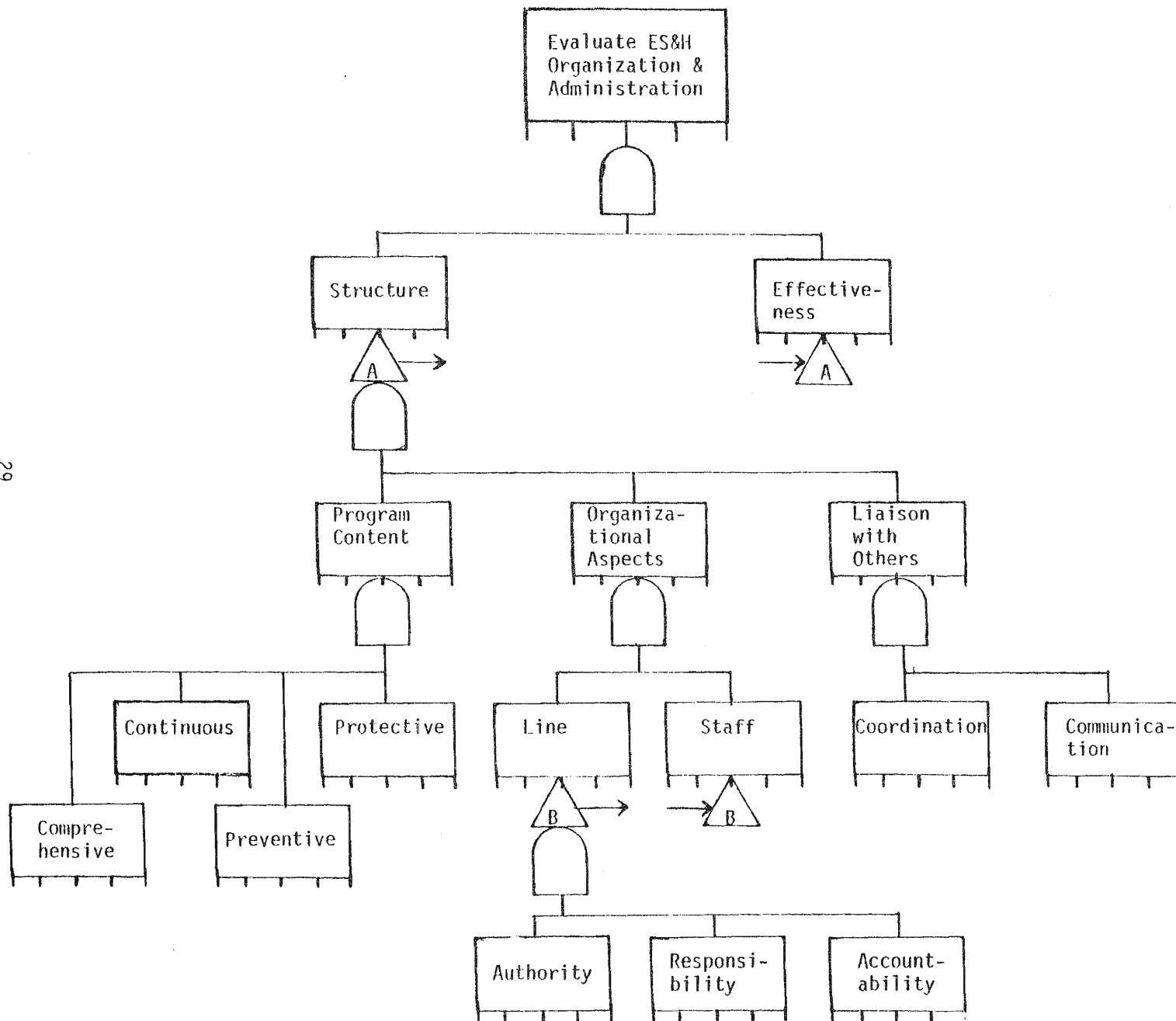
High Potential  
Hazard

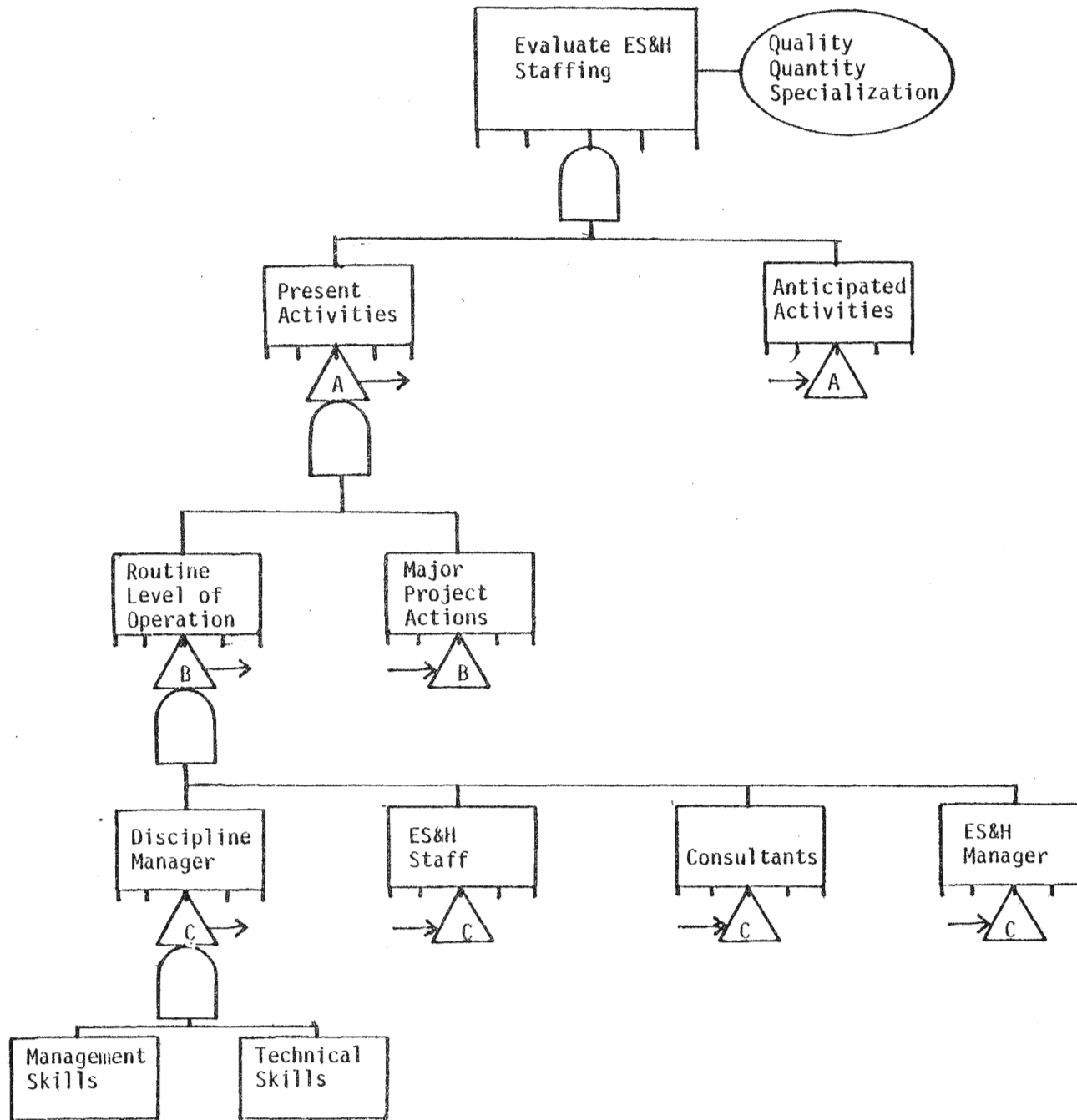
Use of and  
Effectiveness

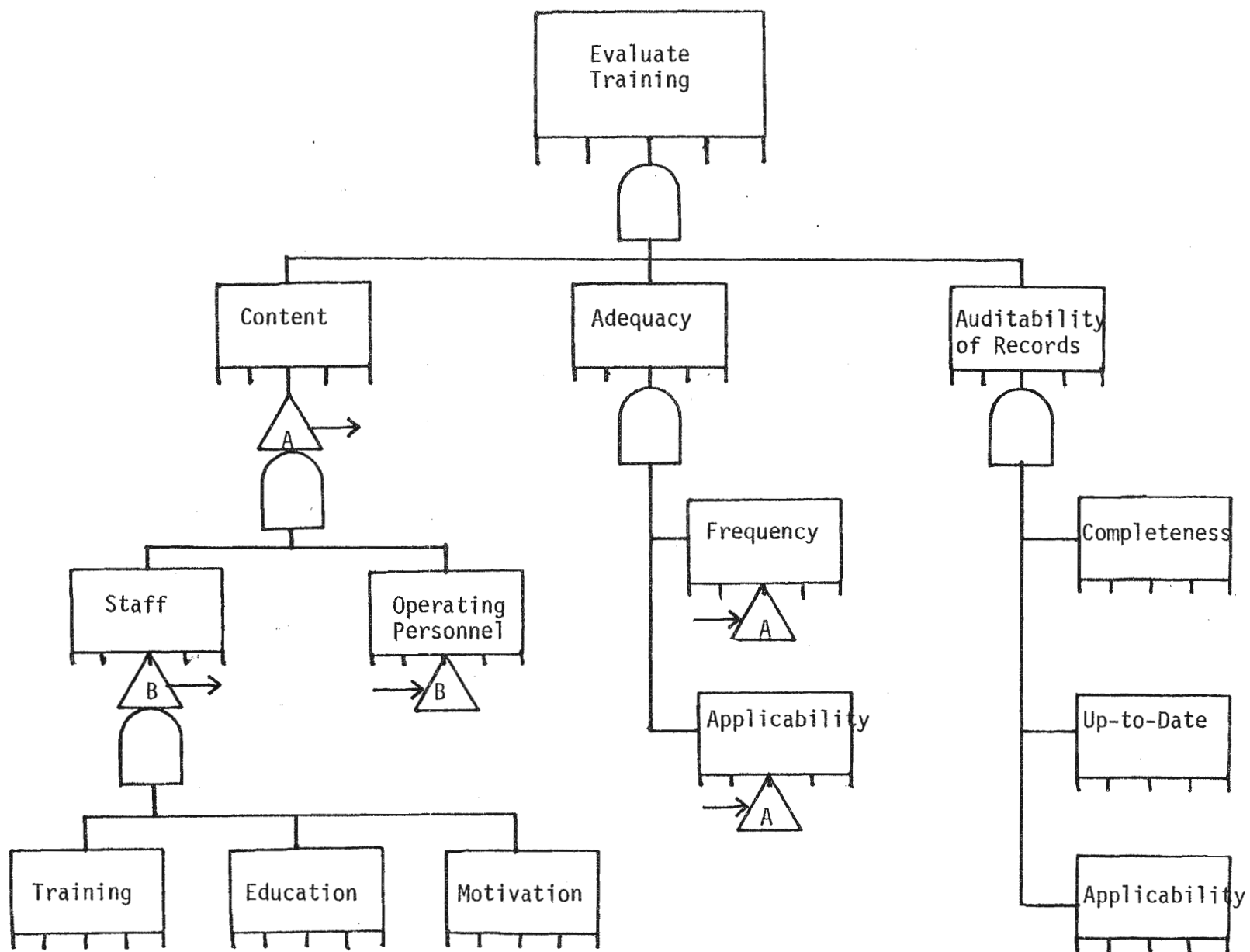
ES&H  
Decision  
Making

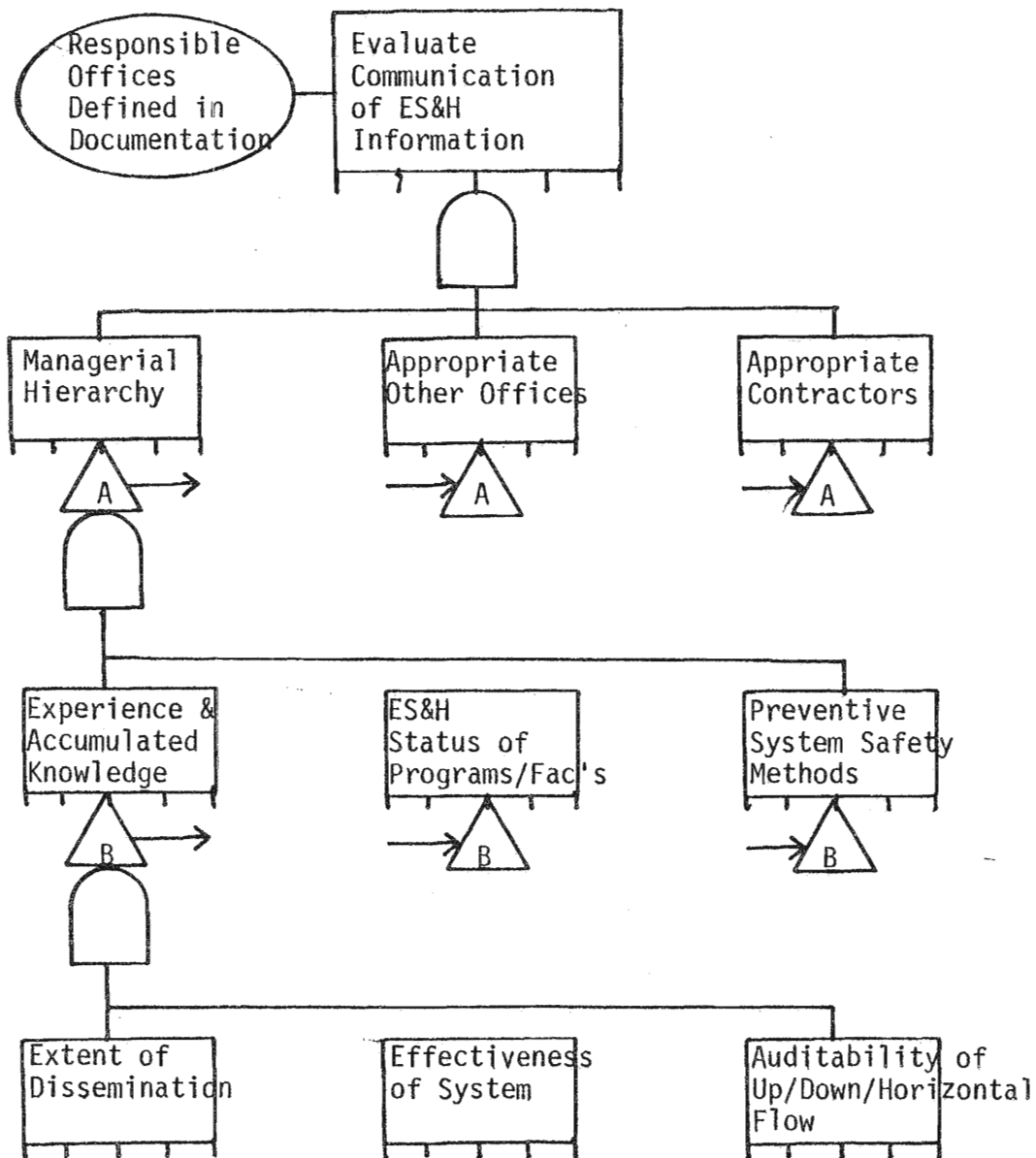
Operational  
Control



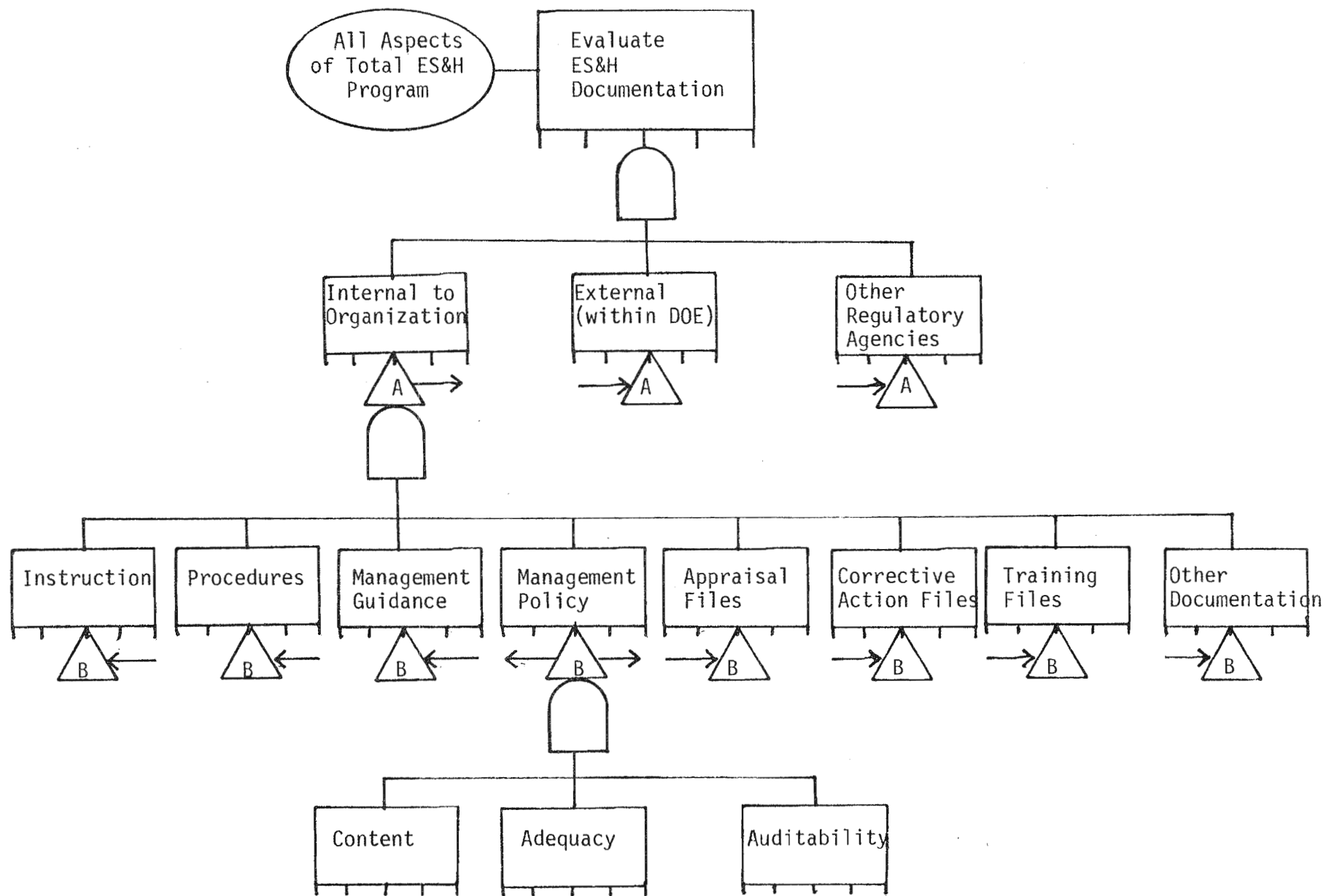


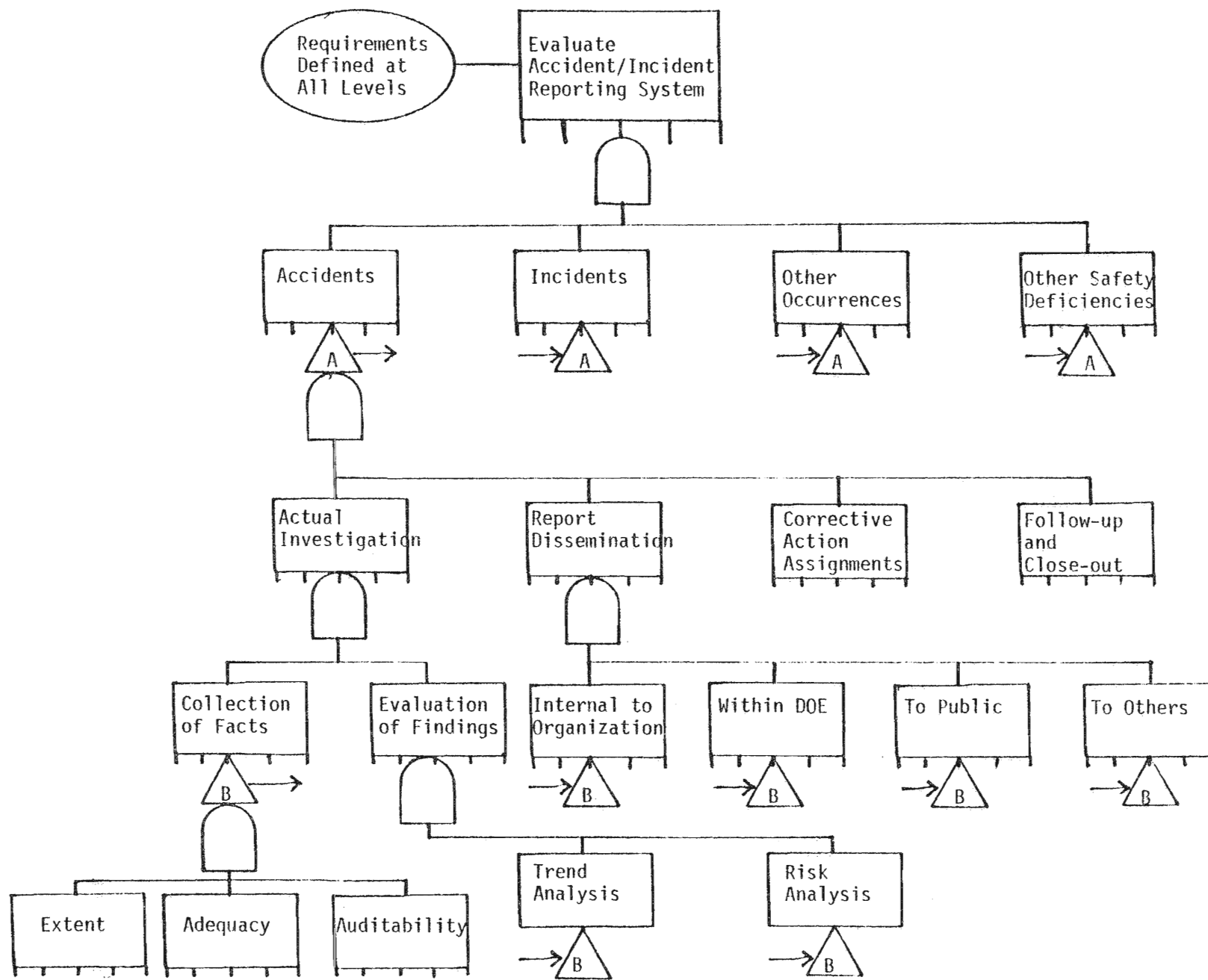


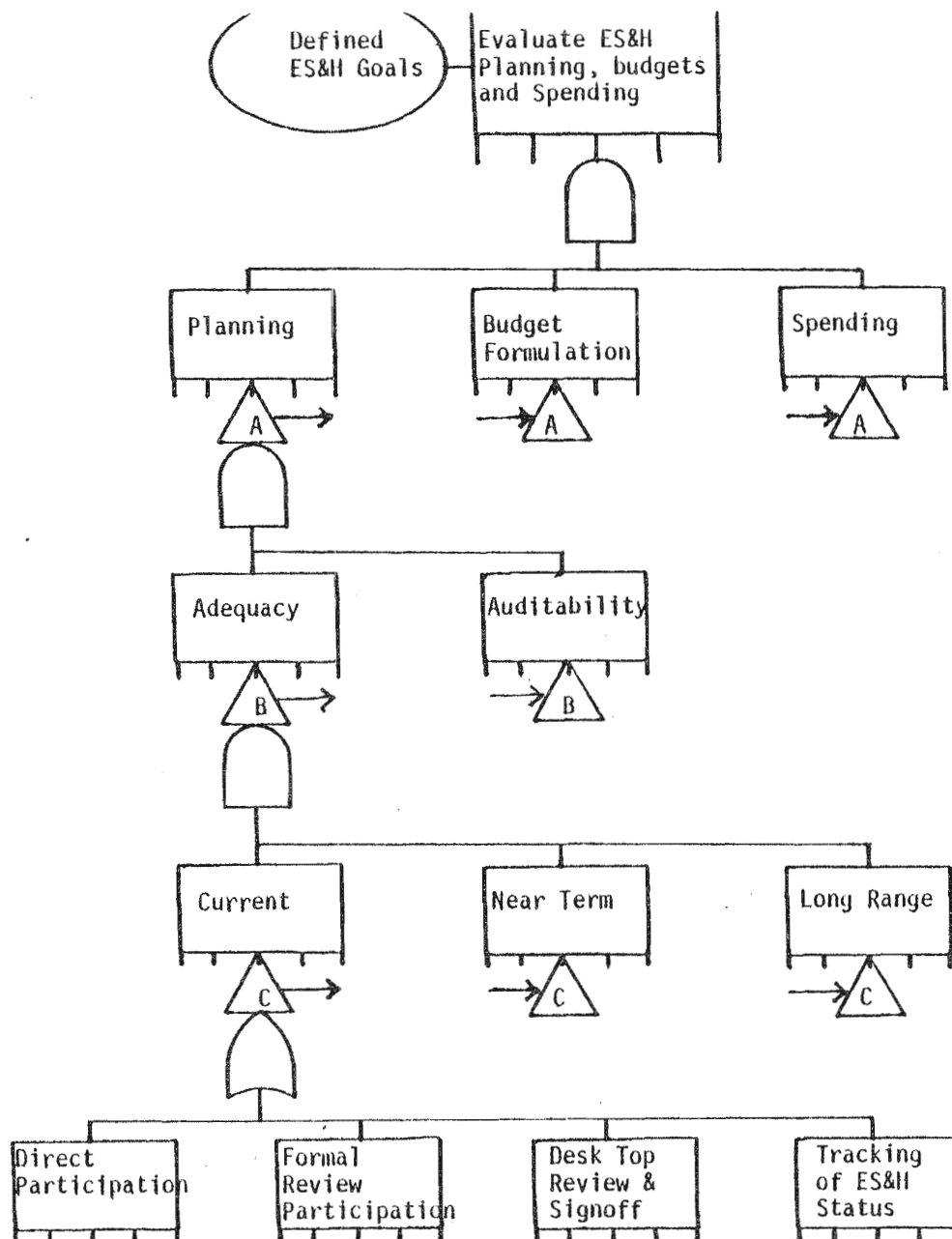


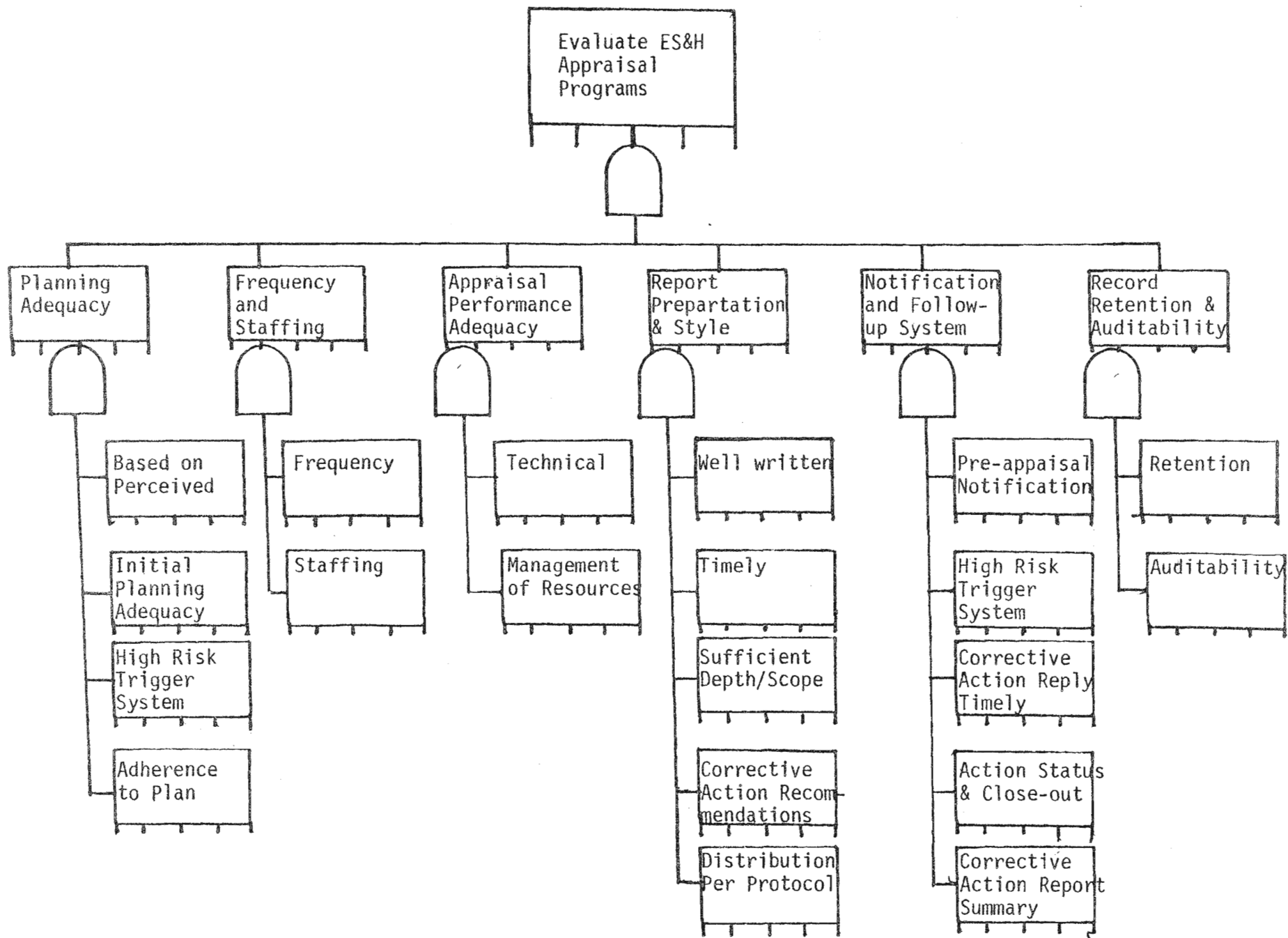


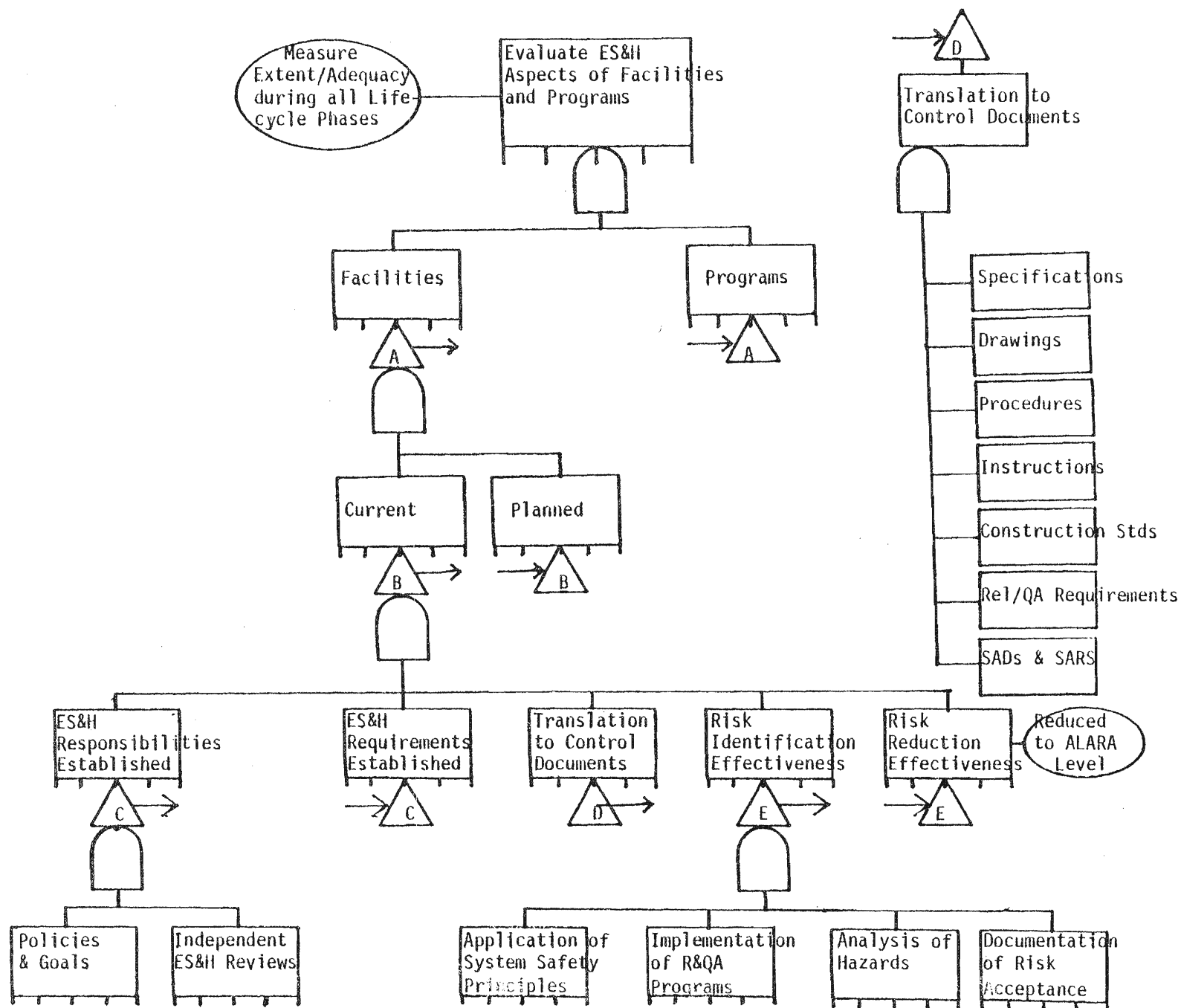


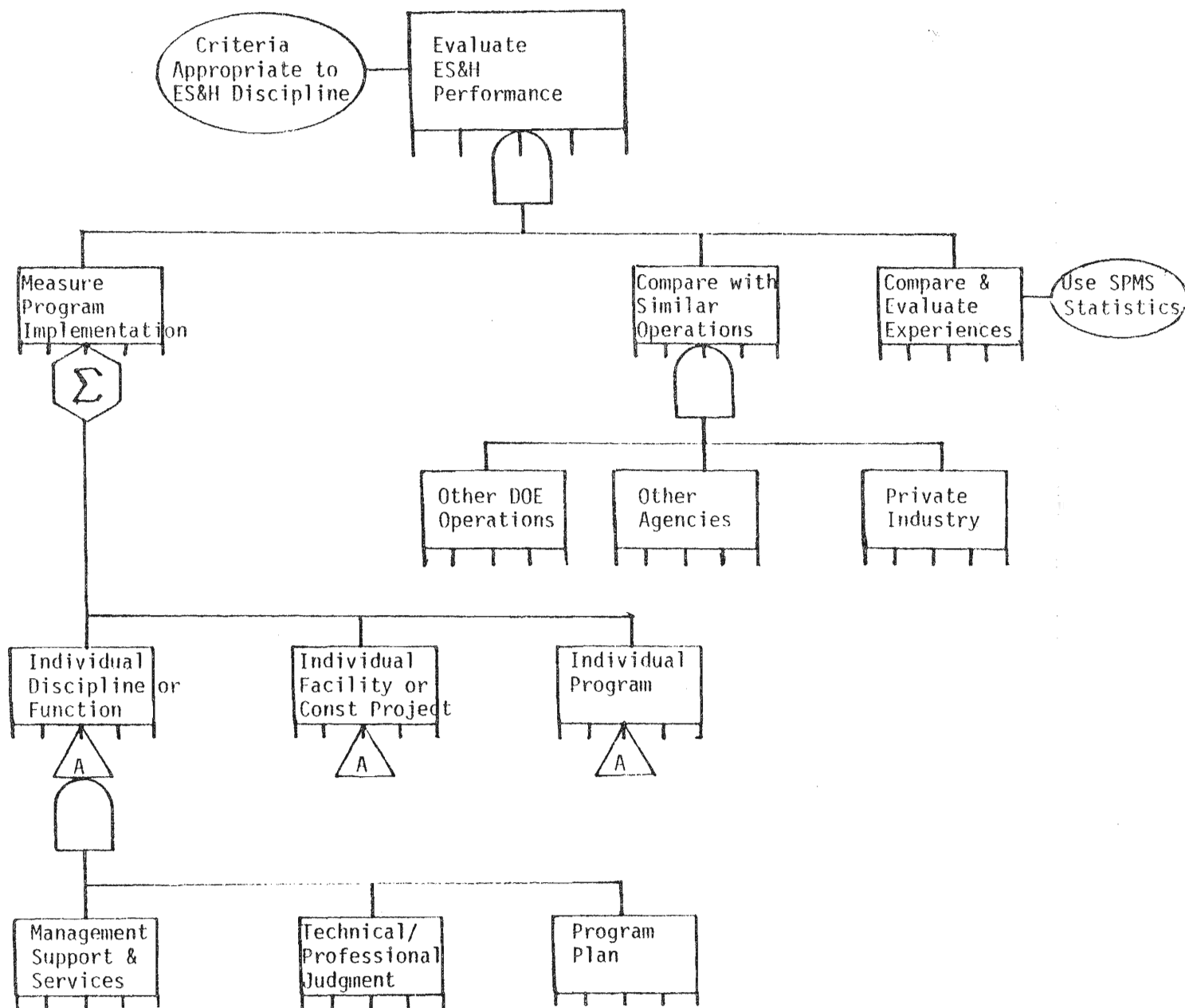












B. APPRAISAL OUTLINE

ES&H Program Performance per DOE Order 5482.1A

B. ANALYTICAL OUTLINE FOR USE WITH DOE 5482.1

1.0 Management Directives and Orders

1.1 Requirements Established

- 1.1.1 Defined
- 1.1.2 Documented
- 1.1.3 Current
- 1.1.4 Developed Locally Where Needed

1.2 Extent of Compliance

- 1.2.1 ES&H Program Plans
- 1.2.2 Contract Clauses
- 1.2.3 Codes and Regulations
- 1.2.4 Local Directives & Orders

1.3 Management Involvement in Compliance

- 1.3.1 Interest and Attitude
- 1.3.2 Initiative and Example
- 1.3.3 Participation

1.4 Management Information System

- 1.4.1 System Content
- 1.4.2 High Potential Hazard Response
- 1.4.3 Use and Effectiveness

1.5 Management Involvement in Decision Making and Operational Control

- 1.5.1 ES&H Decision Making
- 1.5.2 ES&H Operational Control

2.0 Policies, Standards, Permits and Licenses

2.1 DOE

2.1.1 Policies

- o Written
- o Published
- o Transmitted
- o Kept Current
- o Carried Out (Implemented)
- o Control of Variance



- 2.1.2 Standard
  - (Repeat items listed under 2.1.1)
- 2.1.3 Permits
  - (Repeat items under 2.1.1)
- 2.1.4 Licenses
  - (Repeat items under 2.1.1)
- 2.2 Contractor
  - (Repeat items listed under 2.1)
- 3.0 Organization and Administration
  - 3.1 Structure
    - 3.1.1 ES&H Program Content
      - o Comprehensive
      - o Continuous
      - o Preventive
      - o Protective
    - 3.1.2 Organizational Aspects
      - 3.1.2.1 Line
        - o Authority
        - o Responsibility
        - o Accountability
      - 3.1.2.2 Staff
        - (Repeat items under 3.1.2.1)
    - 3.1.3 Conduct of Liaison With Others
      - 3.1.3.1 Coordination
      - 3.1.3.2 Communication
  - 3.2 Effectiveness
    - (Repeat items under 3.1)
- 4.0 Staffing
  - 4.1 Present Activities
    - 4.1.1 Routine Level of Operations
      - o Discipline Manager
      - o Staff
      - o Consultants
      - o ES&H Manager

- 4.1.2 Major Project Actions
  - o Discipline Manager
  - o Staff
  - o Consultants
  - o ES&H Manager
- 4.2 Anticipated Activities  
(Repeat items under 4.1)
- 5.0 Training
  - 5.1 Content
    - 5.1.1 Staff
      - o Training
      - o Education
      - o Motivation
    - 5.1.2 Operating Personnel
      - o Training
      - o Education
      - o Motivation
  - 5.2 Adequacy
    - 5.2.1 Frequency
    - 5.2.2 Applicability
  - 5.3 Auditability of Records
    - 5.3.1 Completeness
    - 5.3.2 Currency
    - 5.3.3 Applicability
- 6.0 Communication
  - 6.1 Managerial Hierarchy
    - 6.1.1 Experience and Accumulated Knowledge
      - 6.1.1.1 Extent of Dissemination
      - 6.1.1.2 Effectiveness of System Employed
      - 6.1.1.3 Auditability of Up/Down/Horizontal
    - 6.1.2 ES&H Status of Program/Facilities  
(Repeat items under 6.1.1)
    - 6.1.3 Preventive System Safety Methods  
(Repeat items under 6.1.1)

- 6.2 Appropriate Other Offices
  - (Repeat items listed under 6.1)
- 6.3 (Repeat items listed under 6.1)
- 7.0 Documentation
  - 7.1 Internal to Organization
    - 7.1.1 Instruction
      - 7.1.1.1 Content
      - 7.1.1.2 Adequacy
      - 7.1.1.2 Auditability
    - 7.1.2 Procedures
      - (Repeat items under 7.1.1)
    - 7.1.3 Management Guidance
      - (Repeat items under 7.1.1)
    - 7.1.4 Management Policy
      - (Repeat items under 7.1.1)
    - 7.1.5 Appraisal Files
      - (Repeat items under 7.1.1)
    - 7.1.6 Corrective Action Files
      - (Repeat items under 7.1.1)
    - 7.1.7 Training Files
      - (Repeat items under 7.1.1)
    - 7.1.8 Other Documentation
      - (Repeat items under 7.1.1)
  - 7.2 External (Within DOE)
    - (Repeat items under 7.1)
  - 7.3 Other Regulatory Agencies
    - (Repeat items under 7.1)
- 8.0 Incident & Accident Reporting
  - 8.1 Accidents
    - 8.1.1 Actual Investigation
      - 8.1.1.1 Collection of Facts
        - o Extent
        - o Adequacy
        - o Auditability

- 8.1.1.2 Evaluation of Findings
    - o Trend Analysis
    - o Risk Analysis
  - 8.1.2 Distribution of Report
    - 8.1.2.1 Internal to Organization
    - 8.1.2.2 Within DOE
    - 8.1.2.3 To Public
    - 8.1.2.4 To Others
  - 8.1.3 Corrective Action Assignments
  - 8.1.4 Follow-up System
- 8.2 Incidents
  - (Repeat items listed under 8.1)
- 8.3 Other Occurrences
  - (Repeat items listed under 8.1)
- 8.4 Other Safety Deficiencies
  - (Repeat items listed under 8.1)
- 9.0 Planning, Budgeting and Spending
  - 9.1 Planning
    - 9.1.1 Adequacy
      - 9.1.1.1 Current
        - o Direct Participation
        - o Formal Review Participation
        - o Desk Review and Sign Off
        - o Tracking of ES&H Status
      - 9.1.1.2 Near Term
        - (Repeat items under 9.1.1.1)
      - 9.1.1.2 Long Range
        - (Repeat Items under 9.1.1.1)
    - 9.1.2 Auditability
      - (Repeat items under 9.1.1)
  - 9.2 Budget Formulation
    - (Repeat items under 9.1)
  - 9.3 Spending
    - (Repeat items under 9.1)

- 10.0 ES&H Appraisal Program
  - 10.1 Adequacy of Planning
    - 10.1.1 Based on Perceived Risks
    - 10.1.2 Initial Planning Adequacy
    - 10.1.3 High Potential and Risk Trigger System
    - 10.1.4 Adherence to Plan
  - 10.2 Frequency and Staffing
  - 10.3 Adequacy of Appraisal Performance
    - o Technical
    - o Management of Resources
  - 10.4 Report Preparation and Style
    - o Well Written
    - o Timely
    - o Sufficient in Depth/Scope
    - o Corrective Action
    - o Distribution in Accordance with Protocol
  - 10.5 Notification and Follow-up System
    - 10.5.1 Pre-Appraisal Notification Given
    - 10.5.2 High Potential Risk Trigger System Functional
    - 10.5.3 Corrective Action Reply is Timely
    - 10.5.4 Action status and closeout
    - 10.5.5 Corrective Action Report Summary Prepared
  - 10.6 Record Retention and Auditability
- 11.0 ES&H Evaluation of Current and Planned Facilities and Programs
  - 11.1 Facilities
    - 11.1.1 Current
      - 11.1.1.1 ES&H Responsibilities Established
        - o Policies and Goals
        - o Independent ES&H Reviews
      - 11.1.1.2 ES&H Requirements Established  
(Repeat items under 11.1.1.1)
      - 11.1.1.3 Translation to Control Documents
        - o Specifications
        - o Drawings
        - o Procedures

- o Instructions
  - o Construction Standards
  - o Reliability/QA Requirements
  - o SAD's and SAR's
- 11.1.1.4 Risk Identification Effectiveness
  - o Application of System Safety Principles
  - o Implementation or Reliability and Quality Assurance Programs
  - o Analysis of Hazards
  - o Documentation of Risk Acceptance
- 11.1.1.5 Risk Reduction Effectiveness  
(Repeat item under 11.1.1.4)
- 11.1.2 Planned  
(Repeat item under 11.1.1)
- 11.2 Programs  
(Repeat item under 11.1)
- 12.0 Performance
  - 12.1 ES&H Program Implementation
    - 12.1.1 Evaluate Individual Discipline or Function
      - 12.1.1.1 Management Support and Services
      - 12.1.1.2 Technical and Professional Judgment
      - 12.1.1.3 Program Plan
    - 12.1.2 Evaluate Individual Facility or Construction Project  
(Repeat items under 12.1.1)
    - 12.1.3 Evaluate Individual Programs  
(Repeat items under 12.1.1)
  - 12.2 Compare With Similar Operations
    - 12.2.1 DOE
    - 12.2.2 Other Agencies
    - 12.2.3 Private Industry
  - 12.3 Compare and Evaluate Experiences

## REFERENCES

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4. U.S. Nuclear Regulatory Commission Office of Inspection and Enforcement, Inspection and Enforcement Manual, Temporary Instruction 2500/4, Health Physics Appraisal Program, Nuclear Regulatory Commission, Washington, D.C., 1980.
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## APPENDICES



APPENDIX A

GUIDELINE TO GOOD PRACTICES



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## APPENDIX A

### GUIDELINE TO GOOD PRACTICES

#### I. INTRODUCTION

The following pages present suggested techniques and advice on conducting field appraisals. These suggestions come from discussions with experienced safety appraisal personnel, from the listed references, and from methods and techniques used in DOE Accident Investigation. Adopt those suggestions you feel will assist you as you conduct appraisals, follow proper document flow, schedule interviews, and validate report findings. Wherever the terms "manager" or "management" is used, it refers to the manager or the management of the appraisee organization.

#### II. COMMUNICATION

First impressions are important. A special effort should be made to establish a good working rapport at the first meeting with management.

##### A. Questioning<sup>1</sup>

1. Avoid an air of dogmatism for it tends to elicit a defensive response from the appraisee. When the appraiser is telling, not asking, he is perceived as an outsider subverting management's control. Be open-minded and willing to hear out the appraisee's views. The purpose of questioning is to learn, not to air preconceived opinions.
2. The discussion should be viewed as a partnership between equals. Any expression of superiority by the appraiser can result in resentment and competition rather than communication.

3. The question "Why did you do that?" projects the impression that the appraiser is sitting in judgment. A better approach that shows the appraiser is genuinely requesting information is to ask "How is this done?", "How does it help you to do it this way?", or "What would happen if it were done another way?"
4. Instead of hammering away with the same question until you are satisfied with the response, be willing to rephrase and clarify what you are seeking.
5. Communication is more than words. A cold, detached tone of voice evokes a similar response. An attitude of empathy will also be reflected in the tone of voice.

B. Listening - "Most people speak at a rate of about 125 words a minute - but our minds work at a far greater rate. As a result, unless we discipline ourselves, our minds will wander. To counteract this tendency, the listener should try these techniques":<sup>1</sup>

1. "The listener should not only hear the spoken words but also think ahead of the speaker, trying to anticipate what he's leading to and what will be the conclusion that can be drawn. This keeps the listener's mind on track and makes the listening more interesting."
2. "The listener should seek the evidence the speaker has or has not adduced to support his comments or buttress the points he is trying to make. This will form the basis for intelligent and relevant questions which will expand on the speaker's thoughts and make them easier to recall."

3. "The listener should mentally summarize what has gone before. If there appears to be any gaps in his recollection of what has been said, he may ask for a reprise which will aid in the absorption of the information."
4. "The listener should look directly at the speaker, observe his facial expressions, gestures, tone, and posture so as to focus on the nonverbal communications, which are sometimes more important than the verbal ones. This also tends to keep the mind tethered to the subject and to improve recall."
5. Don't meet hostility with more hostility; you are rendering a service, not being a disciplinarian.

### III. PREPARATION

- A. Prepare an appraisal plan to fix in your mind how you are going to proceed. Your plan may be requested as input to files for the benefit of future appraisers who evaluate similar organizations.
- B. Lay the groundwork for the appraisal personally - a preliminary meeting with line management. Make face-to-face contact and establish who will be management's primary liaison for the appraisal.
- C. Try to accommodate management with respect to the details of scheduling in order to minimize disruption of operations.
- D. Ask management what are the perceived priority and problem areas not noted in the appraisal scope that you should evaluate.
- E. Assure management that they will be able to discuss the appraisal findings and comment informally prior to their publication.

- F. Establish what working facilities (i.e, desk, phone, etc.) are available for your use during the appraisal.
- G. Learn the job of the appraised organization:
  - 1. Objectives and goals
  - 2. Where it fits in the organizational structure
  - 3. Present and near future projects.
- H. Learn the climate at the appraised organizations.
  - 1. Schedule, funding and staffing pressures
  - 2. Security pressures
  - 3. Attitudes toward company safety policy, rules and procedures.
- I. Review applicable control documents which provide performance standards.
- J. Locate sources for logs, training records, etc.
- K. Be sure you understand what are the objectives of the system that you will be evaluating.
- L. Read previous appraisal reports and learn the general background, findings and actions taken on previous appraisals.
- M. Identify the changes that have occurred since the last appraisal.
- N. Contact the field safety branch to ask for pertinent background material.



#### IV. INVESTIGATIONS: Field Work and Analysis

- A. Appraisals are not limited to finding wrongs and inadequacies; they are a determination of the status - good or bad - of the system.
- B. "The objective is not to parade errors, but to identify matters which prevent the orderly functioning of the activity and create barriers to effective accomplishment of established goals."<sup>1</sup>
- C. In organizaing your efforts consider investigating an organizational/administrative grouping or following the flow of a work process.
- D. Some general guidelines to breakdown broad safety topics are given in SSDC-1, "Occupancy-use Readiness Manual - Safety Considerations."
- E. Evidence<sup>1</sup>
  - 1. "Primary evidence affords the greatest certainty of the fact. An original signed contract, for example, is the best evidence of its existance and its content."
  - 2. "Secondary evidence is inferior to primary evidence and cannot be given the same reliance. Secondary evidence may include a copy of a contract or oral evidence of its contents. Secondary evidence may be considered acceptable if the primary evidence is destroyed or lost and if it can be shown that secondary evidence is a proper representation of the primary evidence."
  - 3. "Direct evidence proves a fact without inference or presumption. It tends to show a fact or matter at issue

without the intervention of proof of any other fact. Evidence is direct when the facts at issue are asserted by those who have actual knowledge of them by having personally witnessed them."

4. "Circumstantial evidence tends to establish one fact by proving another collateral fact. Even though true, circumstantial evidence does not conclusively establish the fact. It is founded on experience and observed facts and coincidences, establishing a connection between the known and proven facts and the facts sought to be proved."
5. "Corroborative evidence is additional evidence of a different character, to the same point. An oral statement, for example, may corroborate that a purported copy of a document is a true copy."

- F. In striving for the facts be wary of unverified statements of opinion and hearsay. Evaluate the source.
- G. The proper attitude is that appraisals are a joint effort of the appraiser and line management.
- H. Recognize that the operational management does know more about how things are actually done in the particular organizations; ask questions.
- I. You may be a stranger to some of the operating personnel. Don't hesitate to identify yourself.
- J. A useful conceptual model for identification of hazards is that of unwanted energy flow, specifically the channels for, the barriers to and the potential recipients of this flow.

- K. Keep your notes and other working papers in order and so written that another individual can take over for you should you be called away from the appraisal.
- L. One method of taking notes is to photocopy a control document and make notes in the margin. If more space is needed than is available in the margin you can (a) code documents and notations for cross-reference or (b) cut and paste a section of the document section at the top of a blank sheet and write below it.
- M. Take notes on the spot. The disadvantages of loss of eye contact and interruption of communication are compensated by increased retention of information.
- N. Keep working papers a uniform size; small scraps get lost. A smaller paragraph or photo can be pasted on a standard size sheet of paper.
- O. Your working papers represent many long hours and are potentially very sensitive; especially if taken out of context. This information is privileged; keep it secure.
- P. Summarize often - either mentally or on paper - in order to:
  - 1. Get an overview
  - 2. Insure you are keeping within the appraisal scope and satisfying the appraisal purpose
  - 3. Keep findings in perspective and focus on the facts.
- Q. Retention of these working papers will be determined on a case by case basis. Perhaps they would be valuable to future appraisers and should be retained in files.

- R. A model for analysis of field work findings is the comparison of the present situation with what is desired.
  - S. Controls naturally become more formal and more restrictive where hazard potential and loss/injury potential are higher. Some guidelines to assess procedural requirements and risk acceptance by line management are given in SSDC-11, "Risk Management Guide."<sup>3</sup>
  - T. Aids to retrieving information such as reference standards, case histories, etc. are explained in SSDC-9, "Safety Information System Guide."<sup>4</sup>
  - U. For areas where no formal standard exists you will need to evaluate the situation in light of your professional experience and interpretation of concepts such as "good engineering practice" and "reasonable risk."
  - V. When analyzing, keep the organization's objectives and goals in mind. Are they reflected in the status of the control systems as you found them?
  - W. Take the vantage point of management. Would the depth of your evaluation satisfy you of the status of the control systems if you were responsible for direct management of the organization?
1. Some questions to consider when a deficiency is found are:<sup>1</sup>
- a. "Is the deficiency important? What effect does it have on the functioning of the operation...?"
  - b. "What is responsible for the deficiency?"
  - c. "Would the matter have come to light in the normal functioning of the control system and in the absence of the appraisal."

- d. "Was the deficiency an isolated error or an indication of control weakness?"
  - e. "Could the deficiency occur again?"
  - f. "Was the deficiency a violation of established procedures?"
  - g. "Did the deficiency indicate the need to clarify or amplify existing instructions?"
  - h. "How can the deficiency be corrected?"
2. Some questions to consider when looking for the causes of a deficiency are:<sup>1</sup>
- a. "Was the management aware of the problem?"
  - b. "Was the problem traceable to inadequate instruction or insufficient training of personnel?"
  - c. "Did the condition occur because supervisors were not adequately monitoring the on-going process?"
  - d. "Were improper priorities assigned?"
  - e. "Did the need for controls go unrecognized?"
  - f. "Was there a lack of coordination with interfacing organizations?"
  - g. "Were conditions caused by human error?"
  - h. "Were the defects attributable to the attitude of the employees? of the supervisors? of the managers?"

3. In preparation for writing the report a standard organization of your information is suggested:
  - a. "A capsule comment of the finding"
  - b. "An identifying number for the particular finding and a reference to the supporting working papers"
  - c. "An indication of whether the finding was a repetition of something found in prior appraisals"
  - d. "A citation to the directives, procedures, or job instructions involved in the finding"
  - e. "A summary of the extent of the tests and the incidence of the discrepancy"
  - f. "The reason the discrepancy occurred"
  - g. "A statement of the corrective action - proposed or taken"
- X. A very informal post appraisal meeting to discuss preliminary findings should be scheduled with the line manager.

## V. REPORT

- A. The report is an opportunity to bring to light basic control deficiencies and root problems and get them corrected.
- B. As a minimum, address each item in the purpose and scope sections. Again, the report is not limited to negative findings.
- C. Each safety deficiency noted on an appraisal report should reference a standard or control document, or otherwise identify the basis of judgment.

- D. Statements of fact must carry the assurance of personal observation or validation by the appraiser (see "evidence" definitions under Section IV). Otherwise you should mention your sources of information.
- E. The accuracy of your findings and evaluations will also be judged by the line manager using the criteria of relevance and perspective. A professional analysis, not a "laundry list", is the expected product.
- F. At times it is easier to use a sketch, photograph, or flow chart than a lengthy explanation.
- G. Some factors to consider in making recommendations for corrective action are:<sup>1</sup>
  - 1. "What course of action will most practically and economically cure the defect?"
  - 2. "What objectives should (be kept)...in mind in recommending corrective action? What should management be trying to achieve in setting forth an improved course of action?"
  - 3. "What choices are open? How do they measure up when compared with the objectives?"
  - 4. "What tentative alternate has been selected and what injurious side effects might be expected?"
  - 5. "Which is the best choice with the least unsatisfactory side effects?"
  - 6. "What mechanism should be suggested to control the corrective action after it is taken? How can one make sure that the corrective action is taken...that it will be carried to

conclusion...that future deviations will be referred back to someone authorized to remove impediments from the proper fulfillment of the suggested course of action?"

- H. A recommendation is a method of solution not the method.
- I. The appraiser cannot insist on specific corrective action, that is a prerogative of higher line management. He should be prepared to explain how he arrived at his findings and to "sell" his recommendation.
- J. To help keep the report concise, keep the central purpose of the report in mind.
- K. In order to write clearly, the problem must be understood clearly.
- L. Technical terminology must be translated to an easily readable form; consider who will read the report.
- M. The report draft must be timely and hence must be written expeditiously. Such action (a) fosters the ideal of service; (b) gives management prompt feedback; and (c) is relevant to present conditions.
- N. The tone of the report is characterized by adjectives such as calm, objective, thoughtful, and dispassionate. The report is no place to grind axes.
- O. Consider the report's effect on subordinates, do not identify the mistakes of individuals by name.
- P. The objectives of the validation of the rough draft with management are:



1. "To resolve conflicts."<sup>1</sup>
2. "To reach agreement on the facts."<sup>1</sup>
3. "To prevent disputatious replys."<sup>1</sup>
4. "To permit the manager...to see in advance the written word - which sometimes will look different from the spoken word."<sup>1</sup>
5. To receive an informal commitment for action on the report recommendations.

Q. The manager is understandably defensive during the validation; use courtesy, empathy and salesmanship. Remember, too, that the manner in which the appraisal has been conducted may set the initial tone of the validation activity, and that the following observations are applicable throughout the appraisal process.

R. "Have Good Manners. It is just plain bad manners to say bluntly 'I disagree with you' or 'You're wrong'. It is worse manners to use such words as 'idiotic', 'ridiculous', or 'nonsense'. Besides, it is poor judgement. Under this kind of attack, the (appraisee)...either lashes back or withdraws. More important, communications is destroyed and the (appraiser's)...objectives cannot be met."<sup>1</sup>

S. "Use Nonpersonal Phrases. In disagreeing, avoid starting a sentence with 'you'. That implies disagreeing with the individual rather than with the concept or idea. Use neutral phrases: 'It might be worth considering...', 'There might be a possibility that...', 'Perhaps it might be useful to explore...' These phrases, being impersonal, seldom arouse emotions - certainly not the emotions

aroused by 'You haven't thought of...', 'You've forgotten...', 'You don't know about...' Never underestimate the emotional impact of words."<sup>1</sup>

- T. "Get on common ground when an impasse appears to be reached. Step back until some point can be agreed upon - even if it is just agreement that the problem is not an easy one to solve. Stand on that ground until tempers are calmed and the (appraisee)...is comfortable enough to be willing to discuss reasonably the matters at issue".<sup>1</sup>
- U. "Don't back anyone into a corner. Do not press the (appraisee)...for a clear statement that he has reversed himself. If he finally goes along with a point, resist the temptation. Don't say something like 'I'm glad you finally see things my way.' The (appraiser's)...objective is to get his conclusions and recommendations across. It doesn't really matter whether or not the (appraisee)...changed his mind".<sup>1</sup>
- V. "Don't mistake airing of views with disagreement. Often all that is necessary is to let the (appraisee)...talk himself out. Perhaps he does not really disagree but merely wants a chance to justify his position or to explain the reason for the conditions that the (appraiser)...found. After he has made his point, the (appraisee)...might be perfectly willing to let the wording of the draft stand as written."<sup>1</sup>
- W. Cross-referencing the draft report to your working papers expedites answering the manager's questions. It is far better to be able to go directly to the appropriate section of your notes than to have periods where the only sound is you shuffling through your papers. Here again you can show you are providing a professional service.
- X. During the validation, impasses on certain points are probably inevitable. When they occur, keep in mind the following:

1. You cannot force an agreement; the ultimate decision will have to be made by higher authorities in safety division and line management. Refer the matter to your supervision, including the comments and position of the manager.
2. If the item cannot be reconciled before the final draft is due, the manager's comments and position should be included in the text. Let him review again so he will not feel misquoted.
3. Don't be inflexible on semantics; be willing to substitute words and phrases that do not significantly change the meaning and context.

Y. Some questions to ask oneself while writing the report are:

1. What is the management control being evaluated?
2. What is the standard for evaluation?
3. What is the adequacy of the control in the present status?  
What is the adequacy of the proof?

## VI. REFERENCE

1. L. B. Sawyer, The Practice of Modern Internal Auditing - Appraising Operations for Management, Institute of Internal Auditors, Inc., New York (1973).

APPENDIX B

APPRAISAL REPORT FORMAT



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## APPRAISAL REPORT FORMAT

The following is a format suggested for use in preparing functional appraisal reports. Reports should not be written in the first person, singular, (i.e., "I"). A list of personnel contacted should be included as an appendix item.

- I. Cover Sheet - Include appraisal discipline, date of report, organization being appraised.
- II. Table of Contents (Optional)
- II. Introduction - Provide any supporting information which will enhance the reader's understanding of the appraisal. This should include the purpose and scope of the appraisal, an outline/description of the factors which were under consideration, the name(s) of the appraiser(s), date(s) of the appraisal visit, facilities visited, and date(s) of the last appraisal.
- IV. Summary - Provide a summary of the overall performance of the functional program being appraised. Highlight and prioritize the important findings.
- V. Summary of Previous Findings - Provide status of any unresolved findings from previous appraisals that required corrective action.
- VI. Findings, Conclusions, and Recommendations
  - a. Findings - Each finding should be concise and limited to one or two specific program strengths or deficiencies. Findings will be numbered consecutively and grouped by appraisal factors.
  - b. Discussion - A discussion of the facts which support the finding should immediately follow each finding.

- c. Conclusions - A conclusion should follow immediately after the discussion. Discuss the significance of the finding, what needs to be done to correct identified deficiencies, and the potential impact on the program.
- d. Recommendations - Generally, conclusions can be written as statements of need, so that the corrective actions are obvious. However, when they are not obvious, recommendations may be made. Recommendations should be general enough to allow management flexibility in determining the best solution for their organization. They should identify what should be done, not how to do it.



APPENDIX C

ES&H APPRAISAL SUMMARY QUESTIONNAIRE



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ES&H APPRAISAL SUMMARY QUESTIONNAIRE

Appraised Organization \_\_\_\_\_ Date of Appraisal \_\_\_\_\_

Discipline\* \_\_\_\_\_

Appraiser's Names \_\_\_\_\_

Based on the information obtained from this appraisal, summarize your findings on the following pages. This summary should correlate with the appraisal report.

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The term "discipline" as used throughout this questionnaire refers to the specific ES&H speciality program being appraised, i.e., occupational safety, fire protection, industrial hygiene, etc.

I. Management Directives and Orders

- o Directives and Orders (to include program plans) are complied with. ( )
- o Directives and Orders are kept current. ( )
- o Local Directives and Orders are developed where necessary. ( )
- o Appropriate clauses are included in contracts. ( )
- o Management supports the program. ( )

II. Policies, Standards, Permits (PSP)

- o Standards and permits are complied with. ( )
- o Standards and permits are kept current. ( )
- o Local standards and permits are developed where necessary. ( )

III. Organization and Administration

- o The location of the discipline in the organization enhances the effectiveness of the program. ( )
- o Responsibilities/authorities of line and staff are properly assigned for this discipline. ( )

IV. Staffing

- o Discipline manager possesses both the management and technical skills needed to manage the program. ( )
- o Discipline staff possess the technical/management skills needed to perform their functions. ( )
- o Discipline office is adequately staffed to accomplish its mission. ( )

V. Training

- o Relative to this discipline, an effective training, promotion and education program exists for line and staff personnel, e.g., both safety engineers and operations staff receive training related to their respective safety responsibilities. ( )

VI. Communication

- o Discipline manager has an effective system for keeping management appraised of the status of the program. ( )
- o Horizontal communications exist between other offices and the discipline office. ( )
- o Discipline information is effectively communicated to the appropriate offices and contractors. ( )

VII. Documentation

- o Discipline activities are auditable. ( )
- o Policy, procedures, internal instructions, and training records are well documented. ( )

VIII. Incident and Accident Reporting

- o The incident and accident reporting system is effective, comprehensive, accurate and consistent with DOE reporting requirements. ( )
- o The data obtained from this system is analyzed for trends and risk potential ( )

IX. Planning, Budgeting and Spending

- o Long range planning includes discipline goals. ( )
- o Discipline budget formulating and review process is adequate. ( )
- o Appropriated funds are expended for discipline needs. ( )

X. Discipline Appraisal Programs

- o The appraisal program is well planned. ( )
- o Appraisals are conducted with sufficient frequency. ( )
- o Appraisal reports are informative and well written. They effectively communicate their findings to management. ( )
- o An effective system for follow-up actions is operating. ( )

XI. Discipline Evaluation of Current and Planned Facilities and Programs

- o There is an ongoing program to identify and evaluate the risk potential for all current and planned facilities and programs. ( )

XII. Performance

- o The accident/injury/illness/incident exposure experience (as appropriate for this discipline) compares favorably with similar DOE operations. ( )

XIII. Overall Performance

- o Based on the information obtained from this appraisal, how would you rate the overall performance of this organization with respect to your discipline? ( )

APPENDIX D

SAFETY APPRAISAL WORKSHEETS

SAMPLE  
SAFETY APPRAISAL  
WORKSHEET

Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
<p><u>Management Implementation Policy</u></p> <ol style="list-style-type: none"> <li>1. Is there a written, up-to-date policy?</li> <li>2. Is the policy comprehensive enough to include cost effectiveness, legal compliance, and other motivations?</li> <li>3. Is the policy implemented and communicated to management, supervisors, employees, and technical staff?</li> </ol> <p><u>Goals</u></p> <ol style="list-style-type: none"> <li>1. Are goals set for each level of management?</li> <li>2. Is the manager held accountable for meeting those goals?</li> </ol>	<ol style="list-style-type: none"> <li>1. Reviewed existing management directives.</li> <li>2. " " "</li> <li>3. Reviewed <sup>question with</sup> 4 levels of mgmt. (top, directorates, division &amp; branch.</li> </ol> <ol style="list-style-type: none"> <li>1. Reviewed existing mgmt directives. Interviewed J.P. Jones (Asst to President)</li> <li>2. Same</li> </ol>	<ol style="list-style-type: none"> <li>1. Policy documents found only at top and 2nd level down.</li> <li>2. Documents in existence are adequate in these areas. (Legal considerations seem heavily emphasized, more so than humane considerations.)</li> <li>3. <del>Supervisors</del> <sup>managers</sup> at division and branch level don't know policy.</li> </ol> <p>1 &amp; 2. Goals are set but managers are not specifically held accountable.</p>



SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
I.	<u>Management Directives and Orders</u>  <u>General Questions</u> <ul style="list-style-type: none"> <li>o Directives and Orders (to include program plans) are complied with?</li> <li>o Directives and Orders are kept current?</li> <li>o Local Directives and Orders are developed where necessary?</li> <li>o Appropriate clauses are included in contracts?</li> <li>o Management supports the program?</li> </ul> <u>Other General Questions</u>		
1.	Are all the Management Directives and orders sufficient and well organized to assure that the overall program will be as advertised to the customer, to the public, to the organization itself, and to other groups as appropriate?		

SAFETY APPRAISAL  
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	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
	<p>Other General Questions (cont'd)</p> <p>2. What are the significant aspects of the ES&amp;H program performance, taking into consideration the management of the program and the extent to which sound technical judgment is exercised in implementing the program?</p> <p>3. To what extent are contract safety clauses, ES&amp;H program plans, codes, regulations and directives complied with?</p> <p>4. To what degree does management enforce the ES&amp;H speciality programs?</p> <p>5. Is management active in the decisions and operations of the various disciplines?</p>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
I.	<u>Management Directives and Orders (cont'd.)</u>  <u>Questions Related to Specific Functional Appraisal:</u>  (Occupational Safety, Fire Protection, Industrial Hygiene, etc.)		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
II.	<p><u>Standards and Permits</u></p> <p><u>General Questions</u></p> <ul style="list-style-type: none"> <li>o Standards and permits are complied with?</li> <li>o Standards and permits are kept current?</li> <li>o Local standards and permits are developed where necessary?</li> </ul> <p><u>Other General Questions</u></p> <ol style="list-style-type: none"> <li>1. How adequately are DOE and ES&amp;H policies and standards written, published, transmitted, kept current and carried out?</li> <li>2. How effective is the implementation of federal, state and local requirements?</li> </ol>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
II	<u>Standards and Permits (cont'd)</u>  <u>Questions Related to Specific</u> <u>Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
III	<p><u>Organization and Administration</u></p> <p style="padding-left: 40px;"><u>General Questions</u></p> <ul style="list-style-type: none"> <li>o The location of the discipline in the organization enhances the effectiveness of the program?</li> <li>o Responsibilities/authorities of line and staff are properly assigned for this discipline?</li> </ul> <p style="padding-left: 40px;"><u>Other General Questions</u></p> <ol style="list-style-type: none"> <li>1. What is the assignment of line and staff responsibilities to the various organizational components?</li> <li>2. Is the organization structured for effective mission achievement in all ES&amp;H programs?</li> </ol>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
III	<u>Organization and Administration</u> (cont'd.)  <u>Questions Related to Specific</u> <u>Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
IV.	<u>Staffing</u>  <u>General Questions</u>  <ul style="list-style-type: none"> <li>o Discipline manager possesses both the management and technical skills needed to manage the program?</li> <li>o Discipline staff possess the technical/management skills needed to perform their functions?</li> <li>o Discipline office is adequately staffed to accomplish its mission?</li> </ul> <u>Other General Questions</u>  1. Is the quality and quantity of professional staff adequate?  2. When principal changes in organizational programs are anticipated, are safety staffing changes made to meet the needs anticipated?  3. How adequate is the technical skill and numbers of staff assigned to carry out the ES&H program?		



SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
IV	<u>Staffing (cont'd.)</u>  <u>Questions Related to Specific</u> <u>Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
V.	<u>Training</u>  <u>General Questions</u> o Relative to this discipline, an effective training, promotion and education program exists for line and staff personnel, e.g., both safety engineers and operations staff receive training related to their respective safety respon- sibilities?  <u>Other General Questions</u> 1. How complete and auditable are training records? 2. What is the extent and adequacy of training, education and promotion in the areas of ES&H for both ES&H staff and operational personnel?		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
V.	<u>Training (Cont'd.)</u>  <u>Questions Related to Specific</u> <u>Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
VI.	<u>Communication</u>  <u>General Questions</u> <ul style="list-style-type: none"> <li>o Discipline manager has an effective system for keeping management apprised of the status of the program?</li> <li>o Horizontal communications exist between other offices and the discipline office?</li> <li>o Discipline information is effectively communicated to the appropriate offices and contractors?</li> </ul> <u>Other General Questions</u> 1. To what extent has DOE experienced and accumulated knowledge in preventive techniques been disseminated? 2. How promptly are safety reports getting to higher, mid and lower management?		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
VI.	<u>Communication (cont'd.)</u>  <u>Questions Related to Specific</u> <u>Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
VII	<u>Documentation</u>  <u>General Questions</u>  o Discipline activities are auditable?  o Policy, procedures, internal instructions, and training records are well documented?  <u>Other General Questions</u>  1. To what extent and how adequate are records documented across the board enhancing auditability or ES&H assurance? i.e., a. How frequently are appraisals conducted?  b. How adequate are records kept on formal appraisals?  c. How effective and timely is the follow-up system?		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
VII	<u>Documentation (cont'd.)</u>  <u>Questions Related to Specific Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
VIII.	<p style="text-align: center;"><u>Incident and Accident Reporting</u></p> <p style="text-align: center;"><u>General Questions</u></p> <ul style="list-style-type: none"> <li>o The incident and accident reporting system is effective, comprehensive, accurate and consistent with DOE reporting requirements?</li> <li>o The data obtained from this system is analyzed for trends and risk potential?</li> </ul> <p style="text-align: center;"><u>Other General Questions</u></p> <ul style="list-style-type: none"> <li>1. What is the extent and adequacy of the system established to implement the requirements of reporting accidents/incidents?</li> <li>2. How adequate are the trend and risk analysis and what action has been taken to reduce risk problems?</li> </ul>		



SAFETY APPRAISAL  
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Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
<p>VIII. <u>Incident and Accident Reporting (cont'd.)</u></p> <p><u>Questions Related to Specific Functional Appraisal:</u></p>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
IX.	<u>Planning, Budgeting and Spending</u>  <u>General Questions</u> <ul style="list-style-type: none"> <li>o Long range planning includes discipline goals?</li> <li>o Discipline budget formulating and review process is adequate?</li> <li>o Appropriated funds are expended for discipline needs?</li> </ul> <u>Other General Questions</u> 1. Is the budget adequate not only for the safety group but also for related safety programs aspects for which other groups in the organization have responsibility? 2. To what extent does long range organization planning include ES&H goals? 3. How extensive is ES&H input to the budget formulation and review process.		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
IX.	<u>Planning, Budgeting and Spending (cont'd.)</u>  <u>Questions Related to Specific Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
X.	<u>Discipline Appraisal Programs</u>  <u>General Questions</u>  o The appraisal program is well planned?  o Appraisals are conducted with sufficient frequency?  o Appraisal reports are informative and well written. They effectively communicate their findings to management?  o An effective system for follow up actions is operating?  <u>Other General Questions</u>  1. How frequently are appraisals conducted?  2. What improvements were implemented by management?  3. How adequate are records kept on formal appraisals?  4. How effective and timely is the follow-up system?		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
X.	<u>Discipline Appraisal Programs</u> (cont'd.)  <u>Questions Related to Specific</u> <u>Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
XI	<u>Discipline Evaluation of Current and Planned Facilities and Programs</u>  <u>General Questions</u>  o There is an ongoing program to identify and evaluate the risk potential for all current and planned facilities and programs?  <u>Other General Questions</u>  1. To what extent and how adequate are measures established to ensure that applicable require- ments are correctly translated into specifications, drawings, procedures and instructions?  2. How effective is the organiza- tion at finding and reducing known risks to acceptable levels in the current facilities?		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
XI.	<u>Discipline Evaluation of</u> <u>Current and Planned Facilities</u> <u>and Programs (cont'd.)</u>  <u>Questions Related to Specific</u> <u>Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
XII.	<p><u>Performance</u></p> <p><u>General Questions</u></p> <ul style="list-style-type: none"> <li>o The accident/injury/illness/ incident exposure experience (as appropriate for this discipline) compares favorably with similar DOE operations?</li> </ul> <p><u>Other General Questions</u></p> <ol style="list-style-type: none"> <li>1. What are the significant aspects of the ES&amp;H program performance, taking into consideration the management support of the pro- gram and the extent to which sound technical and professional judgement is exercised in implementing the program?</li> <li>2. How well does the organization compare with similar operations in overall experience of ES&amp;H areas?</li> </ol>		



SAFETY APPRAISAL  
WORKSHEET

	Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
XII	<u>Performance (Cont'd.)</u>  <u>Questions Related to Specific Functional Appraisal:</u>		

SAFETY APPRAISAL  
WORKSHEET

Lines of Inquiry (Questions to be Asked)	Actions Taken (Location, Documents Reviewed, Units Observed, Personnel Interviewed)	Answers Obtained (Plus Notes and Comments)
<p>XIII. <u>Overall Performance</u></p> <ul style="list-style-type: none"> <li>o Based on the information obtained from this appraisal, how would you rate the overall performance of this organization with respect to your discipline?</li> </ul>		

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