



Qualitative Measurement of Environmentally Preferable Purchasing (EPP) Among Federal Employees in 2000



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Preface

The U.S. Environmental Protection Agency's (EPA's) Environmentally Preferable Purchasing (EPP) program is mandated by Executive Order 13101. This Executive Order, entitled "Greening of Government Through Waste Prevention, Recycling, and Federal Acquisition," directs Executive agencies to implement a variety of waste reduction and other activities, and directs EPA to assist Federal agencies in making purchasing decisions that are less damaging to the environment.

To achieve the goals of environmentally preferable purchasing set forth in the Executive Order, EPA's EPP program:

- issued guidance articulating five principles for applying EPP in the Federal government setting;
- initiated demonstration pilot projects in conjunction with Federal agencies; and
- developed outreach materials and tools to train and provide assistance to Federal purchasers.

To strategically guide the EPP program toward the most effective methods and program activities, and for the purposes of the Government Performance and Results Act (GPRA), EPA initiated a multi-phased market research or measurement project. The project is designed to measure the awareness and success of current EPP efforts and identify what motivates people to connect environmental considerations to their purchases of products and services.

The measurement research activities were designed to:

- obtain immediate qualitative feedback on the effectiveness of the EPP program;
- identify qualitative inputs to the development of quantitative research, future tools and resources for purchasers, outreach activities, and other EPP methods or policies; and
- develop a quantitative baseline to measure the effectiveness of the EPP program, specific projects, and, to the extent possible, gauge environmental improvement over time.

This *Qualitative Measurement of Environmentally Preferable Purchasing (EPP) Among Federal Employees in 2000* is the first phase of the measurement research. Subsequent quantitative phases are planned.

The findings from this qualitative market study served the EPP program well as "grist for the mill." Generally, the results of this study have helped:

- identify the need to create "drivers"—for example, a driver could be to help establish mandates from top management at more departments and agencies;
- identify how purchasers and requesters can fit EPP into their acquisition process;
- underscore the need to target marketing to bring about changes in perceptions and behavior regarding environmental purchasing practices; and
- highlight the need to engage the supply side, or vendors, in strategies and activities to advance EPP across the Federal government.

Specifically, study findings, combined with the learnings from the pilot projects, are informing EPP program plans for:

- 2001-2005 strategic plans;
- product- or service-specific marketing plans;
- general outreach and EPP program awareness plans; and
- inputs to the development of the quantitative research.

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Executive Summary

Background

The U.S. Environmental Protection Agency's (EPA's) Environmentally Preferable Purchasing (EPP) program is mandated by an Executive Order. Signed on September 16, 1998, Executive Order 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition supersedes Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention, issued on October 20, 1993. Executive Order 13101 retains a similar requirement for EPA to develop guidance to "address environmentally preferable purchasing."

In essence, this Executive Order tasks EPA with assisting Federal government agencies in considering the environment in all government purchases. It is one of several programs that fall under the "Greening of Government" initiatives.

Over the past several years, EPA has worked with various agencies to promote the program. The Agency also developed EPP outreach materials, including print and electronic media, for distribution within the Federal government. It was unclear to EPA the extent to which Federal employees actually practice EPP—i.e., comply with the mandate. To measure the awareness of EPP among Federal employees and the extent to which they practice EPP, and to assess their information needs about the program, EPA contracted with NuStats of Austin, Texas, for professional market research services.

Research Objectives

The goals of the study were to:

- define and understand Federal procurement practices and behaviors,
- explore what motivates the Federal workforce to link the environment to purchasing-related decision making,
- test the recognition and usefulness of the EPP outreach materials, and
- assess the viability of methods for the subsequent quantitative research phase.

The knowledge gained from this study, along with future quantitative research findings and experiences from pilots and interactions with other Federal agencies, will provide input to the strategic planning for the EPP program.

Research Design

The chosen methodology was a two-phase study, beginning with qualitative research. The decision to use qualitative methods for Phase I was deliberate. From a research perspective, capturing qualitative data first made good sense, given the objective of this part of the research—i.e., to understand underlying attitudes and behavior related to EPP.

Phase I, the focus of this report, consisted of three stages: Discovery, Exploratory, and Confirmatory. Each stage added another layer of insight from the primary target audience: Federal employees who are part of the purchasing process within the government. Study participants included employees in procurement, contracting, purchasing, and acquisitions, as well as those who requested products and services. Interviews with a limited number of private contractors (a secondary target audience) added another dimension to the research.

NuStats conducted qualitative research with more than 130 individuals over the course of several months, using a combination of one-on-one in-person and telephone interviews, focus and mini groups, dyads, and triads. The result was a rich and in-depth look into the motivations and underlying factors that drive purchase decisions in the Federal government.

Learning Questions

The following series of "Learning Questions" guided the research.

- What are the general attitudes, behaviors, and perceived information needs regarding purchasing?
- What are the attitudes, behaviors, and perceived information needs in defining environmental preferability?

- What is the general awareness of the “Greening of Government” initiative?
- What are the awareness levels and opinions about EPP outreach materials?
- Are there opportunities to fit EPP into day-to-day procurement activities?

To answer these questions, NuStats tapped into the tremendous knowledge base and extensive background and experience of Federal employees involved in purchasing.

Key Findings

The study’s eight key findings are:

- Executive Order provisions on the “Greening of Government” are not perceived by study participants to be mandates.
- Agency- or department-specific mandates motivate Federal purchasers more than government-wide Executive Orders.
- Study participants consider different factors when evaluating products versus services.
- Few study participants recognized the term “environmentally preferable purchasing.”
- Some Federal purchasers and requesters consider the environment in a purchase decision.
- Study participants believe the responsibility for doing EPP lies elsewhere.
- Federal purchasers and requesters rarely mention environmental factors as a primary purchasing consideration.
- Awareness of EPA’s EPP tools and resources is low among study participants.

Introduction: Project Overview

Executive Order 13101 mandates that the U.S. Environmental Protection Agency (EPA) assist Executive agencies in making purchasing decisions that are less damaging to the environment.¹ The Environmentally Preferable Purchasing (EPP) program was established to provide guidance and carry out a variety of initiatives and outreach activities targeting a wide constituency, including Federal agencies.

Committed to effectively carrying out its mandate, EPA set out to measure the degree to which EPP principles have penetrated Federal government purchasing practices. The Agency's goals were to explore the underlying motivators that impede and/or drive EPP within the Federal government. In general, EPA's questions were:

- Are Federal employees aware of the EPP program?
- Are Federal employees practicing EPP and, if so, to what extent? If not, why not?
- What attitudes exist about EPP?
- What motivates people to make EPP decisions?
- What type of communication needs do Federal employees have regarding EPP?

To answer these questions, EPA contracted with a consultant with expertise in capturing attitudes, motivations, and behaviors from specialized populations. In the spring and summer of 2000, NuStats, an Austin-based market research firm, initiated Phase I of a two-phase research design that uses qualitative research (Phase I) and quantitative research (Phase II) as complementary strategies.

From a research perspective, capturing qualitative data first made good sense, given the objective of this part of the research—i.e., to understand underlying attitudes and behavior related to EPP. Qualitative analysis draws on an inductive process in which themes and categories emerge through the synthesis of data gathered by such techniques as focus groups, case studies, and one-on-one telephone

or in-person interviews. Samples are usually small, and often purposively selected.

Qualitative research differs from quantitative research in that the latter is characterized by the use of large samples, standardized measures, a deductive approach, and highly structured interview instruments. Qualitative research does not statistically sample representative groups of the study population. Rather, it draws on the insight of carefully screened participants who fit a pre-defined profile. Their answers are valid and extremely useful in the research process, but are not statistically representative and cannot be generalized.

This report summarizes the findings of Phase I, the qualitative research. It is specifically organized to:

- provide an overview of the study objectives,
- explain the study methodology, and
- present a summary of primary and secondary research results.

Research Objectives

Exploring the context in which Federal government employees make environmental considerations in purchasing decisions requires “forecasting” or explaining behavior. This research extends beyond an exploration into the motivations that contribute to “doing EPP,” and also studies motivations that relate to “wanting to practice it,” “knowing how to practice it,” and “knowing why to practice it.” By first studying the awareness levels and attitudes regarding purchasing and the EPP program, the research uncovers the driving forces behind and barriers to acceptance and behavioral change.

The knowledge gained through this research, along with future quantitative research experiences from pilots and interactions with Federal agencies, will provide input into the EPP program's long-term strategic planning.

¹ Signed on September 16, 1998, Executive Order 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition supersedes Executive Order 12873, Federal Acquisition, Recycling, and Waste Prevention, issued on October 20, 1993. It retains a similar requirement for EPA to develop guidance to “address environmentally preferable purchasing.”

Specific research objectives include the following:

- to define and understand Federal procurement practices and behaviors,
- to explore what would motivate the Federal workforce to link the environment to purchasing-related decision making,
- to test the recognition and usefulness of the EPP outreach materials, and
- to assess the viability of methods for the subsequent quantitative research phase.

Research Learning Questions

At the onset of the study, a set of “Learning Questions” related to purchasing and environmental decision making were developed to guide the study (see Table 1). Using a funneling approach, this particular sequence moves from the general to the very specific and ensures deep and careful probing to understand the purchasing beliefs and behaviors of study participants.

TABLE 1
QUALITATIVE STUDY LEARNING QUESTIONS (LQs)

LQ. A. What are the general attitudes, behaviors, and perceived information needs regarding purchasing?
<ul style="list-style-type: none"> • Identify motivations for making a purchase decision and/or product choice (PD/PC). • Identify the least important factors used in a PD/PC, citing examples. • Identify the most important factors used in a PD/PC, citing examples. • Identify sources that provide the most information for considering the most important factors used in a PD/PC and other necessary information, citing examples.
LQ. B. What are the attitudes, behaviors, and perceived information needs in defining environmental preferability?
<ul style="list-style-type: none"> • Define “environment” and what is “green.” • Identify who should be responsible for defining “environment” and “green.” • Identify whether and how environmental and/or green connections are made. • In a PD/PC, identify what environmental factors or attributes were considered, if any, in the last purchase, citing examples. • In a PD/PC, identify if environmental factors or attributes are considered routinely, occasionally, or as a one-time effort only. • If the stated barriers are removed, identify how environmental factors or attributes would be used. • Among environmental factors or attributes that are routinely or occasionally considered, identify the least and most important. • Identify information sources of environmental factors or attributes, citing examples.
LQ. C. What is the general awareness of “Greening of Government?”
<ul style="list-style-type: none"> • Assess the level of awareness of the government movement to incorporate environmental considerations into PD/PC, citing examples.
LQ. D. What are the awareness levels and opinions about EPP outreach materials?
<ul style="list-style-type: none"> • Test the level of awareness of EPP outreach materials. • Determine which outreach materials have been received, and explore the delivery method of the tools. • Explore if the outreach materials are being used/read, and test their utility in supporting an environmental PD/PC. • Identify specific actions taken as a result of using/reading the outreach materials, citing examples. • Identify other existing or needed materials that help make an environmental PD/PC. • Test prototypes and messages. • Determine whether current/planned tools address motivating factors that influence environmental PD/PC.
LQ. E. Are there opportunities to fit EPP into day-to-day procurement activities?
<ul style="list-style-type: none"> • Test the awareness and perception of who is responsible for environmental PD/PC. • Review EPP pilot experiences for the pros and cons related to facilitative EPP efforts. • Review ad hoc EPP experiences for pros and cons.

Research Design Overview

The study design process involved planning the overall approach for interviewing participants, defining the study population, and devising a systematic protocol for selecting and interviewing participants. A detailed discussion of the research design is contained in Appendix A. This section briefly reviews key components of the research design: the research approach, the study population, and the screening and interview protocols.

The Research Approach

In-depth interviews and focus groups are two of the most common forms of qualitative research. These interview formats, along with dyad or triad mini groups, were integrated into a three-stage data collection approach. The activities of the three-staged approach (collecting and analyzing data, developing and modifying theory, and elaborating or refocusing research questions) occurred simultaneously during qualitative research, each influencing all of the others. This qualitative study provided directional pointers about the attitudes, behaviors, and perceptions of the study population. Selecting a multi-stage research approach facilitated mid-course modifications based on the strengths of the directional pointers.

First, the Discovery Stage allowed for the exploration and analysis on a general level at the beginning of the study and led to a fine-tuning of the research objectives and understanding of the study population. Next, research hypotheses emerged from detailed, systematic observations and interpretation of behavior during the Exploratory Stage. Finally, during the Confirmatory Stage, the research hypotheses were examined and confirmed. Appendix A contains detailed research plans for each of these stages.

The Study Population

Properly defining the target population is a crucial step in research design. If not properly defined, the information collected may be misleading or may not be relevant for the research question. From the onset of the study, it was clear that the study population would comprise Federal employees involved in purchasing products or services. However, this definition is so broad that it could have included nearly every Federal employee.

NuStats followed a systematic approach to view this study population in more narrow segments, based upon their inherent job functions as they relate to purchasing. Working with EPA, NuStats devised the following list of purchasing-related tasks:

- identify a need for or request products or services,
- write specifications,
- influence the selection of products and services,
- make purchasing decisions,
- conduct life-cycle costing analysis,
- purchase products and services, and
- conduct post-purchasing follow-up.

Based upon this, NuStats defined two research populations: “Doers” and “Facilitators.”

“Doers” represent Federal employees who originate or make purchasing decisions and/or coordinate the purchase of products and services. This audience includes:

- government bankcard holders;
- contracting, purchasing, and supply specialists (primarily the GS-1102 series); and
- service and product “requesters” or “specifiers.”

These individuals can hold one or more of the functions included in the list above.

“Facilitators” represent Federal employees who set policy, share expertise, conduct training, or provide product and service information. This audience includes management, training providers, EPP Pioneers (early initiators of EPP practices), people with specialized training or expertise (e.g., pollution prevention, environment, safety, and health, and life-cycle costing) who provide decision-making assistance, and vendors. These individuals normally influence the selection of products and services.

The Screening and Interview Protocols

Two final steps in designing the study were to design the recruitment, or screening, and interview protocols. Screening protocols consist of carefully designed questions to qualify people who represent the target population to participate in the study. The screening protocols that were used for this study are contained in Appendix B.

In this study, all participants met the following criteria:

- Their job encompassed one or more of the following purchasing-related functions:
 - identify a need for or request products or services,
 - write specifications,
 - influence the selection of products and services,
 - make purchasing decisions,
 - conduct life-cycle costing analysis,
 - purchase products and services, and
 - conduct post-purchasing follow-up.

- They had experience performing that function for at least six months.

In addition, NuStats monitored the recruitment process to ensure that a mix of “Doers” and “Facilitators” and civilian and military agencies was included in the study.

Interviews were conducted using an interview protocol, or discussion guide. The study’s Learning Questions, identified in Table 1, led the development of this guide. Copies of the discussion guides used throughout this study are contained in Appendix C.

Secondary Research

In this study, secondary research helped define the research problem, identify the study population, finalize the research design, and answer some research questions. Secondary research included the following:

- A review of existing materials and reports prepared by EPA in carrying out Executive Order 13101 provided (1) insight on the number and types of materials produced by EPA and (2) awareness about previous efforts to measure compliance with the Executive Order.
- A cursory scan of the Internet and on-line bibliographic databases provided insight on the penetration level of EPP in Federal agencies and in readily available non-EPA information.
- An exploration of Federal government reports and materials uncovered insight regarding potential research approaches (e.g., Federal-sector purchasing models, target research audience, focus on purchasing processes or specific product/service purchases).

For each of these areas, the data collection methodology used and key observations from the data are reviewed in the following section. A detailed bibliography is presented in Appendix D.

Existing EPA Materials and Reports

Methodology: *Review of information materials and reports provided by EPA.*

Finding: *EPA uses a shotgun approach to outreach.*

A review of the EPP program communications plan (U.S. EPA, no date), indicated a “shotgun” approach to outreach—an approach practiced by many government programs. Because this approach offers “something for everyone,” it stretches limited budgets and fails to match appropriate outreach mechanisms with target audiences.

This study provided insights on the success of this approach versus a focused outreach effort on a single audience. It also explored:

- the relationships within and among audience members;
- the applicability of multi-audience materials;

- the existence of high-impact audience sectors that should receive intense, focused outreach; and
- whether the materials and outreach meet priority and immediate needs.

Environmental Scan of EPP Penetration

Methodology: *Internet-based searches and on-line bibliographic databases.*

Finding: *There is limited penetration of EPP materials.*

- In general, Internet and other on-line searches reflected a very limited penetration of EPP into existing literature and articles other than on the Web sites of EPA, the U.S. General Services Administration (GSA), the Department of Defense (DoD), the Office of the Federal Environmental Executive, and others charged with carrying out “Greening of Government” Executive Orders.
- Detailed and more complex searches reveal that a few Federal agencies have developed their own internal policies and programs related directly to EPP (e.g., the National Aeronautics and Space Administration (NASA), the Department of the Interior (DOI), and DoD).
- Often, references to EPP were made in the context of policies or reports relating to affirmative procurement.

This research suggests that EPP has not penetrated deeply into the information network that facilitates purchasing practices at Federal agencies.

Other Government Resources

Methodology: *Collection and review of Federal government reports and publications.*

Finding: *Washington, DC, is a primary geographic area for this study.*

Much of NuStats’ research focused on the Washington, DC, metropolitan area, including Northern Virginia and Maryland, for two primary

reasons. First, the majority of Federal Executive agencies are headquartered in this geographic area, and could provide a large pool of respondents from which to recruit.

Second, a recent GSA Federal Procurement Data System report (GSA, 1999), revealed that Washington, DC, has been one of the top 10 areas by procurement for the last five years (others were California, Virginia, Texas, Maryland, Florida, Missouri, Massachusetts, New York, and Tennessee). The report further identified the top civilian agencies, DoD facilities, and contractors within each state. This information supports NuStats' decision to conduct research with DC-based Federal employees.

Finding: *A variety of resources facilitates target audience identification and selection.*

Several resources provided insight into the procurement and acquisition workforce and facilitated identifying, defining, and contacting the research audience.

- Two reports identified the major classifications of personnel in the procurement and acquisition workforce (FAI, 1998; U.S. OPM, 1999). These resources helped identify “buyer” study participants.
- The ARNET database of Government Training and Development Resources (OFPP, 2000) identified key education and training sources for this workforce. Some of the following resources were useful in recruiting study participants.

- Defense Acquisition University,
- Air Force Acquisition Training Office,
- Federal Acquisition Institute,
- GSA's Trail Boss Professional Development Program,
- Defense Systems Management College,
- Navy Acquisition Center of Excellence,
- Federal Mediation and Conciliation Service,
- National Contract Management Association,
- National Association of Purchasing Managers,
- Project Management Institute,
- Council of Logistics Management,
- International Association of Contracts and Commercial Managers, and
- National Institute of Government Purchasing, Inc.

- Nearly all Federal agencies are required to produce an annual forecast of contracting and subcontracting opportunities that identifies the type of procurement or acquisition activities projected for the fiscal year, along with a contact person, including phone and/or e-mail address. These reports were used as a resource for the study's participant recruitment.²
- GSA's *Federal Procurement Report* (1999) identifies amounts (volume and expenditures) of products and services categorized by agency and contractor. This resource was useful in designing the research recruitment approach.

² Forecasts from the following agencies were used in this study: the U.S. Department of Energy, DOI, the U.S. Department of Justice, the U.S. Department of Labor, the U.S. Department of Education, EPA, GSA, the U.S. Department of Health and Human Services, and the Veterans Administration (VA). On-line copies of these forecasts can be found at each agency's respective Web site.

Qualitative Research

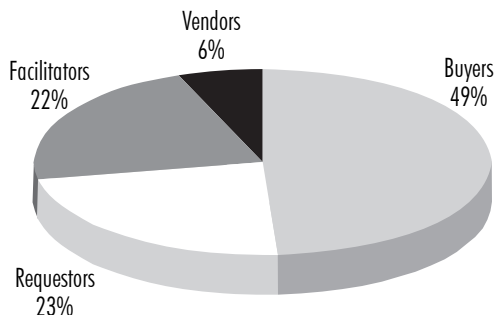
This section reviews the research conducted by summarizing the interviews and identifying the participant mix by role and agency. It also reviews the study’s findings by theme and then by Learning Question.

Research Overview

NuStats conducted a total of 133 qualitative interviews using a combination of one-on-one, dyad, or triad in-person and telephone in-depth interviews, and mini/focus groups.³ In general, two types of interviews were conducted: “Full” and “Tools.” “Full” interviews covered all five Learning Questions. “Tools” tests addressed Learning Question D and included in-depth focus on the utility of specific EPP tools. Table 2 summarizes the types of interviews and audience mix.

Of the people interviewed, most were civilian (63%) or military (31%) personnel, with the remaining 6% being non-government entities (e.g., vendors).⁴ By purchasing role, most people were buyers (49%), and of those, 26% were bankcard holders (see Figure 1).

FIGURE 1
PARTICIPANT PURCHASING ROLES



Appendix E provides a breakdown of participants by agency and by interview type.

Key Findings

This research led to the development of eight broad findings:

- Executive Order provisions on the “Greening of Government” are not perceived by study participants to be mandates.
- Agency- or department-specific mandates motivate Federal purchasers more than government-wide Executive Orders.

TABLE 2
OVERALL CUMULATIVE INTERVIEWS

Audience Mix	One-on-One		Phone		Mini/Focus Group		Total
	Tools	Full	Tools	Full	Tools	Full	
Buyers	1	11	10	17	8	19	66
Requesters	0	4	1	18	3	4	30
Facilitators	0	3	0	12	0	14	29
Vendors	0	0	0	8	0	0	8
Total	1	18	11	55	11	37	133

³ A mix of interview methods contributed to the balance of the depth and breadth in scope of the research findings. One-on-one, dyad (2 people) or triad (3 people) interviews were typically conducted in the office or on the telephone. Mini focus groups typically consisted of “in-office” discussions with 4-5 persons with similar study characteristics. Full focus groups represented group interviews of 6-8 or more people.

⁴ Of the eight non-government entities interviewed, two represented National Industries for the Blind regional coordinator and Javits-Wagner-O’Day, three DoD or DOE service contractors, and three industry product vendors.

- Study participants consider different factors when evaluating products versus services.
- Few study participants recognized the term “environmentally preferable purchasing.”
- Some Federal purchasers and requesters consider the environment in a purchase decision.
- Study participants believe the responsibility for doing EPP lies elsewhere.
- Federal purchasers and requesters rarely mention environmental factors as a primary purchasing consideration.
- Awareness of EPA’s EPP tools and resources is low among study participants.

This report presents these findings in two perspectives: (1) in this section, each finding is discussed as an independent finding in a broad context as it relates to Federal purchasing, and (2) in the following section, the findings are discussed in the context of the five key Learning Questions that guided this research.

The following is a discussion of specific study findings that support each key finding.

Executive Order provisions on the “Greening of Government” are not perceived by study participants to be mandates.

A common theme that arose in this study was that for Federal employees to comply with EPP, they must perceive it to be mandated—i.e., “You must do this.” Participants agreed that if they are told they must do something, they will. A contradictory perception held by many study participants was that even though the “Greening of Government” initiatives are mandated by Executive Orders, they were not perceived as a requirement.

The key to interpreting this finding is to understand the use and definition of the term “mandate.” Participants applied this term to a wide variety of items. The following examples of their perceptions of “mandate” ranged from policy requirements to regulatory requirements to purchasing routes:

- internal policy related to purchasing;
- requirement to purchase from GSA or the Defense Logistics Agency (DLA);
- requirement to purchase from Javits-Wagner-O’Day (JWOD), Federal Prison Industries, National Industries for the Blind (NIB), National Industries for the Severely Handicapped (NISH),

the Federal Prison Industries (commonly referred to as UNICOR[®]), etc.;

- audited activities;
- management directives;
- direct or implied to be part of agency mission;
- specifications for products or services; and
- Federal Acquisition Regulations (FARs).

When asked to explain why they did not perceive Executive Orders to be mandates, they often cited the lack of enforcement. One participant cited the recent Executive Order 13149 as being taken more seriously because it contains an element of enforcement:

“The most recent Executive Order has ‘teeth,’ requiring agency reporting on fuel usage. DOE made sure it had teeth. Upper management is paying attention to this one and so are fleet managers who normally don’t know about Executive Orders.”

Participants agreed that Federal employees would practice EPP more frequently and would accept environmental considerations if EPP were incorporated into existing mandates—i.e., what they perceive as being required.

“Most people need to have it mandated. They need something concrete to follow, like a policy or stated procedure.”

“Mandates make people do it.”

In addition, many participants agreed that enforcement is a necessary component of a successful EPP program, stating that mandates would be even more effective if there were consequences of not practicing EPP. One person cited:

“It would be practiced more if it were more forcefully mandated. What are the repercussions for not doing it? If there were a compliance mechanism, more people would do it.”

Some participants shared that they prefer being “told what to buy,” because it makes their job easier. They believe that researching vendors and products that comply with EPP would take too long and would impede the purchase process. Related to this is the belief by a significant number of buyers that products purchased from GSA, DLA, or other mandatory sources (e.g., JWOD, UNICOR[®]) comply with Federal environmental purchasing requirements. One participant put it this way:

“We are so busy. We are told to buy from certain sources like the Blind or Skill Kraft, so we assume that they are complying.”

Several participants suggested that a time-saving approach would be to designate these products with a logo or symbol “like the ENERGY STAR™ label” or “like the seal of Good Housekeeping.”

Agency- or department-specific mandates motivate Federal purchasers more than government-wide Executive Orders.

An issue imbedded in “mandating” EPP is that where the mandate, or perceived requirement, comes from makes all the difference regarding whether it is practiced. As mentioned previously, some participants believe that an EPA mandate or an Executive Order holds little weight with Federal employees. Many voiced the opinion that the mandate should come directly from top management within their own agency. Participants suggested that the “trickle-down approach” was likely to be more effective if top managers demonstrated their support for EPP by encouraging their staffs to practice it.

“The head of our agency should be the prime contact. We look higher up in the agency for purchasing information and policy.”

“Contracting officials are aware of the ‘green rules,’ but carrying them out falls through the cracks. It is not a priority of upper management and has never had high-level agency attention.”

Several participants reported that they do not practice EPP because they do not think that the rules apply to them or their agency. One civilian buyer responded:

“A lot of our purchasing is done overseas. The U.S. rules don’t apply to services conducted outside of our country.”

A participant representing an agency with an environmental mission added:

“I’ve practiced it because it’s what we do. I don’t think other departments without this mission take it seriously.”

Study participants considered different factors when evaluating products versus services.

Many participants stated that when evaluating products or services, they consider a variety of evaluation factors according to the type of product or

service purchased. Most study participants agreed that it was difficult to identify one set of factors that they routinely used.

Even so, cost, along with quality, reputation, and performance, were frequently cited. Best Value was frequently mentioned, but more often by DoD participants. Bankcard holders cited cost almost exclusively, and purchasers of services placed less emphasis on cost.

Many participants stated that when evaluating products or services, they consider a variety of evaluation factors according to the type of product or service purchased.

There is some indication that the decision-making process for purchasing products and services is somewhat different. A few participants mentioned they consider slightly different factors for products than for services. For products, these persons listed a similar set of factors or decision criteria they use when making a purchase decision, including cost, reputation, ability of vendor/source to meet the specifications, and availability/delivery. On the service side—for example, when contracting out for janitorial services, landscaping, and operations support services—that list was modified. Factors heard repeatedly were past performance, quality of vendor’s work, ability to meet specifications, and cost.

NuStats observed several trends that drive decision making regarding the purchase of products and services.

- For products, observed trends include:
 - using a government-provided bankcard, especially for office products;
 - purchasing on-line using GSA Advantage!;
 - researching products and vendors on-line using the Internet; and
 - using government-wide agency contracts for Information Technology (IT) and other large-scale products.
- For services, observed trends include:
 - some use of bankcards;
 - use of teams for development of specifications; and

— use of government-wide agency contracts for IT and other large-scale services.

Contrary to this, some participants shared that whether they are purchasing a product or service makes little difference. Another person went one step further to say that selecting factors is more case-by-case, which requires some judgement.

“It is a business decision, and more often than not it is just based upon common sense. It is not always the same.”

On the other hand, one person stated another common theme:

“First you consider the cost, and then you apply factors.”

Buyers frequently stated that requesters normally ask for products with which they are familiar and already have confidence in that product’s performance and/or brand name. One buyer put it simply:

“The need drives the purchase.”

A number of participants (primarily from DoD) shared that for some support services—e.g., technical, contractual, custodial—the contractor is responsible for making purchases of products and services. They further shared that contracts rarely, if ever, stipulated how the contractor should “get the job done,” and that applied to purchasing as well.

Environmental factors were rarely mentioned, if at all, without probing. When asked whether they consider environmental factors for service purchases, several participants commented that they do, but not as routinely as when purchasing products. One person suggested that environment should be an evaluation factor for Best Value. On the other hand, some perceived that consideration of environmental factors might be at the expense of Best Value.

Other participants explained that they do not consider environmental factors because it is arduous and would take too much time.

“Because of rush purchasing, there’s no time to hunt around for an environmental product.”

“I just want someone to tell me which products are environmentally friendly. I’ll buy them.”

Many buyers reported using environmental factors in their contract clauses. Most stated that they obtained these clauses from the FAR, and a few provided more specific sources:

- Section K: Certifications and Representations (references to the Clean Water Act and Clean Air Act),
- FAR: Ozone-Depleting Substance clause, and
- Agency FAR clauses on recycled paper.

Few study participants recognized the term “environmentally preferable purchasing.”

There was very little recognition of the *term* “environmentally preferable purchasing” among most study participants, with the exception of some facilitators (e.g., pioneers, policy developers, “Greening of Government” workgroups). It was not unusual for participants to comment that they “may have read something about it” or report that “a woman came and talked to us about it once.” But very few interviewees could support these statements with a reference point regarding the source from which they heard or read about EPP.

Once the term was defined, buyers easily grasped the *concept*, but most stated they knew very little about the specifics of EPP. Concepts that resonated strongly with these individuals were those that were already familiar to them as purchasing vernacular, including the concept of multiple attributes, “making tradeoffs” between environmental attributes, and conducting life-cycle costing. For instance:

“I can relate to the concept of life cycling. This means taking into account how much it will cost initially and comparing savings over the long term. I do that anyway.”

“The multiple attributes means a lot because of Best Value. Making evaluation tradeoffs is what we do, anyway.”

Several participants thought that the terminology “environmentally preferable purchasing” was meaningful, but a little wordy.

“It says a lot, but it’s a mouthful.”

“Environmentally sound products is easier to say.”

Some people preferred a shorter, catchier, easier to use term:

“Green purchasing is easier.”

“Buying green. Something catchy. It has to mean something to people.”

Only a very few participants could not grasp the term at all. As the following comments indicate,

these individuals think they need more information to understand it:

“The term is not okay. I need examples of what they mean, not just a definition.”

“It is too much trouble to understand. It will take a lot of education to make sure everyone understands it.”

The participants who recognized the term cited the following as the sources from which they had heard it:

- Fed Center, (www.fedcenter.com);
- another person (facility manager, pollution prevention coordinator);
- GSA and DLA catalogs;
- Material Safety Data Sheets (MSDS);
- procurement staff (“They train the program offices”); and
- internal memoranda.

Several participants shared the opinion that EPP had not really caught on yet, but were convinced that the EPP awareness level was growing:

“In the Department of Defense, there is more awareness now than ever before, but there is still a long way to go.”

“We are just starting to hear about it...especially in terms of office supplies.”

“With time and training, people will eventually learn it and they will do it.”

Some Federal purchasers and requesters consider the environment in a purchase decision.

A major benefit to qualitative research is the ability to probe deeper into thoughts, ideas, or perceptions. As mentioned in the previous finding, most participants cited little recognition of the term EPP.

During the interviews, however, NuStats’ researchers were able to explore the types of factors and decisions that contribute to purchasing decisions. Two important findings surfaced:

1. In some cases, purchasers were very used to evaluating products based on multi-attribute considerations. Although they were not specifically considering environmental attributes, a number of interviewees recognized that the process they use is similar. They noted that they often have to consider and balance a variety of (non-environmental) factors and make tradeoffs among these factors. For example, the purchase of laptop computers with large memory capacity

equates to increased costs. The only difference with EPP is that a number of different environmental factors are considered and balanced at the same time.

2. In other cases, purchasers were already considering at least one environmental attribute in the process of evaluating products but did not make the connection with the environmental nature of the attribute(s).

A few participants identified purchases in which multiple attributes were considered. These generally included large-system weapons and IT acquisitions, building construction or renovation, landscaping, and facilities management.

Most participants reported making more single-attribute than multiple-attribute considerations. The types of considerations varied according to the types of products or services purchased. For instance, after some probing, respondents often cited environmental considerations for energy-efficient office and IT products, such as green lighting or ENERGY STAR™ computers; chlorofluorocarbon-free (CFC-free) products, products that contain recycled content, low volatile organic compounds (VOCs), or low toxicity; or fuel-efficient products. For services, participants primarily mentioned that they included environmental FAR clauses in contracts or, depending upon the service, focused on a single environmental consideration, such as non-toxic cleaning compounds for cleaning services or extended maintenance warranties for IT equipment service contracts.

Most participants reported making more single-attribute than multiple-attribute considerations. The types of considerations varied according to the types of products or services purchased.

Many participants stated that it sometimes does not make much sense to consider more than one attribute, while other times, it does. One participant illustrated this in the following example:

“For a simple, inexpensive purchase—for a single item, for instance—it might only make sense to consider one environmental factor. But for large purchases—such as for IT systems—more than one environmental factor might be considered as part of the overall mix.”

Study participants believe the responsibility for doing EPP lies elsewhere.

There was a perceived, shared responsibility for making environmental considerations among buyers, requesters, specifiers, and vendors. At the same time, there was also some finger pointing regarding when the decision making should occur. Some participants think these considerations would be best handled at the beginning of the purchase process (i.e., when the need is identified or the specifications are written), before it gets to procurement. One participant (buyer) put it this way:

"I assume someone else has the responsibility to make environmental considerations. I don't know enough about it."

Yet, even those who think the primary responsibility lies with the initiator, or specifier, support the idea that people at all points in the purchasing process should be aware of environmental preferability. Many participants, regardless of their role in an agency, voiced the need for a final checkpoint for making environmental considerations in the purchasing process. Also regardless of their job series, most people think that checkpoints are needed at the contract office level.

The study team noted that this perception was contradictory to the perception held by a majority of facilitators regarding who was responsible for making environmental considerations. Facilitators, who primarily set policy or promoted initiatives related to "Greening of Government," shared the belief that within their agencies, buyers did not hold this responsibility. In contrast, the research team observed that buyers shared one or more of the following opinions: (1) they needed to play a role in defining the environmental consideration with the specifier or requester, and/or (2) they should be part of the "checks and balances" to make sure environmental considerations are made.

During the study, NuStats observed a growing trend of forming multidisciplinary teams to develop purchasing specifications for large-system acquisitions, especially IT, building construction and renovation, etc. This was also recently cited as a trend in *Government Executive's* special annual issue (*Government Executive*, 2000). These teams include representatives from program offices, procurement, and environmental health and safety.

Examples of such teams were observed in both civilian and military agencies.

Federal purchasers and requesters rarely mention environmental factors as a primary purchasing consideration.

Very rarely did participants list a specific environmental concern when building the laundry list of factors or driving forces behind their purchase decision making. When probed further, they realized they consider environmental factors in some cases, usually depending on the nature of the product or service needed.

When asked to explain their decision-making considerations, participants mentioned that environmental factors come up at various stages in the purchase process. Buyers, in particular, incorporate the environmental FAR language into service contracts when the contract is being developed. People who write product specifications were more likely to mention that they make environmental considerations early in the purchase process.

Awareness of EPA's EPP tools and resources is low among study participants.

Very few participants were aware of EPP outreach materials, regardless of format (i.e., print or electronic). Most participants had never seen or heard of EPA or the EPP program tools. NuStats conducted interviews and focus groups with Federal employees to gauge awareness levels and to gain insight into how to (1) improve existing materials and (2) effectively reach the target audience.

Key Findings Organized by Learning Questions

Because the Learning Questions developed by EPA at the outset of this research are an important tool, it is critical to discuss the study's key findings in the context of those questions. Doing so illustrates the complex interrelationship that exists between the findings and addresses the underlying factors, attitudes, and behaviors that contributed to their formulation.

As shown in the Table 3, each of the findings can be interpreted in the context of at least one Learning Question.

TABLE 3
FINDINGS IN CONTEXT OF LEARNING QUESTIONS

Key Findings	LQ. A: What are the general attitudes, behaviors, and perceived information needs regarding purchasing?	LQ. B: What are the attitudes, behaviors and perceived information needs in defining environmental preferability?	LQ. C: What is the general awareness of the "Greening of Government" initiative?	LQ. D: What are the awareness levels and opinions about EPP outreach materials?	LQ. E: Are there opportunities to fit EPP into day-to-day procurement activities?
1. Executive Order provisions on the "Greening of Government" are not perceived by study participants to be mandates.	✓				✓
2. Agency- or department-specific mandates motivate Federal purchasers more than government-wide Executive Orders.	✓				✓
3. Study participants consider different factors when evaluating products versus services.	✓	✓			✓
4. Few study participants recognized the term "environmentally preferable purchasing."		✓		✓	
5. Some Federal purchasers and requesters consider the environment in a purchase decision.		✓	✓	✓	✓
6. Study participants believe the responsibility for doing EPP lies elsewhere.		✓			✓
7. Federal purchasers and requesters rarely mention environmental factors as a primary purchasing consideration.	✓	✓			
8. Awareness of EPA's EPP tools and resources is low among study participants.		✓		✓	

The key findings are presented in the context of the Learning Questions below.

LQ. A.: What are the general attitudes, behaviors, and perceived information needs regarding purchasing?

The Federal government purchasing system has become increasingly customer driven in recent years. Procurement officials and requesters of products and services alike overwhelmingly report that the greatest motivator in making a purchase decision or product choice is customer need. Buyers indicated that customers identify the need for a product or service and then make the initial decisions regarding the attributes or qualities that meets their needs. They offered that a requester's "need" is typically driven by the underlying factors, including the quality, technical capabilities and performance, cost, and immediate availability of a product or service. Representative comments include:

"I need it to last 30 years."

"I need to know that the maintenance crew is always 'on call' and will respond to my calls for service within an hour."

"I need it now."

Procurement officials and requesters of products and services alike overwhelmingly report that the greatest motivator in making a purchase decision or product choice is customer need.

Buyers reported that, more often than not, they are not involved in the initial decision making about the product or service specifications. However, participants suggested that a team approach to purchase/service decision making is a growing trend.

Several civilian and military agencies reported the use of multi-organizational teams to revise existing or create new specifications for large-scale product and service purchases. These teams consist of representatives from the primary program office (the technical staff), procurement staff, and depending upon the product or service, other agency experts who can contribute to the development of technical specifications or the development of evaluation factors. Examples of such experts are cost/benefit analysts or people with life-cycle costing

capabilities, facility managers, engineers, or people with ancillary technical expertises, such as pollution prevention or environmental protection. Participants report that the team approach provides a sense of "shared responsibility" in the decision-making process.

Some relevant comments made by participants are:

"For purchasing ADP equipment, computers, and other IT systems equipment, we follow guidelines that were developed from our agency's computer group, and a team evaluates the bids."

"On our base, we established a 'virtual team' that works as a network to design new facility specifications. Developing criteria collaboratively builds more buy-in from the field offices."

"A Product Standardization Group consisting of people from facility operations, the end users, and procurement is centralizing specifications for certain products and services."

Despite the growing trend of a team approach in purchasing, respondents generally struggled with identifying who has ultimate responsibility. Buyers often said they normally have little input on the development of specifications, but they agreed that they have input on determining or guiding the appropriate purchasing route.

Decision-making Factors

Overwhelmingly, buyers commented that their priority decision-making factor is "mandatory sources." They perceived that these types of purchases were "being watched" or monitored. Examples included:

- JWOD,
- NIB,
- NISH,
- UNICOR^{RN},
- GSA, and
- DLA.

When buying in greater quantity, participants also stressed that cost, convenience, and the type of product or service also drive the purchase source selection. For instance, JWOD, GSA/DLA, UNICOR^{RN}, and NIB/NISH were often mentioned for products and some services. When the costs for these products and services are higher, other purchasing sources were identified, such as government-wide agency contracts with

GSA/Federal Supply Service or other agencies for IT or competitive and open procurements for services.

Another motivator in making product or purchasing decisions is convenience. Sources perceived to be “convenient” and “easy” also drive purchase decisions. Some indicated that procurement officials are reluctant to change the way they do business, especially if they have been following a certain procedure or process for many years. More often, participants cited that there was “too much on my plate,” and taking the easiest route helped lighten their workload. For example:

“Staples is convenient and nearby. I go there on my way home from work or at lunch to pick up supplies.”

“People go with whatever purchasing route is easiest—this means what takes less time, not learning something new—and using commercial vendors they know.”

Convenience and ease of use also relate to the use of bankcards, a purchasing method that, according to respondents, is growing in popularity among many Federal agencies.

Whether a participant was a bankcard holder also made a difference in purchase decision making. The credit cards offer the option of purchasing products and services up to a fixed dollar limit, and purchasing directly through a commercial source (e.g., Office Depot, Staples, or a service provider).

It is noteworthy that buyers with these cards tended to report that they would continue to use a mandatory source prior to using a commercial source. They cited that these mechanisms were well known to them. However, cardholders who are not procurement officials rarely mentioned any knowledge of this option.

Other factors commonly mentioned include:

- Many participants frequently mentioned Best Value. Within DoD, it was referenced as essential in “protecting the government’s best interest.” In using this factor, one person stated that “tradeoffs are the key,” citing cost, technical specifications, and performance among the factors considered. Another participant suggested that “the best way to get EPP practiced more widely by procurement officials is to introduce it as a factor for the Best Value mix.” However, respondents, mostly buyers, expressed concern over how to make the

environmental tradeoffs and who should make them.

- Performance-based factors were also mentioned. In using these factors, participants reported specifying “what we want the contractor to do, not how they need to do it.” DoD contract officers, who are responsible for major acquisition or general service contracts, mentioned this very often.
- Local concerns enter service contracts, such as fleets, landscaping, and new construction. Related to this were state regulations or requirements that were associated with purchasing. One participant shared that during a landscaping and erosion-control project, the project team needed to consider local weather concerns in the selection of its work materials. The team selected an alternative to plastics for erosion control that included the use of coconut fiber mattress and biodegradable staples. For stabilization of riverside banks, willows and reeds were used.

Information Sources

Though not mentioned frequently, some respondents felt electronic commerce (e-commerce) offered an easy and convenient method for purchasing and for making purchasing decisions. NuStats observed little first-hand experience in e-commerce among respondents. GSA Advantage! was referred to as the e-commerce site most used by Federal purchasers. When asked why they like this site, most said it is easy to understand and use and it allows quick purchasing. The most frequently cited non-government e-commerce Web site was FedCenter.com. On further probing, NuStats found that none of the participants actually made a purchase from this site. Reasons included not having a government bankcard and mistrust, e.g., “I am not so sure about this e-stuff.”

Some respondents felt electronic commerce (e-commerce) offered an easy and convenient method for purchasing and for making purchasing decisions.

However, most people were receptive to the Internet and recognized it as a useful source of information pertaining to government purchasing. Web sites

that were most frequently named were government-sponsored, and include:

- ARNET,
- Planet GSA,
- Small Business Administration's Pro-Net, and
- Defense Acquisition Deskbook.

Nearly all the participants also cited their own agency's Web site pertaining to acquisition. Participants indicated that they use Internet resources to obtain or research procurement-related policy and regulations, to locate vendors, to access product catalogs, and to obtain pricing/product information. There is untapped potential for e-commerce in Federal purchasing.

LQ.B.: What are the general attitudes, behaviors, and perceived information needs in defining environmental preferability?

Participants were asked to define two sets of concepts:

- environment and green, and
- environmental purchasing and green products.

Their responses provided insight on how each concept contributes to their attitudes regarding environmentally preferable purchasing.

Regardless of their purchasing role, participants viewed "environment" as a broad concept: "It's where we live," "clean air," and "clean water." "Green" was perceived as a concept they applied to an individual's behavior or an action: "It has to do with buying or doing something to protect our environment or health, such as recycling or purchasing natural products. It's getting back to basics in how we live."

When probed further, buyers eventually made the connection with these concepts to the purchasing environment, which was not surprising, given that the topic of discussion during the interviews was Federal purchasing.

Practice of Environmental Purchasing

When asked about "environmental purchasing" and "green products," buyers viewed these terms differently. Many interpreted "environmental purchasing" as incorporating FAR language into contracts. This type of participant often referenced FAR clauses related to adherence of the Clean Water and Clean Air Acts and the requirement to use

recycled-content paper. "Green products" were reviewed as specific types of products that comply with social, or culturally sensitive, issues.

When participants were asked whether they practice environmental purchasing or purchase green products, their responses varied. Several responded that they or others in their agency do not make environmental purchasing considerations because it has little or no relevance to their agency's mission or what they purchase.

"It [environment] is not within my agency's mission, so there is no directive or policy requiring us to practice it."

"I purchase program support services, such as research studies and technical reports. There's no opportunity for environmental purchasing."

"I only purchase support and operations contracts for large defense weapons systems."

"Most agencies probably wouldn't make those considerations unless they dealt directly with environmental issues."

Other participants suggested the reason why they, or their peers, do not make environmental purchasing decisions is because they don't have the time or the personal interest to do so.

"Just like with everything else, unless someone has awareness of an issue, they don't understand how it impacts them, and they don't do it. It's the same with making environmental considerations. Unless someone is aware that it has a personal impact, they probably won't take an interest in it. They need to know how it will affect them personally to really care."

"Time is an issue. My time is valuable. I do what I have to do and I don't go beyond what is required of me."

Finally, a smaller portion of participants readily agreed that they conduct environmental purchasing. The underlying motivator to doing so is a personal interest or a sense of civic duty as a Federal employee. Several people noted that in their agency there is a strong advocate of environmental purchasing and that this person motivates others to do so.

"Persons who are environmentally conscious are more likely to do it or want to do it or take responsibility for doing it."

"The environment is my soapbox. I do it at home and at work. People who care similarly do it. Otherwise, they don't, and often it isn't because they are not aware—it is because they prefer to stick to their routines."

NuStats observed that one reason for not readily mentioning any consideration of environmental factors during their purchasing decision making could be because the term “environmental” may not be defined or understood the same way by every Federal employee. Participants frequently interpreted this term according to the environmental issues their agency considered important or were concerned about. Environmental issues that were cited included:

- Health and Human Services (HHS) laboratory and VA facility participants shared interest in health care-related environmental issues, including chemicals used in laundry and cleaning facilities, pest control, reduction of non-regulated waste, and chemical substitutions, such as mercury.
- Treasury (Bureau of Printing and Engraving) participants clearly stated concerns about the use and management of process wastes.
- DOE and HHS laboratories shared interest in solvent substitutes.
- GSA fleet managers were interested in the use of alternative fuels, vehicle mileage and gas consumption, and re-refined oil.
- DOI and nearly all facility managers of other agencies expressed interest in environmental health and industrial hygiene issues, including the presence of lead and asbestos in their buildings.
- The U.S. Air Force and the U.S. Department of Agriculture’s Natural Resource Conservation Service were interested in bio-based products.

This careful probing revealed that some Federal employees are practicing EPP, even though they are not aware of what EPP is.

Obstacles to Environmental Purchasing

Participants shared their opinions about the obstacles to practicing environmental purchasing. One perception-based hurdle is associated with the “myth” that environmental products are “no good.” When asked to provide an explanation, they cited experiences with recycled paper in printers or photocopy machines, or refurbished toner cartridges that do not perform as well as new toner cartridges. When asked to cite a recent experience, nearly everyone said their “experience” was based on a product that was used several years ago (some 10 or more years ago), or they explained that they did not

have personal experience but rather their knowledge was based upon “hearsay” from other colleagues.

Early in this study, it was evident that negative perceptions of environmental products or purchases were based on rumors or a bad experience from years ago. Several participants indicated that this barrier is slowly “going away.” One person explained,

“People who work on my base never ask for environmental products. This is because they remember the days when the copier paper jammed the photocopiers or the toner cartridges stopped working after a day or two. However, if I buy these products now they will use them without complaining and really don’t say anything.”

“Years ago, these products were ‘junk.’ But now it’s changing.”

Lack of technical information and skill was frequently mentioned as an obstacle, including not feeling comfortable with making tradeoffs between environmental factors or not knowing how to craft environmental specifications. On the other hand, participants acknowledged that in their normal purchasing decision making, they are used to making tradeoffs on other factors. Others observed that life-cycle costing could easily incorporate environmental factors. Participants offered the following suggestions:

“We need guidance that equates making environmental tradeoffs with the kinds of tradeoffs we make on a daily basis.”

“EPA should designate a technical person or offer a hotline as a resource we can use to help us make these kinds of decisions.”

“When I need help, I go to our environmental department for technical advice.”

Lack of technical information and skill was frequently mentioned as an obstacle.

Finally, when asked how barriers to practicing EPP could be removed, respondents often suggested providing more information on practicing EPP. Responses included:

- Educate people in niche areas (e.g., specification writers, facility managers, environmental health and safety officers).

- Provide information on making tradeoffs between environmental factors, or establish Best Value environmental factors.
- Assign an EPA contact for each agency to provide technical assistance, training, and general EPP promotion.
- Create more case studies (e.g., IT, major acquisitions).

Information Sources on Environmental Purchasing

The study identified that participants' information sources on environmental purchasing are not varied. For instance, buyers and regulators often cited their procurement office as a credible source for information. Buyers of services most often cited the FAR, while buyers and bankcard holders alike deal directly with vendors. NuStats observed that participants would frequently seek out information within their own agencies. Several people referenced their internal procurement Web sites, e-mail messaging systems, bulletin boards, and word of mouth as their primary means of information transfer.

Participants frequently seek out information within their own agencies.

LQ. C.: What is the general awareness of the "Greening of Government" initiative?

In general, "Greening of Government" has low prominence and relevance in comparison to other purchasing-related priorities. By far, participants who acknowledged awareness of the initiative were only vaguely aware of it, as the following comments illustrate:

"It is the environmental way to purchase things."

"The public is watching what the government is doing for the environment—we are setting an example."

Only a very few could cite specific Executive Orders by name without prompting—those who could were primarily the facilitators. Others familiar with the initiative were buyers who have participated on inter-agency workgroups related to the EPP initiatives or those who purchase one specific product or service that is a focus of an Executive Order (e.g., computers—ENERGY STAR™; paper—recycled content; fleets—alternative-fueled vehicles).

Awareness was more likely to be cited for the following:

- FAR environmental amendments, and
- Executive Orders 12873, 13123, and 13101.

Many participants thought that their peers were not complying with these requirements. One person guessed that only 25% of their purchases are in compliance. When asked to explain why, the lack of enforcement was the most commonly cited reason. Participants offered:

"No one does [comply] routinely—and there isn't anyone checking to see if we are in compliance, either."

"Someone needs to monitor progress, and we need accountability mechanisms. Upper management needs to support these checks and balances."

Several people felt that they needed stronger leadership from their upper management in making this more of a priority in their agency. They also shared the opinion that there is too much information to process, given the many Executive Orders and policy letters related to the environment.

LQ. D.: What are the awareness levels and opinions about EPP outreach materials?

Both written and Internet-based EPP outreach materials were tested during this study. Regardless of the format of the material, awareness levels were generally very low among study participants. Moderators observed that participants from agencies with management that supports "Greening of Government" initiatives or with an agency mission closely associated with environmental issues were aware of some materials. Participants most frequently cited *EPP Update* as a familiar tool.

Once they were made aware of the variety and range of materials, participants were generally surprised that EPA has so much information available. Though the majority of participants are not familiar with the materials, they questioned the utility of the materials. Participants were asked to comment on the format and types of materials they preferred. There were strong preferences for materials that save time, are easy to use, and pertain directly to the types of products or services that they buy. One person shared,

"I don't waste my time on information materials that guide my product buying because it takes too much time. If I have a question, I prefer to ask someone."

The following list details the types of materials they prefer:

- step-by-step descriptions (e.g., the “At a Glance” sections of EPA’s *Promising Practices Guide* were preferred over detailed descriptions;
- checklists;
- product lists that include cost and performance, and identify vendors; and
- vendor lists with contact information.

Comments on EPP Outreach Materials

Specific reactions to written materials include the following comments:

- EPA’s *EPP Update* (newsletter):
 - “Include hole punches so that it can be filed in a three-ring binder.”
 - “It is eye-catching with nice graphics and easy-to-read text.”
 - “It would be a useful resource—easy to file and easy to use.”
- Proposed guidance brochure:
 - “The length is good.”
 - “The summary is better than a detailed guidance. Just tell me what I need to know.”
- Case studies:
 - “I’ll only use these if the case study corresponds to my purchases.”
 - “State case studies don’t have much relevance to how I purchase within the Federal government. Provide more Federal government case studies.”
 - “It’s too hard to transfer others lessons to exactly the circumstances I deal with.”
 - “They are too long. Cut to the chase.”
 - “The case studies helped explain the process, but I wouldn’t have read them or even opened them unless they dealt with the types of services I purchase.”
- Catalogs (GSA and DLA Environmental Products Guides, U.S. Postal Service (USPS) Guidance, Green Seal documents):
 - “The USPS format works for me. I like the color codes [red, yellow, and green] because they are easy to understand and they just make sense.”
 - “I like the DLA’s vendor information. This is exactly what I need.”

“The GSA catalog looks like an Office Depot catalog.”

“The Green Seal documents are too wordy.”

When asked how they prefer to receive materials, participants cited the following:

- Networking via task groups (citing the National Academy of Sciences Federal Facility Council, the DoD Joint Committee on Environmental Attributes, various internal agency roundtables, the American Hospital Association EPP Task Group, and various regional Federal Facility Roundtables).
- Conferences/workshops/training.
- Internal agency information channels, including electronic routing of materials and e-mail announcements, and key procurement contacts.
- Guest speakers on procurement issues at internal agency meetings and workshops.
- Trade publications/journals, including:
 - *Federal Times*,
 - *Federal Employees News Digest*,
 - *Government Executive*,
 - *Federal Computer Weekly*,
 - *Public Purchaser*,
 - *Clean Cities* newsletters,
 - National Contract Management Association and other profession association magazines, and
 - GSA newsletter.
- Web sites—the following were mentioned multiple times:
 - GSA Advantage!,
 - Planet GSA,
 - ARNET,
 - internal sites (DOI’s stood out),
 - National Institute of Standards and Technology; Building for Environmental and Economic Sustainability,
 - PRO ACT,
 - Fedcenter.com, and
 - vendor sites.

Comments on EPP Electronic Tools

A second objective of this Learning Question was to collect feedback on EPP electronic tools. Participants were asked to review a set of tools before a pre-arranged one-on-one or group interview.

Awareness of the Web site was very low, as most interviewees had never heard of or been to the site before we contacted them.

Only a handful of them actually went through the site prior to the interview. In terms of the other study goals outlined earlier (e.g., explore how materials are used in the decision-making process, identify other materials needed), we learned that most Federal employees would not use the Web site frequently to make purchase decisions, unless the site was tailored to meet their needs—for example, having product and vendor lists with compliance information, showing price comparisons, and allowing the opportunity to quickly find an answer.

Initial reactions to the Web site were positive and helpful:

" This is great stuff. "

" The links are very helpful—a link to the GSA and DLA schedules would be great. "

" Include the JWOD.com link. "

" This is good. Almost all the tools need up-front, visible text on who the users of the tools are and how the tools will help them. "

" All contract officers should use consistent contract language. A Web site like this, containing contract language, would make this possible. "

Many helpful comments were offered. One theme heard over and over in both the information and the materials interviews was to make it easy, keep it simple—the procurement process is complicated enough already. Several interviewees also suggested that more training on EPP is needed.

Some comments were conflicting regarding the value and benefit of these materials, reflecting that they have utility for some Federal purchasing decision makers:

" Specification writers would only use these tools if forced to. "

" These materials are really useful for specification writers. "

" Unless the tools deal directly with what I buy [research

services], I have no need for them and won't use them. "

" The case studies are very helpful. I like learning from others' experiences. "

Additional comments included:

" These tools are not for the 'average Joe.' This is complex stuff—the normal GS-7s and below won't be able to use them and wouldn't know what to do with them. Purchase card holders can't use these tools either. "

" I like the 'AskJeeves.com' Web site. This one should mimic a similar question-and-answer approach. "

" Model solicitations with environmental-related contract language embedded in them would help me make decisions. "

Participants expressed a need for specific information that they could not readily find with the tools. This includes the following: contract language, instructions on how to write specifications, or sample specifications that they can "cut and paste." When shown these materials in several of the Internet tools, several participants recommended that they be highlighted as a separate tool or button. Some thought that EPA should do a better job of describing up front what the tools were and how to use them. They wanted tools specific to their needs. When asked how these Internet tools could be improved, their recommendations included: a more comprehensive database of products, along with vendors who comply with EPP; more relevant case studies; links to mandatory sources and to GSA; and tools similar to the "cleaning wizard" that relate to the products and services they commonly purchase.

In general, electronic tools seem preferable to printed ones, though that was not true for every single person interviewed. Many people commented that the Web site should have lots of links and references, and should be a resource that Federal employees could turn to for help with contract language, writing specifications, and making purchase decisions.

Post-interview Evaluation on EPP Electronic Tools

A post-interview was conducted with these participants one month following the initial interview to ascertain whether they accessed any of the Web tools once their awareness levels about them were raised. Of the 13 whom were reached, all

Many people commented that the Web site should have lots of links and references, and be a resource that Federal employees could turn to for help with contract language, writing specifications, and making purchase decisions.

remembered participating in the initial interviews and recalled the EPP Internet tools. Nine of them had not revisited the Web site, four had, and five referred the tools to other people, including an environmental specialist, “people on my purchasing team,” and contracting staff.

The following summarizes their responses:

- Nine people had not revisited the Web site.
 - Most said that they had just been too busy dealing the end of the fiscal year since the interview.
 - One person stated that he thought “the tools were just too difficult to use.”
 - Another observed that “the tools did not provide me with relevant information.”
 - One person said that his agency did not have to comply with EPA standards, since it just purchases research and studies.
- Four people had revisited the site.
 - One person was curious as to whether the EPP Web site could be accessed through ARNET. This respondent did not use the site, but was pleased to learn that the site was accessible through ARNET, and “bookmarked” the site for future use.
 - Another person met with her “systems person” to check that all of the tools could be accessed without “glitches.” She reported that the Web site worked fine on her computer, and added that she has not used any of the tools since the interview because she has been too busy.
 - Another person had accessed all the tools, except the Tips on Greening Conferences, citing the success stories to be the most useful to date.
 - A focus group participant tried accessing the site to see if she could do it on her own. She did not have time to spend on it, and stated that she did not easily see the relevance and utility of the tools. She suggested that, for each tool, the Web site should identify the target audience and describe why or how it will assist that audience member.
- Three persons thought they would visit the site after the fiscal year rush ended. One person said that he would use the tools to “develop purchasing policy,” and two thought they would use them to identify or locate vendors.

LQ. E.: Are there opportunities to fit EPP into day-to-day procurement activities?

To fit EPP into daily procurement activities, participants shared the belief that they must be mandated to do so by their agency management. They further agreed that EPP must be easy to do. In general, participants prefer to be told what to buy as it relates to environmental purchasing.

NuStats observed that understanding how the purchasing process differs between products and services will help EPA understand how best to target the right employees. Decisions about products may lead employees to consider a different set of factors than for what they select for services. How those factors vary can make a difference in how EPP is communicated.

Understanding how the purchase process differs between products and services will help EPA understand how best to target the right employees.

Awareness of EPP and the idea that different people share the responsibility for making environmental considerations also need to be taken into account. If employees—and more specifically top management—at an agency are not aware of EPP—in terms of language and identity—they are not very likely to practice it.

Also, the job function of the participant seems to influence the perception of responsibility. Although some participants (mostly buyers) stated “it’s not my job,” most acknowledged that several people were actually responsible for environmental considerations during the purchase process.

Participants provided concrete opportunities for incorporating EPP into their day-to-day activities:

- pollution prevention plans;
- waste reduction performance measures;
- master specifications (e.g., for construction, renovation, IT systems);
- comprehensive opportunity assessments⁵; and
- FAR boilerplate language (Sections 15 and 52).

Others shared the following recommendations:

“I see a role for EPP in the purchase of computers.”

“ If EPA produces any lists for products or vendors, use the GSA coding scheme. We are used to the GSA stock numbers, and vendors use them, too. ”

“ Just encourage a “Seal of Good Housekeeping” type of program so that we won’t have to change how we do business too much. It would be easier to look for a symbol or sign that designates EPP products or services. ”

“ Integrate EPP into ‘Best Values’—Look at 52.212.2. ”

“ See Part 15.101—the commercial clause on evaluation factors—this is a good spot for environmental factors. Provide guidance on how to make tradeoffs on environmental factors. ”

⁵ Cited by a participant from DOE’s Lawrence Livermore National Laboratory as a component of pollution prevention plans to reduce toxicity and hazardous waste generation in the facility.

Peer Review

Background

In past EPA studies, such as the 1999 Consumer Labeling Initiative Phase II Report, peer reviewers' comments have been informative and helpful. Given the potential impact of the recommendations deriving from the qualitative measurement report, the EPA wanted to determine whether we had gone about our research appropriately and whether independent researchers believed the recommendations were supported by the research. With these goals in mind, a peer review of the Qualitative Measurement of Environmentally Preferable Purchasing (EPP) Among Federal Employees in 2000 was undertaken. We hope that these collective efforts will further compliance with Executive Order 13101 that mandates environmentally preferable purchasing in Federal agencies.

Document Reviewed

The document reviewed was the Qualitative Measurement of Environmentally Preferable Purchasing (EPP) Among Federal Employees in 2000. The document contained the following major sections: 1) Executive Summary; 2) Project Overview; 3) Secondary Research; 4) Qualitative Research; and several appendices supporting the research. Appendices included: A) Research Design; B) Screening Protocols; C) Interview Protocols; D) Secondary Research Bibliography; and E) Interview Tracking. The document was created to report on a research study conducted by NuStats Research and Consulting under contract with the Pollution Prevention Division located within the Office of Pollution Prevention and Toxics.

Peer Reviewers

The peer review was conducted by six independent reviewers not employed by EPA and one employed by EPA's Environmental Monitoring for Public Access and Community Tracking (EMPACT) Program. Reviewers were selected based on their expertise or experience in environmentally preferable purchasing, consumer research and testing, or survey methods.

Reviewers included Dr. Charlotte A. Cottrill, Senior Science Advisor, EMPACT Program, EPA, Office of Environmental Information (OEI), Office of Technology, Operations and Planning (OTOP); Eric Friedman, Environmental Purchasing Coordinator, Massachusetts Operational Services Division; Pamela Gallion, Survey Manager, Cannon Center for Survey Research, University of Nevada, Las Vegas; Robert Guillemin, former Environmental Purchasing Coordinator, Connecticut Department of Administrative Services; Lara Sutherland, Senior Research Associate, INFORM, Inc.; Dr. Robert Thomas, Professor of Marketing, McDonough School of Business, Georgetown University; and Shapard Wolf, Director, Survey Research Laboratory, Department of Sociology, Arizona State University.

Charge to Reviewers

Reviewers were asked to respond to questions in five categories: Secondary Research, Study Design, Study Implementation, Study Results and Recommendations, and General Comments. For each of these categories, discussed below, the specific review questions precede the summary of reviewers' responses. The questions addressed topics such as information sources, survey methodology, participant recruitment, and the congruence of the findings with the research.

Summary of Reviewers' Comments

Secondary Research

Did the secondary research address the major sources of information and cover the appropriate issues to help define the research methodology and inform the key learning questions?

Most reviewers agreed that the secondary research covered relevant sources of information. A few reviewers made specific comments on secondary research. One reviewer suggested additionally surveying commonly read purchasing publications such as *The Public Purchaser* to see the general exposure of government employees to environmentally preferable purchasing in their routine readings. Another commented on the apparent focus on government information without

adequate inclusion of academic studies on consumers and organizational behavior. One reviewer pointed out that such a report usually describes the contractor process and role in the introductory section. In this case, EPA's relationship with NuStats should be defined.

Study Design

Was an appropriate methodology, in particular for both the screening and the survey, chosen to conduct this study so that the key learning objectives were effectively addressed?

Most reviewers felt the methodology was appropriate and one especially liked the multi-phase approach. Several reviewers commented on the participant pool and recruitment efforts. A couple of reviewers noted that despite the small pool of participants, the additional one-on-one phone interviews effectively complemented the research. One reviewer, however, felt that more creative incentives could have been explored, such as offering to give money to a designated charity. This reviewer also thought the study as a whole did not consider the effect of the "organization," instead disproportionately focusing on the role of individuals. As for the "doers" and "facilitators" distinction, one reviewer felt the distinction should be more clearly defined, while another reviewer felt "doers" were under represented in the Discovery Stage and "facilitators" under represented in the Exploratory Stage.

Study Implementation

Were the recruitment screeners appropriate to acquire the type of participants needed to conduct this study? Were the questions asked in the discussion guides appropriate and/or sufficient to acquire the necessary participant responses to address the key learning objectives of the study?

All reviewers seemed satisfied with the study implementation, except for concerns previously raised in the design section, such as the lack of attention to the "organization." One reviewer commented that the selection of example responses and quotations effectively illustrate findings, and authors quantify responses appropriately.

Study Results and Recommendations

Does the research support the findings? Do the report findings adequately and effectively address the key learning objectives of the study?

Most felt the research supported the findings. A couple felt the findings were somewhat obvious for those exposed to environmentally preferable purchasing on a daily basis. One reviewer pointed out that this study helps to fulfill the need for comprehensive and systematic documentation of environmentally preferable purchasing trends. This reviewer said a statement explaining that certain findings are obvious to specialists, but are needed for documentation, would make the report more valuable to those exposed to environmentally preferable purchasing on a daily basis.

A majority of reviewers commented on the scope of the recommendation section, noting that they expected the recommendations to be exploratory and not conclusive. Based on the learning objectives, they expected the recommendations of this qualitative study to clearly direct research for the quantitative phase of research, and felt the study fell short of this objective. Some specific suggestions were asking interviewees how willing they would be to participate in quantitative research, and presenting hypotheses for further qualitative and large-scale quantitative study. One reviewer felt the key findings should be written to be more independently informative because some readers will skip directly to this section.

General Comments

Please provide further remarks if there are any additional areas you would like to address or comments you would like to include.

In the general comments section, most felt the report was informative and conducted well. One reviewer commented that it was clearly-written and enjoyable for a reader with little familiarity with environmentally preferable purchasing. Another reader noted that suggestions for follow-up research should be clearly written so that readers do not consider the information presented conclusive.

Appendix A: Research Design

Research Approach

This study followed a three-stage research approach. This allowed for exploration and analysis on a general level at the beginning of the study, leading to a fine-tuning of the research objectives and understanding of the study population. Next, research hypotheses emerged from detailed, systematic observations and interpretation of behavior, which were then explored and confirmed in the final stage.

In a qualitative study, the activities of collecting and analyzing data, developing and modifying theories, and elaborating on or refocusing the research questions are usually happening simultaneously, each influencing all of the others. As was the case in this study, the researcher often may need to reconsider or modify any design decision during the study in response to new developments or changes in some other aspect of its design. The three-stage research design allowed mid-course modifications, contributing to seamless transitions from one research stage to another.

The three research stages are briefly summarized below. Details on each stage are provided at the end of this appendix.

Discovery Stage (December 1999 - March 2000)

- **Objectives:** Explore underlying motivations, barriers, and behaviors relating to Federal purchasing, in general, and identify study participants for subsequent research stages.
- **Methodology¹:** Two telephone focus groups (11 people), 9 one-on-one telephone interviews, and 5 one-on-one and 1 dyad in-person interviews.
- **Outcomes:** Led to the identification of the target research audience and systematic documentation of general purchasing practices.

Exploratory Stage (March 2000 - Early May 2000)

- **Objectives:** Observe and record EPP awareness levels, attitudes, and behaviors and awareness

levels and responses to EPP outreach tools (e.g., written materials, Internet-based); and develop research hypotheses.

- **Methodology:** Two focus groups (11 people), 21 one-on-one telephone interviews, and 3 dyad interviews.
- **Outcomes:** Led to the development of core research hypotheses and facilitated the development of a focused test of Internet-based EPP tools.

Confirmatory Stage (June 2000 - Late July 2000)

- **Objectives:** Hone-in on actionable steps, fine-tune research learnings, and fill research gaps.
- **Methodology:** Two focus groups (10 persons), 51 telephone or in-person interviews, 1 dyad and 1 triad interview.
- **Outcomes:** Led to a series of action step recommendations and clarification of a quantitative research approach.

Research Issues

A number of complexities, inherent in conducting research with Federal procurement officials and employees, arose in the early stage of the research, which influenced the research approach in several ways. NuStats encountered challenges in the following areas:

- selecting research approaches to maximize participation,
- crafting recruitment strategies for securing participation, and
- conducting “comfort zone” screening and interviewing to achieve full and open disclosure.

This section of the report discusses these challenges and identifies the actions taken to overcome them in the research design.

Selecting Research Approaches

The original research design emphasized the use of traditional focus groups in conjunction with one-on-

¹ Telephone and in-person interviews were conducted for an average of 45 minutes. The average focus group length was an hour and a half.

one, dyad, and mini-group interviews, all of which typically involve a financial incentive for participants. However, during the Discovery Stage, the study team learned that giving monetary incentives to participants was not allowed.² In qualitative research, such incentives are necessary as compensation for the time and effort of the participants. Without the capability to provide participant incentives, it was difficult to recruit participants for the focus groups.

The study team shifted from conducting evening focus groups to seeking opportunities to conduct focus groups during business hours. Additional, unexpected hurdles arose. Purchasing personnel, especially contract officers and purchasing specialists, have little flexibility in their work schedules, as they work under extremely tight timelines and provide customer service throughout the day. As a result, it was nearly impossible to schedule focus group sessions at a time that was convenient for participants. The study team learned, however, that the study population could easily participate in pre-scheduled or on-the-spot interviews. Therefore, during the Exploratory Stage, the research design successfully shifted to one-on-one interviews during office hours.

Additionally, a small number of focus groups and mini-groups were also held during the study at conferences and in other venues.

- Several one-on-one telephone interviews led to arranging some focus group and mini-group interviews during the Confirmatory Stage. These were generally held at the participant's place of employment.
- NuStats arranged four focus groups through "piggy-backing" onto meetings of existing groups, such as the Office of Management and Budget's (OMB's) Front-line Forum and the Office of the Federal Environmental Executive's Executive Order Interagency Group. NuStats conducted two focus groups at OMB, and two via a telephone conference call.

Crafting the Recruitment Strategies

Another set of challenges arose in designing a cost-effective and practical recruitment strategy. Identifying *qualified* participants with specific job

functions, such as contract officials and bankcard holders, required the use of existing lists and directories (e.g., acquisition forecasts, bankcard holder lists), intercept recruitment at conferences,³ and "snowball" or referral recruitment.

The use of existing lists was a highly successful yet time-consuming recruitment method. The lists often contained out-of-date or inaccurate information, resulting in additional attempts to reach and identify qualified participants.

During the Exploratory and Confirmatory Stages, some participants were recruited through referrals or the snowball sample. One drawback of using referrals is the possibility of creating a convenience sample, where participants are selected because they are easy to recruit. To prevent this, the screening protocol ensured that only those people who met certain criteria qualified to participate in the study.

Another recruitment challenge was contacting participants by telephone during office hours at their place of business. Recruiting and screening during business hours typically take longer than during evening hours due to voice mail, "cat and mouse" callbacks, and people not being at their desks due to meetings, vacations, training, etc. The addition of two NuStats recruiters resolved this issue.

Conducting "Comfort Zone" Recruitment and Screening Interviews

A final challenge presented itself through the inherent reticence and non-disclosing nature of one portion of the target study population: the procurement official. The nature of procurement work leads to a protective "firewall," where purchasing officials may be guarded and protective of their opinions and views. Because of this, some participants were initially reluctant to participate in the study. To address this reluctance, NuStats edited the screening protocol introduction to (1) disclose the sponsor of the study, (2) emphasize the independent nature of NuStats, and (3) ensure participant anonymity in the study report. Following this modification, recruitment improved dramatically.

² As is common with public organizations, policies and procedures prohibited the use of contract funding to provide a monetary or other incentive to pay Federal employee participants in focus groups.

³ Intercept recruitment and screening were conducted during the National Association of Contract Manager's annual conference in April 2000 and during the GSA EXPO in May 2000.

Sampling Plan

The study goal was to gain an understanding of the EPP program’s target audience: employees within the Federal government who make product and service purchasing decisions. This required a sampling plan that:

- identified the study population (the “sample universe”),
- outlined an approach for contacting participants (the “sample”), and
- set criteria for selecting and qualifying participants (the “screener”).

The Sample Universe

For the purposes of this research, NuStats defined two research populations that comprise the sample universe: “Doers” and “Facilitators,” based on their inherent job functions as they relate to purchasing within the Federal government.

“Doers” represent Federal employees who *make or coordinate the purchase of products and services*. This audience includes:

- government bankcard holders;
- contracting, purchasing, and supply specialists/managers (primarily the GS-1102 series); and
- service and product “requesters” or “specifiers.”

“Facilitators” represent Federal employees who set policies, share expertise, conduct training, or

provide product and service information. This audience includes management, training providers, “EPP Pioneers,”⁴ product and service suppliers, and people with specialized training or expertise (e.g., pollution prevention, environment and health, life-cycle costing) who provide decision-making assistance.

Table 4 provides an overview of the study population and the roles and responsibilities as related to purchasing.

The Sample

Identifying and recruiting willing participants who represent the relevant segments of a study population are necessary parts of research. To facilitate this process, the study team identified several strategies for obtaining target population contact information.

- Buyers were recruited using “intercept (on-the-spot) recruitment” at two procurement-related conferences: the National Contract Management Association’s (NCMA’s) annual conference in Washington, DC, and the General Services Administration’s (GSA’s) Expo 2000 conference in San Diego, CA.
- Buyers, requesters, and vendors were identified through Fiscal Year 1999-2000 acquisition forecasts, which are commonly available on-line from each agency’s respective Web sites.
- Bankcard holders were identified using bankcard-holder lists, which are commonly made available on-line on agency Web sites.

TABLE 4
STUDY POPULATION

Doers	Facilitators
<p>Requesters/Specifiers (Program staff) Buyers (Contracting officials) Government bankcard holders</p> <p>Roles in Purchasing:</p> <ul style="list-style-type: none"> • Channel needs and preferences • Purchase products and services • Make purchasing decisions • Influence product and service selection • Write guide and product specifications 	<p>Managers Pioneers Training organizations Environmental/Life-cycle cost analysis experts Service and product suppliers or vendors</p> <p>Roles in Purchasing:</p> <ul style="list-style-type: none"> • Set policy • Set examples • Provide relevant information • Share product information

⁴ "EPP Pioneers" are individuals who were early initiators of the practice of EPP. Many of their efforts are documented in EPP pilots and case study documents.

- Facilitators were identified through the following procurement-related workgroups and/or contact lists:
 - Office of the Federal Environmental Executive: Executive Order Interagency Group (EOIAG);
 - Office of Federal Procurement: Contact Lists for the Front Line Forum, Agency Procurement Executives, and Agency Senior Officials for Executive Order 13123; and
 - Department of Defense, Defense Logistics Agency, Joint Group - Environmental Attributes Steering Committee.
- Intercept recruiting at procurement-related conferences provided contact information for some requesters and facilitators.

Screening Protocol

NuStats developed a screening protocol that asked pertinent questions to qualify participants for the study. Since measuring general awareness and attitudinal levels of EPP among decision makers was a key research objective, it was critical that participants be responsible for a wide variety of purchasing-related tasks. It was also necessary to recruit people with a range of skills, experience, and viewpoints within the context of Federal purchasing. Therefore, recruitment sought out long-time and newer employees; those with backgrounds in procurement, contracting, and major acquisitions; and those who worked at civilian and military agencies.

All participants met the following criteria:

- Their job encompassed one or more of the following purchasing-related functions:
 - identify a need for or request product/services,
 - write specifications,
 - influence the selection of products or services,
 - make purchasing decisions,

- conduct “pre-purchasing evaluations” or life-cycle costing analysis,
- identify vendors or sources,
- purchase products and services, and/or
- conduct post-purchasing follow-up.

- They had worked in that position for at least six months.
- They represented a mix of “Doers” and “Facilitators.”
- They represented a mix of civilian and military agencies.

In general, the recruitment call process used the following steps:

- identify willingness to participate in the study,
- screen for eligibility, and
- arrange time and date for interview or conduct interview “on the spot” if they are willing and available.

The recruitment process was monitored to ensure diversity of participants. The recruitment screener questionnaire is contained in Appendix B.

Interview Protocol

Interviews were conducted using an interview protocol, or discussion/moderator’s guide. The study’s learning questions led the development of this guide. The questions were carefully selected and phrased to elicit the maximum amount of information during each interview. The guide is designed to generate open-ended conversation based on the respondent’s awareness levels, attitudes about, and experiences regarding purchasing in general, the “Greening of Government,” and EPP.

The discussion guide was refined throughout the course of the research, enabling NuStats to build upon previous learnings or to hone in on potential gaps. Copies of the discussion guides for each research stage appear in Appendix C.

DISCOVERY STAGE
(DECEMBER 1999-MARCH 2000)

Research Objectives

- Explore underlying motivations, barriers, and behaviors relating to Federal purchasing, in general.
- Identify study participants for subsequent research stages.

Learning Question Area

1. General attitudes, behavior, and perceived information needs regarding purchasing.

Expected Outcomes Leading to Actionable Steps

- Collect input to development of EPP strategy and policy.
- Identify target outreach audience.

Research Plan

Study Population	Research Tactics Conducted (All research conducted in Washington, DC)			
	One-on-One In-Person	Dyads	Conference Call Group	One-on-One Telephone
Facilitators (EPP Staff)	4			
Facilitators (EOIAG, Pioneers, and Training Facilities)		2	11	8
Buyers	1			1
Total Participants	5	2	11	9

Research Logistics

Date	Tactics	Study Pop.	Environment	Other
12/12/99	One-on-one interview	EPP Staff	In-person interview	
12/13/99	One-on-one interview	EPP Staff/Doers	In-person interview	
12/13/99	Dyad interview	Facilitator	In-person interview	
1/24/00	One-on-one interview	Facilitator	Telephone interview	
2/7/00	One-on-one interview	Facilitator	Telephone interview	
2/15/00	Group interview	Facilitator	Telephone interview	
3/8/00	One-on-one interview	Facilitator	Telephone interview	
3/15/00	One-on-one interview	Facilitator	Telephone interview	
3/18/00	One-on-one interview	Facilitator	Telephone interview	
3/20/00	One-on-one interview	Facilitator	Telephone interview	
3/21/00	One-on-one interview	Facilitator	Telephone interview	
3/24/00	One-on-one interview	Facilitator	Telephone interview	

EXPLORATORY STAGE
(MARCH 2000-MID-MAY 2000)

Research Objectives

- Observe greening and EPP behaviors and attitudes in depth.
- Test EPP tools.
- Develop research hypotheses.
- Collect input for quantitative research.

Learning Question Areas

1. Attitude, behavior, and perceived information needs in defining environmental preferability.
2. General awareness of "Greening of Government."
3. General awareness of and feedback on EPP outreach materials.

Expected Outcomes Leading to Actionable Steps

- Provide input to overall EPP strategy and policy.
- Develop a hierarchy of least and most important factors used in a purchasing decision.
- Identify outreach and policy strategies for making EPP tools and information available.
- Collect input on outreach (message content, target audience, format, and delivery mechanisms).
- Obtain feedback on strategies to remove barriers and increase motivation to make purchasing decisions.

Research Plan

Study Population	Learning Question Areas	Research Tactics (All research conducted in Washington, DC)		
		Dyad Interviews	Focus Group Interviews	One-on-One Interviews
Buyers Mixed	1, 2, 3	3	6	9
Requesters/Facility Managers	1, 2, 3	2	4	11
Facilitators	1, 3	1	1	1
Total Participants		6	11	21

Research Logistics

Date	Location	Tactics	Study Pop.	Environment	Other
Week of 4/3	DC	Short interview	Buyers	One-on-one interview	
4/13/00	DC	Pilot interview Dyad interview	Buyers	Hotel meeting room	NCMA Conference
4/13/00	DC	Pilot interview	Facilitators	One-on-one interview	
Week of 4/17	Variable	Short interview	Facility Mgrs.	Telephone interview	
4/19/00	DC	Dyad interview	Facility Mgrs.	Meeting room	Department of the Interior Facility Mgr. Conference
5/2/00	DC	Focus groups (2)	Buyers (mixed)	Meeting room	OMB Front Line Forum
Week of 5/8/00	DC	Short interviews	Buyers Requesters	One-on-one interviews	
5/13/00	San Diego	One-on-one interview	Buyers	Meeting room	GSA Expo

CONFIRMATORY STAGE

(MID-JUNE-JULY)

Research Objectives

- Hone in on actionable steps and key implementation recommendations.
- Test quantitative research outlines and instruments.
- Recommend quantitative research approach.

Learning Question Areas

1. Behavior relating to EPP and defining EPP.
2. General awareness of and feedback on EPP Tools/Internet Tools Test.
3. Opportunities to fit EPP into day-to-day procurement activities.

Expected Outcomes Leading to Actionable Steps

- Provide input to overall EPP strategy and policy.
- Identify outreach and policy strategies for making EPP tools and information available.
- Modify current outreach materials based on interest level, usefulness, and link to expected behavior changes that lead to incorporating environment into PDPC.
- Incorporate EPP experiences into EPP strategies, policies, and outreach materials.

Research Plan

Study Population	Learning Question Areas	Research Tactics (All research conducted in Washington, DC)		
		One-on-One Interviews	Dyad or Triad Interviews	Focus Group Interviews
Buyers	2	11		10
Buyers	1, 3	13	2	
Requesters: Bankcard holders, program staff, building/facility managers	2	1		
Requesters: Bankcard holders, program staff, building/facility managers	1, 3	15	3	
Facilitators	1, 3	11		
Participants		51	5	10

Research Logistics

Date	Location	Tactics	Study Pop.	Environment	Other
June 12-June 16	Various	One-on-one interview	Mixed	Telephone interview	Pilot
Week of 7/10-7/21	DC	One-on-one interview	Buyers	Telephone/in-person interview	Tools/Full
Week of 7/10-7/21	DC	Mini group interview	Buyers	In-person interview	Tools
Week of 7/10-7/21	DC	One-on-one interview	Requesters	Telephone/in-person interview	Tools/Full
Week of 7/17-7/21	DC	Mini group interview	Requesters	In-person interview	Tools
Weeks of 7/17-7/28	Various	One-on-one interview	Vendors	Telephone interview	Full
Week of 7/24-7/28	Various	One-on-one interview	Mixed	Telephone interview	Follow-up

Appendix B: Screening Protocols

EPP Interview Screener

Respondent Name: _____	Agency/Affiliation _____	
Respondent Address: _____		
Respondent City: _____	State: _____	Zip Code: _____
Respondent Phone: (_____) _____ --- _____	Fax (_____) _____ --- _____	

Hello, my name is _____ of NuStats Research and Consulting. We are working with a Federal agency to conduct market research related to Federal purchasing. As part of this effort, we are contacting people like yourself who are involved in the request, specification, or purchase of products and services to see if you might be willing to participate in a discussion group. The discussion will explore how recent changes in acquisition reform have affected how certain products and services are selected and purchased. By participating in this discussion group and sharing your opinions, ideas, and experiences, you could contribute to or influence future purchasing practices.

Engage in a conversation that achieves:

- understanding of the research objectives;
- willingness to participate in the study; and
- verification of agency, division, telephone, and email.

If person agrees to participate, say: "I'd like to ask you a few questions related to the study."

If person does not agree or can't participate because of a time/date conflict, ask: "Could you refer me to someone else in your department who performs similar functions who might be willing to participate?"

1. Do you work for the Federal government in a civilian or military agency or as a Federal contractor?

- Yes (*specify*) No (*TERMINATE*)

[May be addressed in introduction]

2. Do you perform any of the following activities on a routine basis? (Check all that apply.)

- Identify a need for or request product/services
- Write specifications
- Influence selection of products/services
- Make purchasing decisions
- Conduct life-cycle costing analysis
- Purchase products and services
- Conduct post-purchasing follow-up
- None (*TERMINATE*)

3. **What is your job title or function?** (Do not read from list. Check all that apply. If none apply, check "other" and ask respondent for his/her job title/function. Read the list only if the respondent needs prompting.)

- Project Manager
- Purchasing Manager
- Contract or Purchasing Specialist
- Supply Specialist or Manager
- Bankcard Holder
- Facility Manager, Engineer, or Architect
- Other (specify) _____

4. **For how long have you been involved in purchasing?** (Terminate if less than 6 months.)

5. **In the last six months, have you made a purchasing decision or selection for at least one of the following products or services?** (Check all that apply.)

- Office Supplies
- Office Equipment
- Cleaning Products
- Road and Parking Lot Renovation and Repair
- Copier Paper
- Paint
- Engineering, Custodial, or Landscaping Services
- Construction/Renovation
- Large System Acquisitions (weapons, satellites, communications)
- Other (specify) _____

6. **Approximately how many purchase transactions do you handle or are involved in (e.g., as requester, or service or product specifier)?**

In a typical month? _____

In a typical year? _____

7. **Consider the last few "typical" purchases you were involved with or handled. Which of the following categories best reflects those purchases?**

- Under \$25,000
- Over \$25,000 but under \$100,000
- Over \$100,000

Thank you for answering our questions.

Again, the discussion group will be held on ____ (day) ____ (date) ____ from ____ to ____ (specify time) at _____ (name of facility) located at _____ (address). The discussion will last about 90 minutes. While we cannot pay you for donating your time, we will serve a light breakfast before the discussion and will reimburse you for mileage or travel expenses. We will contact you on the day prior to the discussion to confirm your participation.

Appendix C: Interview Protocols

Discovery Stage Discussion Guide

Interviewees

Group 1: Providers of EPP Policy or Guidance

Group 2: Other Facilitators

Group 3: Contract Specialists

Perspectives on the EPP Measurement Project (Group 1)

1. Based on what you know about the EPP project we are undertaking right now, what do you think are this project's objectives?
 - What would you like it to achieve?
 - What are your expectations?
2. What do you think you will be able to do with the results and products of this project?
3. What are the most valuable background informational materials you would recommend on the topic of this project?
4. Who are the most valuable experts for advising this project? Why?
5. What are your recommendations for improving the project?

Status of the "Greening of Government" Initiative (Groups 1 & 2)

6. What does the "Greening of Government" initiative mean to you?
 - What is its current status in your opinion?
 - What other initiatives and efforts are related to this initiative?

Progress/Effectiveness of the EPP Program (Groups 1 & 2)

7. In your opinion, is the EPP program successful (e.g., Is it being widely implemented? Are agencies aware of the program?)? Why or why not?
8. Who would you say are the key EPP "players" (and what are their roles) in the following segments?
 - Government policy/guideline personnel or offices.
 - Federal procurement/acquisition decision makers.
 - Private-sector personnel.
9. Who are the "antagonists" or "naysayers" of EPP?
 - What are their issues?
 - Do you recommend that we contact these people?
10. What do you think are the most serious barriers to the success of the EPP program in the Federal government? Why?
11. How well informed on the EPP program requirements are E.O. 13101 stakeholders? Where do they get their information?

12. Which agencies/departments/personnel stand out in your mind as leaders in:

- the “Greening of Government” initiative and
- complying with EPP guidelines?

Federal Procurement System (Groups 2 and 3)

13. Define the “Federal acquisition community” (i.e., Who is included in the community and what are their roles).

14. Within a government agency, who are the procurement “officials” (those with product decision-making power)?

15. Describe the key processes for procuring products and services (e.g., charge card, GSA supply service, and storeroom).

16. For this project, we are including the Federal acquisition community in focus groups, one-on-one interviews, etc. Given the decentralized nature of procurement and acquisition practices within the Federal government:

- Of the many individuals you previously identified, whom should we target?
- How should we contact these people?

17. To what extent do you believe that government purchasers are aware of either the “Greening of Government” or EPP program requirements?

- To the best of your knowledge, are your peers making purchasing decisions based on these requirements?
- What are their information and training sources?
- What are the barriers or obstacles to carrying out these requirements facing procurement officials?

Exploratory Stage Discussion Guide

Introduction

- Moderator disclosures: The moderator should introduce his/herself, the assistant, and notetaker and explain their roles in the discussion. Inform the participants that the client is a Federal agency that is trying to gain greater understanding about what motivates purchasing decision making.
- Participant introductions: Ask the participants to introduce themselves, to specify their job function, and to describe the most frequent purchase decision or product selection they make.

Warm-Up/Reconnaissance

- Explain the purpose of session: to solicit insight on the motivations for and information needs regarding making a purchase decision and/or product choice. Stress that today’s discussion covers government purchasing—not consumer purchasing. Emphasize that we want honest answers—not the “politically correct” answers.
- Explain warm-up.
- Ask participants to specify the reasons for making a purchase decision and/or product choice.
- Probe them on the dynamics of the Federal marketplace.
- Ask who are the decision makers or product selectors (the originator of the request, the specifier, or the purchaser).

General Attitudes about Purchasing

- Ask participants to remove the blue index card from the envelope (*see Exhibit A*). Tell them this activity will help identify and rank the factors they consider when making purchasing decisions or selecting a product or service.
- Ask participants to rank the factors on the card, with 1 being the most considered and 9 being the least considered factor. (There is a space to add one more factor and rank from 1 to 9.)
- On the reverse side of the card, ask them to write down the products/services they were thinking of when they ranked the factors.
- On a flip chart with pre-printed factors, record other factors they added. Review high- and low-ranked factors.
- Discuss the least and most important factors.
 - What products were you thinking of for each?
 - Specify examples of when you used the highest-ranking factors.
 - Why don't you use other (low) factors?

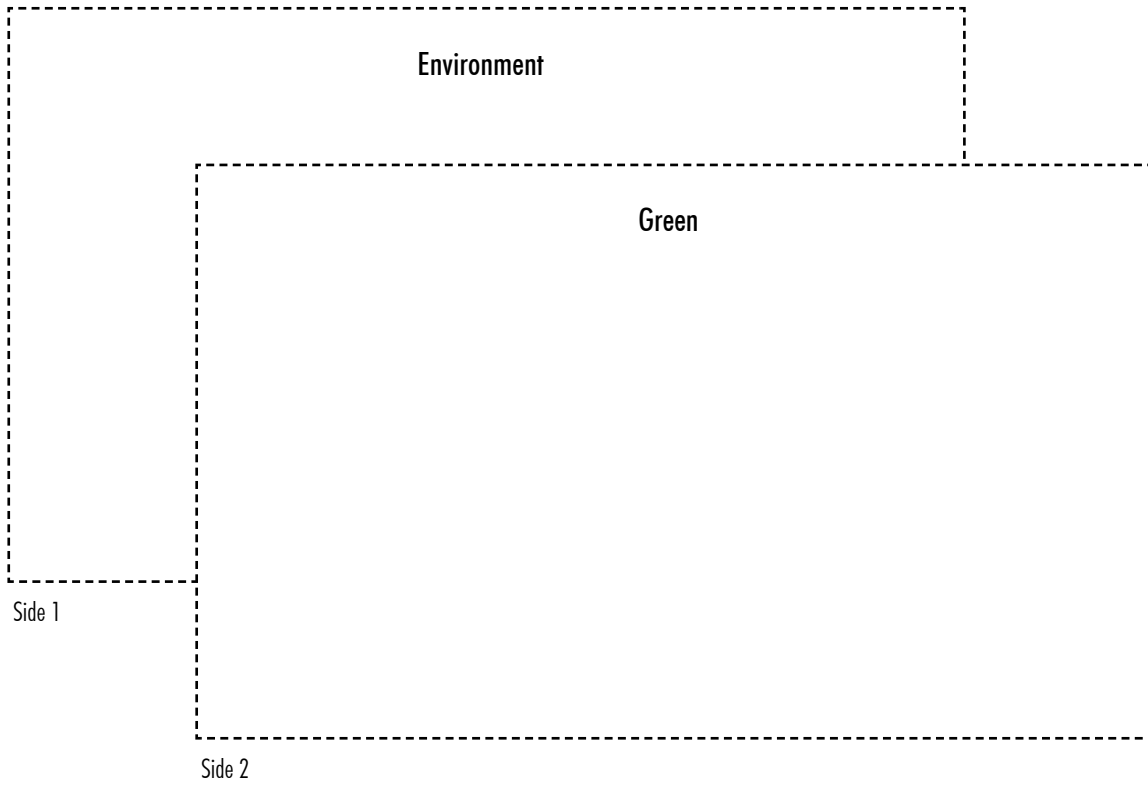
EXHIBIT A (BLUE INDEX CARD)

_____	Price
_____	Reputation of the Brand
_____	Always Use the Product
_____	Meeting Exact Specifications
_____	Social/Environmental
_____	Easiest to Purchase of All Available Choices
_____	Small Business Set-asides
_____	Mandatory Sources
_____	Other _____

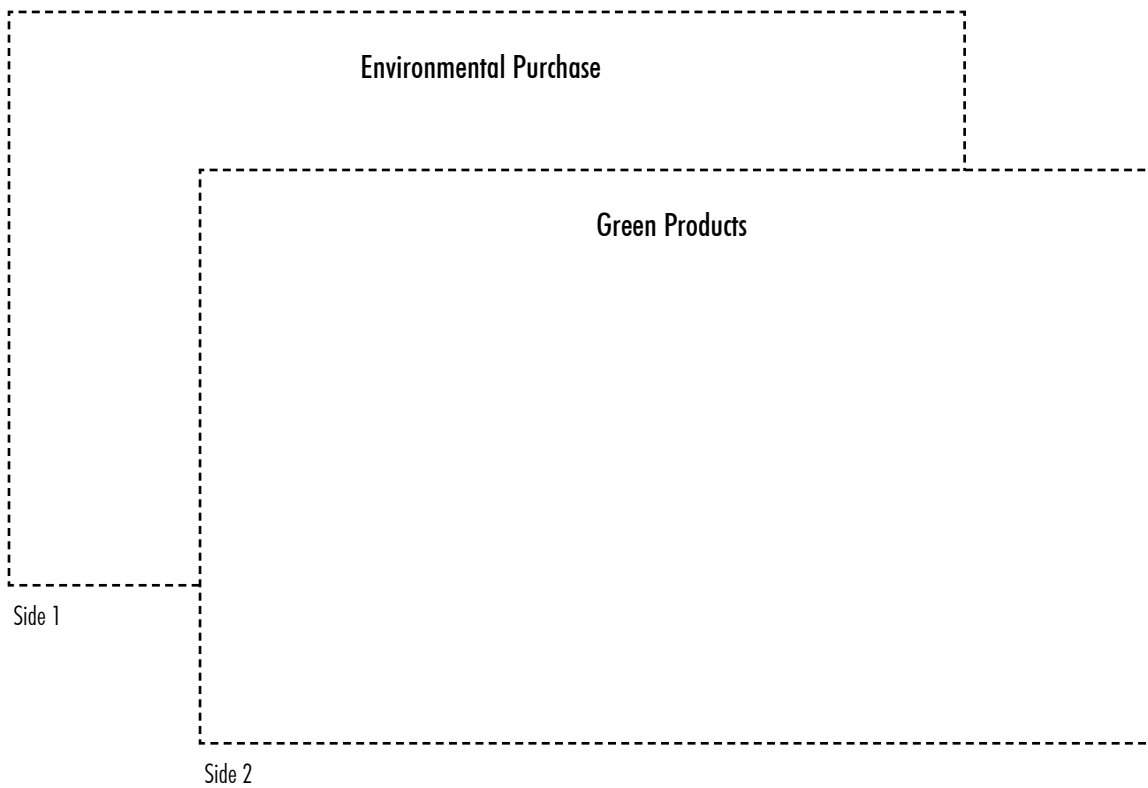
Defining Environmental Preferability

- Ask participants to remove the yellow index card from the envelope (*see Exhibit B*). Ask them to record their “top-of-the-mind” image or reactions to the words printed on either side (Green and Environment).
 - Who is responsible for defining these terms?
 - What are the connections between the two?
- Ask participants to remove the red index card from the envelope (*see Exhibit C*). Ask them to record their “top-of-the-mind” image or reactions to the words printed on either side (Environmental Purchase and Green Products)
 - Who is responsible for defining these concepts?
 - What are the connections between the two?
- Ask whether there a role for these concepts in making *governmental* purchasing decisions or product selections. If so, ask why; if not, ask or why not.

**EXHIBIT B
(YELLOW INDEX CARD)**



**EXHIBIT C
(RED INDEX CARD)**



- Ask whether in their most recent purchasing decision or product selections, they have considered any environmental factors (e.g., recycled content, energy conservation, low VOC, CFC-free). If yes, list the factors on the flip chart.
 - What products or services were you thinking of when you mentioned each factor (*record them on the flip chart*)?
 - Are these considerations made routinely, occasionally, or was it a one-time effort only?
 - Please provide specific examples.
 - Why did you consider these factors?
 - What barriers did you encounter to not including these factors in your decision making?
- Describe a perfect world where all barriers were removed.
 - Would you use the environmental factors or attributes in a perfect world?
- Refer to the list of factors.
 - Please record on a piece of paper the factors you consider to be the least and most important and specify why.
 - Do you view or consider the factors singly or as multiple attributes?
 - Where do you obtain information on environmental factors or attributes?
 - Of the sources you use, what information is lacking or what would you like to see more of?

Attitudes and Opinions on the “Greening of Government”

- Ask for a hand count on who is familiar with the “Greening of Government” initiatives.
- Ask them to define the “Greening of Government.” (*Cite examples.*)
- Ask participants to remove the white index card from the envelope (*see Exhibit D*).
 - Rank the purchasing-related policies printed on the card in order of your familiarity with them, with 1 being most important.
 - Record your most challenging or rewarding experience with *one item*.
- Refer to the list of purchasing-related policies. Ask the group to identify or name the purpose of each.

EXHIBIT D (WHITE INDEX CARD)

_____ Executive Order 12856

_____ Executive Order 12873

_____ Executive Order 14101

_____ Federal Acquisition Regulations (FAR) environmental amendments

_____ Executive Order 13123

_____ Executive Order 13101

_____ Executive Order 12902

_____ Office of Federal Procurement Policy Letter 92-4

- Ask participants to report on the items they ranked as 1 and 9.
 - Are you carrying out the policies of the items you rated as 1? Provide examples and articulate what makes it easy.
 - What are the barriers to carrying the policies out (*including confusion and lack of motivation*)?

Awareness of and Opinions on EPP Outreach Materials

- Present the EPP outreach materials.
 - What materials are you familiar with?
 - Which ones are you not familiar with? Why?
- Of the materials they are familiar with, ask which they have actually received.
 - How did you receive them (e.g., from EPA, from a colleague, on the Web site)?
 - Which delivery mechanisms work best?
 - Were they useful in helping you make a product/service selection? Why or why not? Please relate a rewarding experience.
- Ask what other information sources (non-EPA) participants are aware of or have used to make a purchasing decision or product selection.
 - How did you obtain the materials (delivery, format)?
 - What did you like about the resource?
- Ask what resources they need that currently don't exist.
- Ask whether any of the materials they have seen or used, *motivated* them to make an environmental purchasing decision or product choice. Why or why not?
- Ask whether the materials, in general, help to alleviate some barriers to making environmental purchasing decisions or product choices. If so, how?

Conclusion/Closure

- Appeal for additional information.
- Summarize the group's perceptions.

Confirmatory Stage Discussion Guide

Partial Interviews (June)

Name: _____	Phone: _____
Department: _____	Fax: _____
Source: _____	

Roles

Buyer: Contract Officer/Purchasing Specialist

Requester: Bankcard holder or Manager

Requester: Environmental Health and Safety Official, or Building or Facility Manager

Requester: Program Staff; Environmental Program

Facilitator: Policy; Pollution Prevention Coordinator

Other: _____

Hello, my name is _____. I am calling on behalf of the Environmental Protection Agency's (EPA's) Pollution Prevention Division. We are working on a project to explore issues related to incorporating environmental considerations into government purchasing. Would you be willing to participate in a 20-minute discussion—now, or at a time that is more convenient for you?

If they are hesitant, explain why we selected them and how we obtained their name.

If they are still hesitant, say: We have conducted interviews with nearly 60 people in the Federal government over the last two months and have arrived at a set of conclusions and recommendations for EPA. We would like to test these recommendations before finalizing them.

If they still seem hesitant, say: EPA needs your insights and experiences so that the Agency can better understand the “real world” related to purchasing so that it does not “work in a vacuum.” EPA needs your input so that it can create a program that meets the needs of those making purchasing decisions in the government. This could make your life—and the lives of others involved in purchasing—a whole lot easier.

Would you be willing to participate? Now, or would you like to schedule a later interview?

Schedule Date and Time: _____

Warm Up

1. Of the following list of activities related to purchasing, which are you typically involved in?

- Identify a need for or request a product or service
- Write specifications
- Influence the selection of products/services
- Make purchasing decisions
- Conduct “pre-purchasing evaluations” or life-cycle costing analysis
- Identify vendors or sources
- Purchase products or services
- Conduct post-purchasing follow up
- Other _____

2. How long have you been doing this?
3. What types of products or services do you normally purchase?

General Procurement

4. *Don't ask bankcard holders, but ask everyone else:* What is the mechanism you most frequently use to purchase products/services? *(Probe on the use of that source and for which products and services.)*
 - Small Purchase
 - Bankcard
 - Mandatory Source (PROBE: What is (are) that (those) source(s)?)
 - Small Business Set-aside
 - General Services Administration (GSA) or Defense Logistics Agency (DLA) schedules
 - Government-wide Contracts
 - Other *(specify)* _____
5. What factors do you consider when making a purchasing decision? *(List all. Probe on Best Value, or ask about what "Best Value" means to them.)*

"Greening of Government"

6. Are you aware of or have you ever heard of the "Greening of Government" initiatives?
 - *If they recognize the initiatives, probe on which ones.*
 - *If they don't recognize the initiatives, prompt them with the ones related to having to buy recycled paper, ENERGY STAR™, or green products.*
 - *How did you hear about them? During training? From management or internal Policy?*
 - *What other resources have you seen or used on the "Greening of Government"?*
 - *Do you consider green initiatives to be requirements? Why or why not? What do you think would make them a requirement?*

Awareness, Attitudes, and Behaviors about EPP

7. One of the Executive Orders requires Federal agencies to purchase products and services that are "environmentally preferable." The Executive Order named EPA responsible for helping agencies and providing guidance on considering environmental preferability in the purchase process. While EPA does not certify specific products or create product lists, the Agency has developed a set of guiding principles. Are you at all familiar with this concept?
8. When you think about "environmentally preferable products or services," what comes to mind?
9. The purchasing process involves a variety of people who make purchasing decisions at different points in the process. We have observed that there is not agreement about who is responsible for making environmental considerations or requesting that they be made. For each of the following entities, please tell me if you think the responsibility lies there or not. *(Probe what is the responsibility and why—when is the best point.)*
 - Buyer—Contracting officer or specialist, purchasing specialist, approver of bankcard purchases
 - Originator—Program staff, bankcard holders
 - Sources—Vendors, mandatory sources, GSA/DLA
10. A few questions back, we discussed factors that are routinely considered in making purchasing decisions. We have observed that environmental considerations are not a high ranking factor for certain products and services, but are higher ranked for office products.
 - *Can you think of some other products or services where environmental considerations may rank higher or lower?*

— What might it take to get it considered more often?

11. *If Best Value is not mentioned:* Our previous research suggests that purchasing decisions in the Federal government are made based on the “Best Value” for the goods and services needed. Some considerations in Best Value include price, timeliness of delivery and availability, and the vendor’s ability to meet specifications. What would it take to incorporate EPP into those considerations?
12. Can you think of a specific instance of “green purchasing” within the Federal government? What was it? Who made the decision? How?
13. Can you think of leaders or promoters of “green purchasing”? Who are they? What do they do?
 - In their department
 - Inside or outside of government
14. For keeping up with the practice of purchasing and procurement, what resources do you use most? (*Probe on the type of resource.*) What is the format? What do you particularly like about it? How is it distributed?
15. If you were to make a recommendation to EPA regarding its program strategy on green purchasing as it relates to Federal procurement, what would it be?
16. We’d like to do some further research on this issue. Would you be available for another interview with us sometime in July?
17. Can you recommend anyone else in your office/department/agency with whom we can talk about this topic? (*Name and contact info.*)

Thank you so much for your time and input. I appreciate your help. Have a good day.

Confirmatory Stage Discussion Guide

Full Interview (July)

Discussion Guideline for Further Exploratory Probing on Attitudes

Hello, my name is _____. I'm calling on behalf of the Environmental Protection Agency's (EPA) Pollution Prevention Division. We're talking with [Federal government employees] / [vendors of Federal government agencies] to explore issues that relate to environmental considerations and purchasing decisions. I'd like a few minutes of your time, either now or at a time more convenient for you.

If the interviewees are hesitant, explain why we selected them and where we got their names.

If they are still hesitant, say: We have conducted interviews with more than 60 people in the Federal government over the last two months and have arrived at a set of conclusions and recommendations for EPA. We would like to test these recommendations before finalizing them.

If they still seem hesitant, say: EPA needs your insights and experiences so that the Agency can better understand the "real world" related to purchasing so that it is not "working in a vacuum." EPA needs your input so it can create a program that meets the needs of those making purchasing decisions in the government. This could make your life—and the lives of others involved in purchasing—a whole lot easier.

Would you be willing to participate? *Continue the interview now or schedule a later interview.*

Schedule Date and Time: _____

For all government employees:

1. First, I'd like to make sure we have your correct job role. What is your title and job function?

Title: _____ *Function:* _____
(e.g. buyer, requester, facilitator, or vendor)

2. Of the following list of activities related to purchasing, which are you typically involved in?

- Identify a need for or request a product or service
- Write specifications
- Influence the selection of products/services
- Make purchasing decisions
- Conduct "pre-purchasing evaluations" or life-cycle costing analysis
- Identify vendors or sources
- Purchase products or services
- Conduct post-purchasing follow-up
- Other (specify) _____

3. In the last six months, have you made a purchasing decision for at least one of the following products or services?

- | | |
|---|--|
| <input type="checkbox"/> Office supplies | <input type="checkbox"/> Office equipment |
| <input type="checkbox"/> Cleaning products | <input type="checkbox"/> Copier paper |
| <input type="checkbox"/> Road and parking lot renovation/repair | <input type="checkbox"/> Paint |
| <input type="checkbox"/> Engineering, custodial, or landscaping | <input type="checkbox"/> Construction/renovation |
| <input type="checkbox"/> IT systems and products | <input type="checkbox"/> Large system acquisitions |
| <input type="checkbox"/> Conference planning | <input type="checkbox"/> Other (specify) _____ |

4. What is the most frequent purchase decision or product selection you make?

5. What are the reasons or driving forces behind your having to make a purchase decision and/or product choice? (*Probe on how decisions are made—by the originator, by themselves, jointly, or as a team. Probe on each to determine when and why it is done that way.*)

■ Are your reasons different, depending on any of the following:

- Whether you are purchasing a product versus a service?
- The type of product and type of service?
- The dollar value of the purchase?
- The purchase mechanism?

6. As you make purchase decisions and/or request a product or service, what are the types of factors you take into account? *Record each factor below. For each factor, ask what type of product or service they were thinking about, and ask where they get information for considering that factor.*

<i>Factor</i>	<i>Product/Service</i>	<i>Information Source</i>

Explore their motivations for their ranking of each factor.

Ask whether their information sources are written materials or people. Ask them to cite examples for both.

7. *If environmental considerations are mentioned (e.g., recycled paper, computer /ENERGY STAR™, FAR clauses), say:* You mentioned that you consider [fill in with answer] when making a purchase /purchase decision. Is that something you take into account for most purchases? What was the motivating factor that made you consider that [those] environmental consideration[s]?
8. Can you tell me about a specific recent purchase where you considered those factors? (*Probe on the use of single- versus multiple-attribute considerations—why or weren't they made?*)
9. *If environmental considerations were not mentioned:* How about environmental considerations, such as local environmental concerns, or buying products with other environmental attributes? Do you think of those factors in the purchase process? *If yes, ask them to explain further; if no, ask them to explain why not.*
10. Typically, at what point in the purchase process should those factors be considered? Would you say it's:
- When there's a need or when a request is made?
 - When someone is conducting market research or selecting a vendor?
 - When a purchase is actually made?
 - Never? Why?
11. Where in the purchase process do you think responsibility lies for making environmental considerations? *If unsure, probe:*
- Do you think it lies with the people making the request, or perhaps with the people who makes the actual purchase?
 - Are these people aware of this responsibility? If so, how were they made aware of it?
 - Do they accept this responsibility? Why or why not? What needs to be done to make them aware of and accept this responsibility?
12. Are you aware of the “Greening of Government” initiatives?
- *If yes, ask:* Can you think of any specific examples of initiatives?
 - *If no, ask:* Have you heard of Executive Orders or the FAR environmental amendments, or anything similar?

13. If there were no mandates or Executive Orders or FAR clauses related to environmental considerations, would Federal government procurement and purchasing be easier or more difficult? *Ask them to explain their answer.*
14. Do you think that mandating environmental considerations as they relate to procurement and purchasing is the only way that agencies will carry out those initiatives? Why or why not?
15. The Executive Order related to our discussion right now is Executive Order 13101. Are you familiar with it?
- *If yes, ask:* How did you hear about it? What does it mean to you?
 - *If the answer was no, briefly explain or clarify main components of the Executive Order. Ask:* Does it sound familiar now? Why? Which components are familiar? How did you hear about them?
16. Are you familiar with the term “environmentally preferable purchasing”?
- *If yes, ask:* What does it mean? How well do you think the term is understood by your peers?
 - Quite well A little bit Not at all
 - *Why is this so? Probe on whether it is because of a lack of information, no management/policy support, indifference, too many other things to do, etc.*
 - *Regardless of the answer, explain or correct their previous response by getting them to see beyond the single-attribute and multiple-attribute considerations. Does the term EPP work well for you? If not, ask:* Can you think of a better term or something that would be more meaningful to you or others? Do you think it really doesn’t matter what you call it, so long as the program works?
17. For several years, EPA has been developing tools and providing assistance to the Federal government on conducting environmentally preferable purchasing. I’d like to get your ideas about how EPA can improve on its efforts.
- What might it take to get environmentally preferable purchasing practiced more widely or considered more often?
 - Should environmentally preferable purchasing “piggy back” onto or be incorporated into other initiatives or should it be presented on its own? Why?
 - Are there existing purchasing-related requirements and processes that environmentally preferable purchasing can easily be incorporated into?
 - Given what you now know about environmentally preferable purchasing, what, if any, information materials or tools do you think are needed? What are credible sources? What formats would you prefer for receiving these tools?
 - Who is a credible source for information on procurement issues? On environmental purchasing issues?
18. What information materials or resources do you depend upon most often for making purchasing decisions or product/service selections? Why? What do you most like about that resource? *Check all that apply.*
- Paper Formats
- | | |
|--|--|
| <input type="checkbox"/> Memo | <input type="checkbox"/> Periodicals/newspapers |
| <input type="checkbox"/> Policy/white papers | <input type="checkbox"/> Newsletters |
| <input type="checkbox"/> Magazines/journals | <input type="checkbox"/> Other (brochures, reports, posters) |
- Person-to-Person Formats
- | | |
|---|---|
| <input type="checkbox"/> Presentations at conferences | <input type="checkbox"/> Hotline/technical assistance |
| <input type="checkbox"/> Presentations at meetings | <input type="checkbox"/> Exhibit booth |
| <input type="checkbox"/> Agency/installations | <input type="checkbox"/> Other (<i>specify</i>) _____ |
| <input type="checkbox"/> In-person training | |

Electronic Formats

Web-based

CD-ROM

Video

E-mail

Listserves

Other (*specify*) _____

19. Have you seen or used any of the written materials or tools about environmentally preferable purchasing that EPA has produced? *If yes, ask: Which ones?*
- How did you hear about them and/or how were they received?
 - Are they useful? *If yes, ask: Why? Did they help you make a product selection or purchasing decision?*
 - Did anything about the design or format of the material stand out? *If so, ask: What was it? Why did it stand out?*
20. *Regardless of their previous answer, ask: Have you received material from another source on environmentally preferable purchasing? If so, ask: From whom? How did you hear about it, and how was it received?*
21. Consider the many ways that information can be presented—which of the following formats do you prefer? Why or why not?
- Narrative vs. directive
 - Case study (detailed) vs. checklist
 - Product lists
 - Vendor lists
22. Given what you now know about environmentally preferable purchasing, what kinds of information about it do you think would motivate you to incorporate environmental factors into your purchasing decisions? Why would this information be a motivator?
23. One way EPA is promoting environmentally preferable purchasing is by sharing case studies. Can you think of an example within your agency/department? Could you tell me more about that project?

Confirmatory Stage Discussion Guide

Tools Test (July)

The Office of Pollution Prevention of the Environmental Protection Agency (EPA) is tasked with assisting Federal employees in making environmental considerations in purchasing—also known as environmentally preferable purchasing (EPP).

EPA wants your opinions about its Internet resources related to EPP. Please use the following guide to explore a variety of on-line tools. At our follow-up meeting, we'll talk about your reactions to the tools and get your thoughts on improving the resources.

Your follow-up time is scheduled for _____, July _____, 2000 at _____ a.m./p.m.

If you have any questions, please call Mia Zmud, NuStats Research and Consulting, at 1-800-447-8287, ext. 2224. Thanks for your time!

Internet Resource Evaluation Guideline

Over the next few days, please visit this Web site: www.epa.gov/opptintr/epp/how-to.html

To try out the tools, click on the link on the left side of the page called "Tools." You'll go to the page with the *Greening Uncle Sam (GUS) Purchasing Tool Suite*. The tools were developed (or are under development) by U.S. EPA's EPP program to assist purchasers in putting EPP into practice. First read this page, then try out the following tools.

Database of Environmental Information for Products and Services

Assignment: The database is organized like a giant mall. We'd like you to go through the steps you'd need to purchase something, or make a purchase decision if the item is not yet available on-line. Assume you need to buy cleaning products for your office or facility. You can use either the browse or the search function to find what you're looking for. Both of them lead to the same information, but offer different ways to get there. We want your feedback on using both functions, so look for information on cleaning products using both features.

Hint: Try the hardware store when using the Browse function, and select Cleaning Supplies (Industrial Use) when using the Search function.

Three added features you can look through are: Contract Language, Voluntary Standards, and Environmental Attributes. These give Federal employees some ideas for how to include EPP language in contracts, what the voluntary standards are, and the environmental attributes of the product. Your input on these links will greatly assist us in evaluating the Web site and the EPP program itself.

Comments: Use this space, or a separate piece of paper, to write down any comments you have about the site as you're going through it.

Promising Practices Guide for "Greening" Contracts

Assignment: This is an on-line source for green purchasing tips, strategies, and success stories. This information was compiled to make it easier to identify and purchase:

- Recycled-content products
- Energy-efficient products
- Bio-based products
- Environmentally preferable products and services

Currently, this guide includes 16 success stories (or case studies) highlighting how Federal agencies have successfully incorporated environmental concerns into the purchasing process. Each success story includes details about the purchasing process, identifies the lessons learned, and provides links to additional

information, such as the contracts or specifications. Success stories can be sorted by agency and/or by product category. The guide also includes an extensive list of related resources.

We'd like you to review the success stories to see how other Federal agencies incorporate environmentally preferable products into their purchasing. One example, EPA's Region 10 Remodels with EPP, reviews how Region 10 incorporated a wide variety of green features into its refurbished executive office suites. The project showcases the latest innovations in "green construction" and environmentally preferable purchasing. While you're there, please check out the "At a Glance" section, which has a link to the contract language used for Region 10.

Comments:

For the above tool, please evaluate the following items:

- Had you ever visited this site and used this tool before?
- Is this tool easy to use and understand? Do you like the format? Why or why not?
- Does seeing other agency's efforts help you in your job?
- Would this tool help you make purchasing decisions? For which products and services?

Tips for Buying Green with the Government Credit Card

Assignment: For those of you who hold a government credit card (Purchase Card), this tool was created to offer some green tips for EPA's Purchase Card Training Course material. EPA's Manual for Credit Card Holders includes tips to help you make "greener" choices when buying products using your credit card.

Please take a few moments to review the following topics:

- Buy products with recycled content
- Buy products with reduced packaging
- Look for the Energy Star label
- Ask if the product contains hazardous materials or toxic chemicals
- Look for other information on the environmental features of products

This section should help you understand how to include environmental considerations in purchases made with your Federal credit card.

Comments:

For the above tool, please evaluate the following items:

- Have you ever visited this site and used this tool before?
- Is this tool easy to use and understand?
- Would it help you in your job?
- Would it help you make purchasing decisions?

Interactive Training Tool

Much of the material on the EPP site is available in an interactive version. The interactive version can be found at: www.itgco.com/gentt/. Click on "View the Interactive Version of This Training Tool."

To view the interactive version, you'll need the plugin Flash Player installed and enabled on your computer. If you don't currently have Flash, you can download it free at: <http://www.macromedia.com/software/>

If you are unable to view the Interactive version, please enter through the "View the Text Version of This Training Tool."

If your computer doesn't have a sound card, this interactive tool will show text and graphics, but the audio will not be available for you to hear. You can still view the site, without sound.

Once you're in the training tool, see Section II, Current EPP Mandates. Please review one of the following topics:

- Executive Order and FAR Requirements
- EPA's EPP Guidance

For the above tool, please evaluate the following items:

- Have you ever visited this site and used this tool before?
- Is this tool easy to use and understand? Why or why not?
- Would it help you in your job?
- Would it help you make purchasing decisions? For which products and services?

Cleaning Products Pilot Project (CP3)

Assignment: The CP3 Web site provides information related to biodegradable cleaners and degreasers offered in the **GSA's** (General Services Administration's) Commercial Cleaning Supplies Catalog. Federal employees can browse and order cleaning products using GSA Advantage!, GSA's on-line ordering system.

We'd like you to go through this Pilot Project tool, with the intent to make a purchase decision about a biodegradable cleaning product, using the Purchasing Decision Wizard, Option 3 (weighted attribute). This will help you rank various product attributes.

The URL is: <http://www.epa.gov/oppintr/epp/cleaners/select/matrix.htm>

Comments:

For the above tool, please evaluate the following items:

- Have you ever visited this site and used this tool before?
- Is this tool easy to use and understand? Why or why not?
- Did you feel comfortable setting the threshold of relative importance levels?
- Would it help you in your job?
- Would it help you make purchasing decisions?
- Would it be valuable to you for other product categories as well?

We'll contact you again at the appointed time (see front page) to get your opinions about and reactions to the pages you just reviewed. Please be completely honest in your assessment about the content, layout/design, and practical applications to your job. Your feedback will help EPA improve the site, as well as provide valuable insight into how to best communicate the EPP program to Federal agency employees. Thanks for your time!

Appendix D: Secondary Research Bibliography

Burman, Allan V. December 1998. "Who's Who in Acquisition." *Government Executive* [On-line]. Available: www.govexec.com [12/2/99].

Burman, Allan V. April 1999. "'Smart Pay' Pays off." *Government Executive* [On-line]. Available: www.govexec.com [12/2/99].

Carter, Craig R., and Joseph R. Carter. 1998. "Interorganizational Determinants of Environmental Purchasing: Initial Evidence from the Consumer Products Industries." *Decision Sciences* 29(3).

Federal Acquisition Institute (FAI). 1998. *Report on the Federal Acquisition Workforce Fiscal Year 1997*. Washington, D.C.

Federal Register. "Executive Order 13101—Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition." Wednesday, September 16, 1998:49643-49650.

Government Executive. 2000. Procurement Preview.

Kittower, Diane. 2000. "High IQ Plastic." *The Public Purchaser*. July/August:24-28.

Laurent, Anne. September 1997. "Sudden Impact." *Government Executive* [On-line]. Available: www.govexec.com [12/2/99].

Laurent, Anne. June 2000. "E-Invasion: Dot.coms Are Swarming into the Government Market." *Government Executive* June:27-34.

Maxwell, Alison. October 1997a. "Green Government." *Government Executive* [On-line]. Available: www.govexec.com [12/2/99].

Maxwell, Alison. October 1997b. "Greenbacks for Green Firms." *Government Executive* [On-line]. Available: www.govexec.com [12/2/99].

Maxwell, Alison. August 1998. "'Planet GSA' Aims to Go Green." *Government Executive* [On-line]. Available: www.govexec.com [12/2/99].

Office of Federal Procurement Policy (OFPP). No date. "Professional Development," Acquisition Reform Network (ARNET). [On-line]. Available: www.arnet.gov/profdevelop.html [12/7/00].

The Reeves Agency and Jacobs, Jenner & Kent. 1999. *EPA Communications Study*. U.S. EPA Purchase Order No. 8W-2455-TTSA.

Saldarini, Katy. January 2000. "Feeling the Consequences of Procurement Reform." *Government Executive* [On-line]. Available: www.govexec.com [1/24/00].

U.S. Department of Defense (U.S. DoD). Office of the Secretary of Defense Under Secretary of Defense - Acquisition and Technology. 1995. *Recycling, Waste Prevention and Acquisition Benefit the National Environment* Available: <http://www.denix.osd.mil/denix/Public/Policy/AF/Policy/note30.html> [12/8/00].

- U.S. DoD and Swedish Armed Forces. 1999. *Environmental Considerations in the Systems Acquisition Process: A Handbook for Program Managers*. Available: <<http://www.navyseic.com>> and <<http://www.denix.osd.mil>> [12/8/00].
- U.S. Environmental Protection Agency (U.S. EPA). No date. "Environmentally Preferable Purchasing (EPP) Program's Communications Plan - A Living Document."
- U.S. EPA. February 1997a. *Cleaning Products Pilot Project*. EPA 742-R-97-002. Available: www.epa.gov/oppt/epp.
- U.S. EPA. May 1997b. *Selling Environmental Products to the Federal Government*. EPA 742-K-97-002. Available: www.epa.gov/oppt/epp.
- U.S. EPA. November 1997c. *EPP Update*. EPA 742-F-97-002. Available: www.epa.gov/oppt/epp.
- U.S. EPA. September 1998. *EPP Update*. EPA 742-F-98-019. Available: www.epa.gov/oppt/epp.
- U.S. EPA. March 1999a. *EPP Update*. EPA 742-N-99-001. Available: www.epa.gov/oppt/epp.
- U.S. EPA. March 1999b. *Guide for Measuring Compliance Assistance Outcomes*. EPA 300-B-99-002.
- U.S. EPA. May 1999c. "EPA Guidance on Conducting Inspections of Federal Facilities for Compliance with Section 6002 of RCRA." Memorandum. Washington, D.C.
- U.S. EPA. July 1999d. *Defending the Environment at the Department of Defense*. EPA 742-R-99-002. Available: www.epa.gov/oppt/epp.
- U.S. EPA. September 1999e. *EPP Update*. EPA 742-N-99-002. Available: www.epa.gov/oppt/epp.
- U.S. General Accounting Office (U.S. GAO). 1998. *Report to Congressional Committees. Acquisition Reform: Implementation of Key Aspects of the Federal Acquisition Streamlining Act of 1994*. GAO/NSIAD-98-81. Washington, D.C.: U.S. Government Printing Office.
- U.S. General Services Administration (U.S. GSA). 1998. *White Paper: Acquisition Sources and Alternatives*. Washington, D.C. Available: <<http://www.itpolicy.gsa.gov/mke/acqwp.htm>> [01/22/00].
- U.S. GSA. 1999. *Federal Procurement Report: Fiscal Year 1998 Through Fourth Quarter (October 1, 1997, Through September 30, 1998)*. Washington, D.C.
- U.S. National Aeronautics and Space Administration (NASA). JE/Environmental Management Division. 1999. *Affirmative Procurement Plan for Environmentally Preferable Products*. Washington, D.C. Available: www.nasa.gov.
- U.S. NASA. Ames Research Center. *Purchasing Bankcard Program: Training Packet*. Washington, D.C. Available: www.nasa.gov. No date.
- U.S. Office of Personnel Management (U.S. OPM). 1999. *The Fact Book - 1999 Edition: Federal Civilian Workforce Statistics*. OWI-99-2. Available: <http://www.opm.gov/feddata/factbook/index.html> [12/8/00]
- White House Task Force on Greening the Government Through Waste Prevention and Recycling. March 1999. *Strategic Plan to Implement Executive Order 13101: Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*. Available: <<http://www.ofee.gov/html/strtpln2.html>> [11/30/99].

Appendix E: Interview Tracking

Interviews Tracked by Agency and Role

Agency	Buyer	Requester	Facilitator	Total
AID	2			2
DOC	1	3	1	5
DoD AF	7	2	2	11
DoD AR	4	1	2	7
DoD DLA	1		1	2
DoD MC	3	2	0	5
DoD NAV	5	2	0	7
DoD-OTH	3		4	7
DOE	2	3	3	8
DOI	7	5	1	13
DOJ	4		1	5
DOL	1	1		2
DOT	1			1
ED	2			2
EPA	1	3	4	8
GSA	3	1	2	6
HHS	11	5	1	17
JWOD			2	2
NASA			1	1
OPM			1	1
Treasury	5			5
USDA	1		1	2
VA	1	2	2	5
Vendor (JWOD)			2	2
Vendor (Commercial)			3	3
Vendor (Contractor)			3	3
Total	66	30	37	133