VI. HOW CAN THIS INFORMATION BE USED TO EVALUATE WORKPLACES?

I sit in this office and get complaints all day long about this building -- in person, on the phone, memos in the mailbox. It never ends. They're usually little problems, and we get them taken care of right away for the most part, but sometimes I wonder if we're doing something wrong. We never hear about something being right, so I can't really tell how well the building is working, and I get so many little complaints that I can't tell which ones are important and which ones are trivial. A burned-out light bulb or a spill on the carpet sounds like the end of the world by the time it gets to me. -- a physical plant manager describing his maintenance planning.

This chapter outlines a procedure for assessing the environmental quality of any occupied building. In order to conduct the environmental quality assessment in a reliable and valid way, articulating a series of procedural steps is critical. The procedure presented in this chapter explicitly requires formulating an accurate description of the places being assessed, and establishing environmental quality assessment criteria that are consistent with the goals and objectives of the organization occupying the building.
A total of ten steps in three phases have been formulated:

**Phase I: Definition**
(1) identifying relevant goals particular to the assessment of a building or set of buildings;
(2) clarifying the objectives of the assessment;
(3) establishing the relevant levels of analysis;
(4) identifying place;
(5) prioritizing places; and
(6) describing places that make up a building;

**Phase II: Evaluation**
(7) evaluating these places according to the environmental quality criteria established in earlier steps;

**Phase III: Application**
(8) from this evaluation identifying the nature of the problems that have been discovered;
(9) identifying the processes by which these problems can be alleviated; and finally
(10) repeating and/or evaluating the effectiveness of the procedure itself.

**PHASE I. DEFINITION**
This stage will consist of identifying goals, establishing objectives for the assessment, identifying, prioritizing and describing places to be assessed. These tasks will be completed through a process of negotiation with an evaluation team comprised of representative members from the organization and evaluation consultants.

**Step 1. Identify goals of society, organization and individuals**
The first step consists of identifying the relevant goals of society, organization and individual occupants with respect to building(s) being considered for assessment.

1.1 What are society’s goals for the building or facility?
Examples of societal goals might include: in the case of schools, producing responsible citizens, established standards and for asbestos abatement and other environmental health issues, standards for student achievement; and, in the case of
workplaces, provision of steady employment, various fire and life-safety codes, and indoor air quality regulations, among many others.

1.2 What are the organization’s goals for the building?

Examples of organizational goals might include: in the case of schools, increase student achievement scores, improving parental and community involvement, improving school climate, etc.; and, in the case of work organizations, increase profits, added value, improving measures of productivity, total quality improvement, etc.

1.3 For each occupant group, what are the individual goals relative to this building?

There are two levels to be concerned with here:
1. What are individuals goals for the building as a whole?
2. What are individuals expected products and achievements for particular places within which they work?

Examples of individual goals for any workplace might include: gaining satisfactory levels of privacy, comfort, autonomy and control for productive work, improved social interaction and communication between occupants, achieving a satisfactory sense of security, accessibility, various professional goals and achievements, and many other goals.

Step 2. Establish assessment objectives

The choice of buildings to be assessed should follow a certain set of objectives. These objectives should be clearly stated in order to provide a clear direction to the assessment work.

2.1 Identify the facility(s) to be assessed
2.2 Why are these) particular buildings or facilities being selected for assessment?
2.3 What are the stated objectives of the assessment?

Objectives might include a narrow assessment of particular environmental quality goals such as indoor air quality, asbestos abatement, productivity, energy cost effectiveness, or performance. An assessment could be used to measure the performance of facility management services in relationship to occupant goals, or include a broader assessment of the total environmental quality of a place according to a broader set of goals of society, organization or individuals. The objective of the assessment may be still more global: to develop measurable benchmarks for comparison to other buildings over time.
Step 3. Determine level of analyses

This step requires the assessment team to determine the level of analyses appropriate or required. This can be done by investigating the existing correspondence, or fit between philosophy, goals and operational strategies, and the building and places within the building designed to support those philosophy, goals and operational strategies. A lack of correspondence, or fit may indicate a mismatch and suggests the need for assessment at the particular level of analysis: at the philosophical level, goals level, or the level of operational strategies. This step constitutes a preliminary test of where key problems may arise in the building assessment.

3.1 Is there correspondence between organizational philosophy, goals and operational strategies relevant to the building?

In other words, is the espoused philosophy for a particular organization manifesting itself through the goals and operational strategies within the building? An example might be that a school espousing a middle school philosophy (team teaching, houses) is operating as a junior high school (departmentalized, autonomous classrooms); or a work organization may espouse the philosophy of multidisciplinary team problem solving, but the prevailing management strategy within the organization continues to favor a departmental mentality.

3.2 Is there correspondence between goals and the facility which serves these goals?

Referring back to the middle school operating as a junior high, the following example illustrates a lack of correspondence between organizational goals and the facility: a middle school program (which requires clusters of classrooms off a main corridor in order to support team teaching and the concept of 'houses') being implemented in a school building originally designed as a double loaded corridor.

3.3 Is there correspondence between operational strategies and the places they are contained in?

Within the context of a work organization espousing teams as the basis for their operations, this lack of correspondence would manifest itself physically by the lack of provision of adequate group work space to support team efforts: not providing group work space might inhibit the performance of teams.

3.4 What level(s) of analysis will be considered in this assessment?

Depending on the levels of correspondence identified above, the assessment might focus more or less on a particular level of analysis.
Step 4. Identify place(s)

Once the level of analyses have been determined, all possible places associated with those levels of analyses should be identified. At this step, an exhaustive list of all the places present in a particular building to be assessed should be made.

4.1 What are the places that can be identified within a particular building?

4.2 What are the place adjacencies within the building?

Step 5. Prioritize places

Some places may be more important than others in relation to the goals of the assessment. Not all places can always be investigated at once due to the limitations of cost and time. A list of prioritized places should be developed. The reasons for the particular prioritization should be clearly stated and documented.

5.1 Establish criteria for prioritizing places: Prioritize according to:
   (a) most critical to least critical to stated organizational goals,
   (b) cost limitations,
   (c) time limitations,
   (d) political acceptability, and/or
   (e) other criteria.

5.2 Explain the rationale for selected criteria in 5.1

5.3 Prioritize places to be assessed according to criteria established in

Step 6. Describe places

Describe places to be assessed according to the five components: organization, people, materials, products and achievements, environment. For each place the following questions must be answered:

6.1 Describe the physical environment which comprises the place:

6.2 Describe the expected products and achievements (place-specific goals) of the place:

6.3 Describe the people, the normal participants/occupants of the place:

6.4 Describe the organizational structure of the place:

6.5 Describe the materials (supplies, information) required to optimally maintain the place:
PHASE II. EVALUATION

Once the definitional issues are resolved and agreed on the evaluation phase will begin. This phase will consist of conducting a series of survey questionnaires, interviews, walkthroughs, observations, and archival research, among other data collection techniques required to answer the general questions which follow. (These questions will be more clearly specified for the places that are eventually identified.)

Step 7. Evaluate places

This step is at the heart of the PEQA. Places identified, prioritized and described in the previous steps (4, 5, & 6) will be evaluated according to how well they meet the operational goals and strategies for individuals, the organization and society (identified in Step 1).

*The global question of concern at this step is: is this place helpful, dependable, satisfying and equitable with respect to a specific set of goals and expectations of either individuals in that place, or required by the organization and/or society?* This generic question can be broken down and particularized for society, organization and individuals:

7.1 Assessing EQ from the perspective of society's goals

1. Is this place helpful in meeting society's established goals? (such as cost effectiveness?, accountability?, safety codes and regulations?, or other goals relevant to maintaining environmental quality?)

1.1 and, if the place is helpful, in what ways does this place actively help society in achieving these goals?

(a) that is, to what extent do the people and organization of the place contribute to helping society achieve these goals?

(b) that is, to what extent does the environment and resources of the place contribute to helping society achieve these goals?

1.2 if this place is not helpful, in what ways does this place hinder the meeting of societal goals?

(a) that is, to what extent do the people and organization of the place contribute to helping society achieve these goals?

(b) that is, to what extent does the environment and resources of the place contribute to helping society achieve these goals?

2. Does the place consistently meet society's established goals, that is, is the place dependable?
2.1 if this place is not dependable, can you explain why this is so?

(a) that is, to what extent are the people and organization of the place dependable? and in what ways?

(b) that is, to what extent are the environment and resources of the place dependable? and in what ways?

3. Finally, does this place meet society's established goals in a fair and equitable way?

3.1 if not, what are the conditions under which a particular unfair or unequitable situation exists in this place?

(a) that is, to what extent do the people and organization of the place contribute to the unfair situation?

(b) that is, to what extent do the environment and resources of the place contribute to the unfair situation?

7.2 Assessing EO from the perspective of organizational goals

1. Is this place helpful in meeting established organizational goals? (such as productivity and performance?, effectiveness?, social interaction?, communication?, or other goals relevant to maintaining environmental quality?)

1.1 and, if the place is helpful, in what ways does this place actively help the organization in achieving these goals?

(a) that is, to what extent do the people and organization of the place contribute to helping the organization achieve these goals?

(b) that is, to what extent does the environment and resources of the place contribute to helping the organization achieve these goals?

1.2 if this place is not helpful, in what ways does this place hinder the meeting of organizational goals?

(a) that is, to what extent do the people and organization of the place contribute to helping the organization achieve these goals?

(b) that is, to what extent does the environment and resources of the place contribute to helping the organization achieve these goals?

2. Does the place consistently meet established organizational goals, that is, is the place dependable?
2.1 if this place is not dependable, can you explain why this is so?

(a) that is, to what extent are the people and organization of the place undependable?

(b) that is, to what extent are the environment and resources of the place undependable?

3. Finally, does this place meet organizational goals in a fair and equitable way?

3.1 if not, what are the conditions under which a particular unfair or unequitable situation exists in this place?

(a) that is, to what extent do the people and organization of the place contribute to the unfair situation?

(b) that is, to what extent do the environment and resources of the place contribute to the unfair situation?

7.3 Assessing EQ from the perspective of individual goals

1. Does this place help you achieve your goals and objectives? (such as expected products and achievements?, flexibility? privacy?, safety?, comfort?, accessibility?, social interaction?, communication?, or other goals relevant to maintaining environmental quality?)

1.1 and, if the place is helpful, in what ways does this place actively help you in achieving these goals and objectives?

(a) that is, to what extent do the people and organization of the place contribute to helping you achieve these goals and objectives?

(b) that is, to what extent does the environment and resources of the place contribute to helping you achieve these goals and objectives?

1.2 if this place is not helpful, in what ways does this place hinder the achievement of your goals and objectives?

(a) that is, to what extent do the people and organization of the place contribute to helping you achieve your goals?

(b) that is, to what extent does the environment and resources of the place contribute to helping you achieve your goals?

2. Does the place consistently help you achieve your goals and objectives, that is, is this place dependable?

2.1 if this place is not dependable in helping you achieve your goals, can you explain why this is so?
(a) that is, to what extent are the people and organization of the place undependable?

(b) that is, to what extent are the environment and resources of the place undependable?

3. Does this place help you achieve your goals and objectives in a fair and equitable way?

3.1 if not, what are the conditions under which a particular unfair or unequitable situation exists for you in this place?

(a) that is, to what extent do the people and organization of the place contribute to the unfair situation?

(b) that is, to what extent do the environment and resources of the place contribute to the unfair situation?

4. To what degree, overall, do you feel satisfied with this place?

4.1 If you are not satisfied, what is the source of your dissatisfaction?

(a) that is, to what extent do the people and organization of the place contribute to your dissatisfaction?

(b) that is, to what extent do the environment and resources of the place contribute to your dissatisfaction?

4.2 If you are satisfied, what is the source of your satisfaction?

(a) that is, to what extent do the people and organization of the place contribute to your satisfaction?

(b) that is, to what extent do the environment and resources of the place contribute to your satisfaction?

PHASE III. APPLICATION

The objective of this final stage is to apply the knowledge gained during the evaluation to improve the environmental quality of the places evaluated. Problems are fed back into the processes that can best address those problems. The final step calls for addressing the continuous improvement of the assessment procedure itself.

Step 8. Identify nature of problems

From the previous step, a series of problems, or correspondence mismatches will emerge. These problems can be categorized or classified as either problems of knowledge,
design or implementation. From this classification, it will be easier to identify change agents to help solve the problem.

8.1 List the problems and/or issues that have surfaced during the previous step.
8.2 Which problems are due to problems of knowledge?
8.3 Which problems are due to problems of design?
8.4 Which problems are due to problems of implementation and operation?

Step 9. Identify processes
What is the process by which a particular problem or issue can be resolved?

9.1 Which problems could be solved through increasing the knowledge of occupants toward these problem/issue? How?
9.2 Which problems/issues could be solved through improving operations and management procedures? How?
9.3 Which problems could be solved through redesign and construction? How?
9.4 Which problems could be solved by engaging the regulatory process? How?

Step 10. Repeat and/or evaluate effectiveness of procedure
This step calls for the procedure to be repeated for each place being assessed (Steps #s 7-9). Second, if problems with scope have surfaced, then re-evaluating Steps #s 1-6 may be necessary. Finally, problems may surface concerning the manner in which problems are being categorized and assigned to change agents.

10.1 Have all places been assessed, and if so, has all relevant data been collected?
10.2 Are there problems with the scope of the project which have surfaced? If so, what are they and how might the scope be revised to accommodate/address these problems?
10.3 Are there problems with the manner in which problems have been categorized and assigned to a particular process?
10.4 If so, what are they and how might this procedure be revised to accommodate/address these problems?