♻EPA

Guide for Measuring Compliance Assistance Outcomes

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SECTION I: INTRODUCTION

A.   Background

In fiscal year 1994, EPA created the Office of Enforcement and Compliance Assurance (OECA), which is responsible for ensuring the compliance of the regulated community with federal environmental statutes. To achieve that goal, OECA employs an array of approaches including regulatory enforcement, compliance assistance, and compliance incentives. While EPA has experience tracking and measuring its enforcement presence, the Agency now faces the challenge of developing an infrastructure to measure the impact of its compliance assistance activities. OECA is currently in the process of developing the tools to collect data for evaluating these activities.

Independent of OECA's efforts, Congress enacted the Government Performance and Results Act (GPRA) in 1993 to promote more results-based management. This act requires federal agencies to develop 5-year strategic plans with goals, objectives, and performance measures. In response, EPA developed a strategic plan that delineates specific goals. Goal 9, which falls under OECA's responsibility, requires EPA to ensure full compliance with laws intended to protect human health and the environment. EPA plans to meet this goal through compliance incentives and assistance programs and by identifying and reducing significant noncompliance in high-priority program areas, while maintaining a strong enforcement presence in all regulatory program areas.

In January 1997, OECA began developing the National Performance Measures Strategy (NPMS) to establish new measures for evaluating the effectiveness of compliance assurance projects in terms of impacts on the regulated community and the environment. Specifically, the purpose of the NPMS is "to develop and implement an enhanced set of performance measures for EPA's enforcement and compliance assurance program"[1] that incorporate outcome measures (changes in behavior due, at least in part, to compliance assistance activities), and environmental indicators (measures of progress toward achieving environmental or human health objectives) in addition to output measures. As part of the NPMS effort, OECA established a performance profile that consists of 11 sets of measures for evaluating the impacts of EPA's enforcement and compliance assistance activities (See Appendix A). Set 3 of the NPMS is focused

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[1] U.S. EPA. 1997. National Performance Measures Strategy. December. p. 3.

on quantifying environmental or human health improvements resulting from compliance assistance tools and initiatives.

Measures developed through NPMS will apply only to EPA's enforcement and compliance assurance program. They will not serve as a framework for measuring performance of state enforcement and compliance assurance programs. OECA and the states developed a separate set of accountability measures for state enforcement and compliance assurance programs, and those measures are being used in Performance Partnership Agreements (PPAs). Thus, while NPMS measures are not applicable to states directly, they can still find information in this guide to help measure goals articulated in their PPAs.

B.   Purpose of Guide

The NPMS Set 3 Task Group (whose members are listed in Appendix B) prepared this document to help you measure the impact of your compliance assistance projects and activities (e.g., telephone helplines, compliance assistance tools, workshops) on the regulated community.[2] The methodology presented in this guide also serves as pilot evaluation methodology under NPMS. Results from your evaluations will help OECA implement the methodology nationwide in fiscal year 2000. OECA will incorporate the results into its strategic plans and annual performance plans required by GPRA. In addition, using this guide to measure compliance assistance outcomes will support internal Regional management and policy decisions.

C.   Overview of Guide

This guide consists of the following sections designed to help you measure the outcomes of compliance assistance:

- **Section II: Compliance Assistance Activities and Outcomes** discusses the types and purposes of compliance assistance activities and the outcomes associated with these activities.

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[2]   Under Set 10 of the NPMS, OECA is developing a PC-based system, "CATs," for tracking outputs related to compliance assistance activities.

■   **Section III: Planning an Evaluation** identifies key questions for planning an evaluation and discusses possible considerations. This section also contains a description of data collection tools and explains why you might want to use a combination of tools.

■   **Section IV: Conducting an Evaluation** provides general tips for conducting an evaluation, as well as specific tips by evaluation method, including establishing a starting point, developing and testing the data collection instrument, linking questions to outcome measures, and improving response rates.

■   **Section V: Analyzing and Presenting Data** provides tips on analyzing and presenting data to facilitate management decisions. This section also discusses the importance of identifying and delineating the limitations and purpose of the study when publicizing or interpreting the results.

■   **Section VI: Compliance Assistance Evaluation Checklist** summarizes key steps discussed in the guide.

SECTION II: COMPLIANCE ASSISTANCE ACTIVITIES AND OUTCOMES

Compliance assistance consists of information and technical assistance provided to the regulated community to help it meet the requirements of environmental law. First and foremost, compliance assistance ensures that the regulated community understands its obligations by providing clear and consistent descriptions of regulatory requirements. Compliance assistance also can help regulated industries find cost-effective ways to comply and to go "beyond compliance" in improving their environmental performance through the use of pollution prevention and other innovative technologies.

A.   Compliance Assistance Activities

EPA groups compliance assistance activities into four major categories: telephone assistance, workshops and training seminars, compliance assistance tools, and onsite visits.

- **Telephone Assistance** includes assistance provided via special toll-free "hotlines" and other forms of telephone assistance, where phone assistance is a primary outreach vehicle for compliance assistance.

- **Workshops** include all types of meetings that are sponsored by the program and that involve a group of regulated entities. Activities that fall under this category include seminars, conferences, training, and forums.

- **Compliance Assistance Tools** include the development and distribution of all forms of printed materials (e.g., newsletters, fact sheets, information packets, brochures) as well as videos, slide shows, and the establishment of Web sites that are either produced in the Regions, by Headquarters, or others for distribution purposes. Compliance assistance tools also include plain language guides, self-audit checklists, expert systems, and CD-ROM–based applicability determinations.

- **Onsite Visits** include facility visits to provide technical assistance, compliance assistance, environmental management reviews, and pollution prevention assistance.

B.   Measuring Results of Compliance Assistance

EPA has identified three types of measures to gauge the success of compliance assistance activities. These measures include *output measures*, *outcome measures* (both regulatory and

nonregulatory), and *environmental and public health indicators*. While this document focuses on outcome measures, understanding output measures and environmental and public health indicators helps put the outcome measures into perspective.

Output Measures

Output measures are defined as "quantitative or qualitative measures of important activities, work products, or actions taken by EPA or by states under delegated federal programs."[3] They include the number of facilities reached through compliance assistance tools and initiatives or through the distribution of compliance information. Output measures for compliance assistance activities include the number of site visits conducted, the number of helpline calls answered, and the number of fact sheets developed.

Outcome Measures

Outcome measures are "quantitative or qualitative measures of changes in behavior of the public or regulated entities caused, at least in part, by actions of government."[4] Outcome measures include changes in awareness and understanding, changes in behavior, and environmental and human health improvements:

- **Changes in awareness or understanding** reflect an increased knowledge of regulatory or nonregulatory environmental issues, including reporting and monitoring requirements, regulatory schedules, and pollution prevention opportunities. Examples of *changes in awareness or understanding* include the percentage of facilities receiving assistance that indicate an improved understanding of environmental regulations or the number of facilities attending a workshop that gained knowledge about pollution prevention or control technologies.

- **Behavioral changes** represent actual changes that a regulated entity has undertaken as a result of compliance assistance. Examples of *behavioral change* include the number of facilities that submitted required permit application or notification forms because of a training program, or the percentage of facilities assisted that adopted recommendations

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[3] NPMS, p. 4.

[4] NPMS, p. 4.

discussed during an onsite visit. *Behavioral changes* can be voluntary (e.g., voluntary reductions of industrial emissions as a result of publication of pollution prevention guidance documents or fact sheets), or regulatory (e.g., facilities reporting overlooked chemicals as a result of the publication of Toxic Release

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PRINTERS TAKE ACTION AFTER VIEWING WEB SITE

An online survey of users of the Printers National Environmental Assistance Center (PNEAC) Web site found that 65 percent of printers responding to the survey (14 individuals) made a behavioral change as a result of the Web site. Examples of actions taken include:

- Contacted a regulatory agency
- Changed handling of waste or emission
- Requested technical assistance
- Changed a process or practice
- Contacted a vendor

Inventory guidance documents). Improvements in compliance are also included under behavioral change.

- **Environmental and human health improvements** are measures of specific environmental and human health improvements at specific facilities resulting from compliance assistance activities. *Environmental and human health improvement measures* provide an indication of the scope and types of improvements resulting from compliance assistance tools and from the delivery of compliance assistance through targeted initiatives. An example of *environmental and human health improvements* would be the number of pounds of pollutant emission reductions at a facility resulting from the adoption of a control technology explained in a training video.[5]

Environmental and Human Health Impact Indicators

Environmental and human health impact indicators are defined as quantitative or qualitative measures of progress over time toward achieving national environmental or human health objectives. These indicators help EPA measure what impacts its environmental programs are having on national environmental problems. Environment indicators might, for example, show a reduced level of nutrients

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[5] Note that it might take some time for facilities to implement certain behavioral changes and realize environmental results. For this reason, you might want to periodically follow up with recipients of compliance assistance.

in a water body over a specified amount of time. EPA is planning annual studies of ambient environmental conditions to measure overall progress in achieving its goals.

C.   Continuum of Output and Outcome Measures

Figure 1 shows the continuum of output and outcome measures from reach to the targeted community to environmental and health improvements. Each measure builds on the previous measure on the continuum. Changes in behavior will not occur until the target audience understands the regulatory requirements. Similarly, it is difficult to assess the environmental and human health improvements without knowing the degree to which behavior has changed.

Although this document focuses on measuring the outcomes (i.e., *changes in awareness and understanding, changes in behavior, and environmental and human health improvements*) associated with compliance assistance projects, understanding how effectively you have reached the target audience will help you measure these outcomes. If the hotline, assistance tool, or workshop is reaching only a small portion of the intended audience, there will be limited corresponding changes in awareness and understanding. For example, if only a few printers in a targeted community are aware of a compliance assistance workbook and hotline, only a small number of facilities can possibly make changes as a result of the assistance.

Figure 1: Continuum of Compliance Assistance Measures
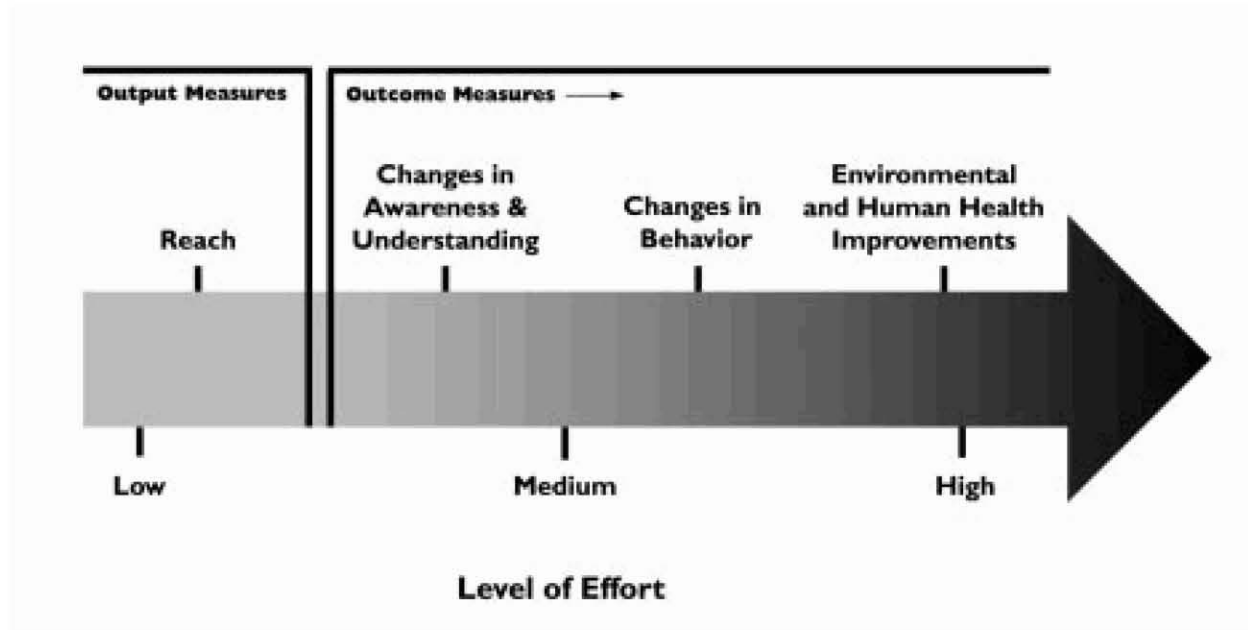
SECTION III: PLANNING AN EVALUATION

Planning is an essential step to conducting a successful evaluation. Without effective planning, the subsequent steps in an evaluation are likely to provide results that are difficult to understand. Identifying the goals of the compliance assistance project and where on the continuum you are starting from, along with defining the purpose and scope of the evaluation, will help you determine the best approach for your evaluation. To begin planning your evaluation, take some time to answer the following key questions:

- ■   What is the goal of your compliance assistance project?

- ■   What is the purpose and scope of your evaluation?

- ■   What measures are appropriate?

- ■   Which data collection method best meets your needs?

A.   What Is the Goal of Your Compliance Assistance Project?

The first step in the evaluation process is to identify the initial goals of the compliance assistance project. Is the goal of your project to document specific environmental results? Or, is the goal of the project simply to increase awareness? Region 4 hopes to document environmental results in its Charleston community-based environmental protection project. On the other hand, Ohio's "Dry Cleaner Initiative," seeks to educate, via mass mailings and onsite visits, dry cleaners on air permitting requirements under the 1993 MACT standard. Understanding where your project falls on the compliance assistance continuum will help ensure that you select appropriate measures to evaluate your success.

> **EPCRA 100 PERCENT COMPLIANCE GOAL**
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> The Headquarters team working on the EPCRA §312 Initiative set an ambitious goal for its compliance assistance project: achieve 100 percent compliance among facilities in the industrial organic chemical sector subject to the requirements of EPCRA §312, which requires facilities to prepare an inventory of chemicals produced, used, or stored on site. EPA selected this industry sector (SIC 2869) since this sector reported the largest number of accidental chemical releases of all industrial sectors surveyed.

Examples of specific project goals include:

■   To educate, via a series of seminars, companies in the Maquiladora industry that transport
     wastes from Mexico to the United States on applicable regulations.

■   To identify multimedia environmental problems and pursue corrective action through
     community-based environmental protection (CBEP) and onsite assistance to small
     businesses to prevent the problems from reoccurring.

■   To improve compliance at approximately 1,000 federal facilities via an interagency
     working group.

■   To promote environmental justice by improving the quality of the land, air, water, and
     living resources in a targeted urban neighborhood via onsite assistance to small
     businesses.

B.   What Is the Purpose and Scope of Your Evaluation?

Carefully assessing the evaluation's purpose—why the evaluation is needed, how the information will be used, and who will use the evaluation results—will help you determine the scope of the evaluation and next steps. Is the purpose of the evaluation to assist in management decisions? For example, are you trying to collect information such as lessons learned, innovative techniques used by facilities as a result of compliance assistance, or how the compliance assistance activity helped the audience? If so, an

> **POSSIBLE EVALUATION USES**
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> EPA's *Hearing the Voice of the Customer* (OP-235-B-98-003) identifies several management uses for program evaluations:
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> ■   Find ways to improve program services.
>
> ■   Answer inquiries about program accomplishments or needs.
>
> ■   Make a stronger case for more budget resources.

anecdotal assessment will probably meet your evaluation needs. On the other hand, if you trying to make major policy decisions or preparing a report for distribution to the public, then you might want to consider conducting a statistical study instead.

SNAPSHOT OF THE TEXAS/MEXICO BORDER INDUSTRY PROJECT

The Texas/Mexico Border Industry NPMS Set 3 Pilot Project seeks to educate, via a series of seminars, companies in the Maquiladora industry that transport wastes from Mexico to the United States. Seminar topics provide information on applicable state and federal requirements, promote voluntary compliance incentives and provide information on innovative pollution prevention techniques. Compliance guides and checklists were developed for the seminars, which include a guide for generators, a checklist for manifest requirements, and a guide for transporters of hazardous waste. The goal of the evaluation is to determine the effectiveness of the workshops on behavioral change and to determine changes in compliance data from HAZTRAKS before and after the seminars.

Anecdotal Assessments

Anecdotal assessments—evaluations that describe accomplishments, yet make no broad generalizations or claims[6]—will be suitable for most compliance assistance evaluations conducted by OECA. Anecdotal assessments tell a story about how compliance assistance has impacted the group of people that responded to your survey. These evaluations can include quantitative assessments such as the number of facilities implementing a process change as a result of onsite visits, but also tell a broader story of how and why the facilities responded to the compliance assistance. If the purpose of your evaluation, for example, is to determine whether or not onsite compliance assistance visits are worth continuing, then you need to know, *in general*, how well the visits were perceived by industry as well as what specific behavioral changes were made as a result of the visit. In this case, information from 6 to 10 recipients of site visits will probably provide enough information to make a decision about the value of site visits. While it is a not statistical study (i.e., you cannot generalize your results to all facilities that received an onsite visit), a well-thought out anecdotal assessment will provide the qualitative information needed to make an internal management decision as to whether this activity is worth continuing.

Statistical Studies

If the purpose of your evaluation is to make broad policy decisions, such as moving from a compliance assistance phase to an enforcement stage for a particular industry sector, you might want to consider conducting a statistical study. Statistical studies enable you to generalize your evaluation results

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[6] See Sparrow, Malcolm K. 1997. Regulatory agencies searching for performance measures that count. Journal of Public Administration Research and Theory.

to a larger audience (e.g., all facilities in an industrial sector, geographic region, or all users of a compliance assistance tool). This type of study requires that you collect more detailed data from a larger number of respondents in order to make reliable generalizations. The NPMS Set 1 Task Group is developing a separate guide to assist Regions in developing statistical methodologies. Appendix C includes additional information on conducting statistical studies, including how to chose the right sample size. If you are planning to conduct a statistical study, you might want to consider contacting statistical experts in EPA's Office of Policy for assistance.

Specifying the Target Population

As you develop the scope of your evaluation, you should also identify your target population, taking into account the purpose of your evaluation. Target populations might include specific industry sectors or a geographic area. You might also want to target your evaluation broadly to encompass a service, regardless of the sector or geographic location. Table 1 illustrates how identifying the purpose of your evaluation will help you define your target population.

Table 1. Examples of Target Populations

Purpose of Evaluation	Target Population
Evaluating the impact of a compliance assistance helpline, fact sheets, and site visits on the dry cleaning sector.	Industry sector
Assessing the reduction in chromium air emissions in a specific region resulting from process changes implemented based on outreach materials related to the chromium electroplating MACT standards.	Geographic region
Estimating the changes in awareness and understanding of environmental regulations of visitors to a Web site.	Users of the Web site

MEASURES FOR THE TEXAS CITY SMALL BUSINESS PILOT

The goal of the Texas City, Texas, Small Business NPMS Set 3 Pilot Project is to identify multimedia environmental problems and pursue corrective action through CBEP to prevent the problem from reoccurring. Teaching small business owners to assess their facilities and correct problems is the key to achieving this goal. The project team plans to achieve this goal through onsite visits to small businesses in Texas City. Compliance assistance will be available through the state environmental agency (the Texas Natural Resource Conservation Commission), a county-level assistance provider, and large-business mentors. Each visit will consist of an environmental assessment, determination of environmental compliance, and identification of changes required to achieve compliance. The evaluation team identified the following measures for this project:

- Rates of noncompliance.
- Improvements made as a result of the onsite visits.
- Number of facilities that self-police based on state/federal self-policing policies.
- Number of days for a significant violator to return to compliance.
- Number of small businesses participating in the project (and the percentage of small businesses in the community that are participating).
- Number of businesses that request onsite assistance, requests for written information, and numbers and types of compliance assistance information tools developed or identified by the program.
- Rate of compliance and noncompliance.
- Qualitative lessons learned.

C. What Measures Are Appropriate?

Defining success up front, based on the project goal and purpose of the evaluation, will help you select the appropriate evaluation measures, as well as interpret the results. Try to identify what results you would expect based on your experience with similar projects, goals established at the outset of the activity, or management expectations for the project.

Tables 2 and 3 list specific measures developed by the NPMS Set 3 Task Group for assessing the outcome of compliance assistance activities and sector strategies. OECA's goal is to develop a nationally consistent methodology to track these measures, similar to the Case Conclusion Data Sheets, which OECA developed for the enforcement program. These sheets, now docket fields, track activities resulting from enforcement actions such as improvements in labeling, recordkeeping, and reporting.

Table 2. Measures for Compliance Assistance Activities

Outcome Measure	Specific Measures
Awareness and Understanding	Number who improve their understanding of regulatory requirements
Behavioral Change	*Regulatory:* Number of regulatory requirements adopted (includes notifications, permits adopted, labeling, reporting, etc.) Changes in level of compliance (multimedia, subset, compliance indicators) *Nonregulatory:* Number of process changes adopted Number of environmental management changes or reviews adopted Number of best management practices adopted Number of self-audits conducted Number of recommendations adopted Number of facilities changing regulatory status
Environmental and Human Health Improvements	Number of facilities that reduce emissions or other pollutants Number of human health worker protection improvements Amount of emissions reduced, pollutants reduced, and/or risk reduced

D.   Which Data Collection Method Best Meets Your Needs?

Gathering the necessary data to evaluate compliance assistance activities is usually the most difficult, time consuming, and resource intensive step in the evaluation process. It is essential that you select the most appropriate data collection tool to meet the goals of your evaluation. Additional considerations include determining if the data gathering falls under the purview of the Paperwork Reduction Act (PRA), and is, therefore, subject to Office of Management and Budget (OMB) approval. In addition, OECA developed an Information Collection Request (ICR) entitled *Regional Compliance Assistance Program Evaluation* (EPA ICR No. 1806.01) that Regions can use to expedite OMB approval of survey questions. This generic ICR reduces the OMB review period from 6 months to 6 weeks.

Table 3. Sample Measures for Sector Strategies

Sector	Specific Outcome Measures
Petroleum Refining Sector	Increased compliance rates for these facilities 1 year after the program. Number of previously unknown facilities acting to address any compliance issues as a result of receiving compliance assistance (including contacting EPA or states for assistance). Number/percentage of facilities that self-report ground-water contamination.
Iron and Steel Sector	Number of environmental management plans adopted by steel mills. Number of steel mills that evaluate plant water and waste operations as a result of compliance assistance activities.
Agricultural Industry Sector	Number of concentrated animal feeding operations (CAFOs) with Comprehensive Nutrient Management Plans (CNMPs). Number of CAFOs that submit a permit application.
Chemical Sector	Number of facilities changing regulatory reporting. Number of facilities reducing discharges as a result of compliance assistance.

The Paperwork Reduction Act (PRA) and OMB Approval

The PRA requires federal agencies to receive OMB approval prior to collecting substantially similar information from 10 or more nonfederal respondents. As defined by the act, a "collection of information" means obtaining or soliciting information through identical questions, or reporting or recordkeeping requirements. The PRA applies to both mandatory and voluntary data collection efforts. Thus, most compliance assistance evaluations are subject to the PRA. Note, however, that the following actions do *not* require OMB approval:

- Surveys handed out onsite immediately after a workshop, seminar, or meeting, that ask participants about the quality of the seminar (e.g., knowledge of speakers, usefulness of handouts).[7]

- Attendance sign-in sheets at a meeting, workshop, or Web site.

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[7] Surveys to collect baseline data to assess awareness and understanding prior to the workshop *may* require OMB approval. Consult Appendix D for specific scenarios.

Appendix D provides additional information to help you determine whether or not your evaluation falls under the PRA.

Figure 2 should help you determine what next steps are necessary to proceed with your evaluation. In general, when you ask the same set of questions (whether voluntary or regulatory) to 10 or more people, the survey will fall under the PRA.[8] OECA has, however, obtained an expedited approval process for many compliance assistance surveys through its generic ICR. You can use the generic ICR when your goal is to determine the effectiveness of compliance assistance activities on the audience that receives the compliance assistance (e.g., participants at a workshop or users of a compliance assistance tool). Note, however, that the generic ICR *cannot* be used when you plan to use a statistical approach to generalize the effectiveness of a compliance activity to an overall population. In this case, you will have to develop a separate ICR for your evaluation.[9]

If your survey is covered under the generic ICR, you will still need to obtain clearance from OMB before you distribute your survey. To obtain clearance, you need to submit a copy of the survey instrument, cover memo, and burden estimate to the Regulatory Information Division (RID) in the Office of Policy. For more information on the level of information needed, the timing, and sample memos, see *How to Obtain Clearance for Regional Compliance Assistance Evaluation Surveys Under the Generic ICR 1860.01 OMB Control # 2020.0015* in Appendix E or on the Web at <www.epa.gov/oeca/perfmeas/icrfacts.html>.

Data Collection Tools

There are a number of tools you can use to collect data for your study. These tools include: mail, online, and phone surveys; mail-back comment cards; focus groups; onsite revisits; and reviews of self-reported data. In general, telephone surveys, focus groups, and onsite revisits allow for the collection of

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[8] Note that this requirement does *not* apply when contacting officials at federal facilities.

[9] OMB put this constraint on the ICR to give the public an opportunity to comment on survey methodology prior to implementation. For guidance on developing an ICR, see EPA's *ICR Handbook* available from the Office of Policy, Regulatory Information Division (RID). RID provides policy direction and oversight of Agency management of regulatory information and manages the Agency's administration of the burden reduction provisions of the Paperwork Reduction Act. OECA liaison, Lynn Johnson, on RID's Paperwork Analysis Team will answer any questions you might have about whether an ICR is needed, issues involved in preparing an ICR, or the ICR clearance process. Lynn can be reached by calling 202 260-2964 or via mail at Mail Code 2137. The fax number is 202 260-9322.

Figure 2. Obtaining OMB Approval for Compliance Assistance Evaluations
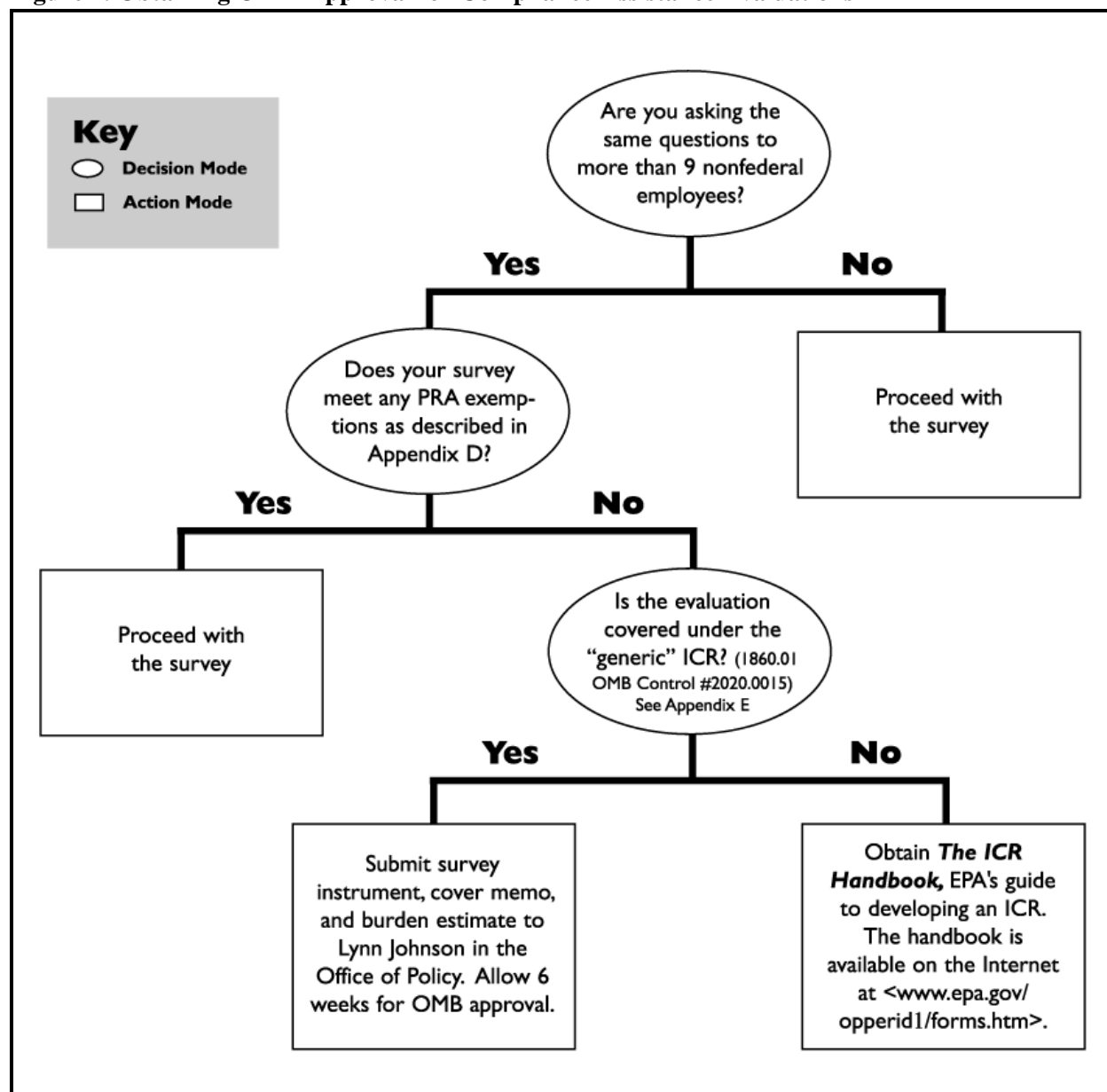
more detailed information than mail or online surveys and mail-back comment cards, since they allow you to ask followup or clarifying questions. Additional considerations for each of the methods are as follows:

■ **Mail-Back Comment Card.** Comment cards are tear sheets that you can distribute to potential respondents with the compliance assistance tool (e.g., guidebooks, videos, and information packets) itself. Since the card travels with the tool, you do not need to incur the costs of a followup mailing. Note, however, that you will incur the prepaid mailing costs for the tear sheet.

The mail-back card also ensures that all users have access to commenting on the product. If, for instance, a state compliance assistance program distributes your compliance assistance tool along with its own tools, users can still reach you with their comments.

■   **Online Survey.** An online survey is a set of questions posted on an Internet Web site or list server. These surveys have the potential to reach a large number of respondents. For surveys on Web sites, you have the ability to reach users that might otherwise be unknown to you. Many respondents like online surveys as they can respond to them when it is convenient, and they do not need to worry about losing a survey or mailing it back.

> **OECA USES ONLINE SURVEY TO EVALUATE ASSISTANCE CENTERS**
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> OECA evaluated customer satisfaction and behavioral change associated with 5 of the Internet-based compliance assistance centers via an online survey in 1998. Several hundred people responded to each of the online surveys. To increase the response rate, OECA offered respondents the opportunity to download an environmental screen saver from the Web and distributed a mousepad to respondents who volunteered to be part of a followup focus group.

As with mail surveys, the survey might result in a limited amount of detail as respondents might not want to spend a lot of time typing in a longer response. In addition, without follow up, there is potential for ambiguity or conflicting results, as with the mail survey.

■   **Mail Survey.** A mail survey is a set of questions sent to potential respondents via standard mail. A mail survey enables you to reach a large number of potential respondents, if you have their addresses. Compared with a comment card, a mail survey enables you to ask more questions. There is, however, potential for ambiguity in the results without following up to a mail survey. If, for example, you receive unexpected results or conflicting answers to questions, it is hard to interpret the data without following up. Similarly, a limited level of detail is available in most responses, as respondents will not spend the time to write long answers to open-ended questions.

■   **Telephone Survey.** A telephone survey is a standard set of questions asked to potential respondents over the telephone. These surveys, used alone, or in combination with mail or online surveys, enables the evaluator to ask followup or clarifying questions, potentially resulting in better data.

■   **Focus Group.** A focus group is a facilitated group discussion of questions you raise to selected members of your target audience. Focus groups often stimulate creative ideas and innovative

approaches. They also enable participants to debate differences of opinion and the evaluator to assess outcomes. This activity does, however, require a limited focus or the results will be difficult to interpret. Note also that there might be a limited ability to ask followup questions if you are using a "hidden evaluator" technique (i.e., you are using a professional facilitator to ask the questions while you monitor the proceedings from behind a double mirror). In addition, note that dominant participants might skew the discussion.

- **Onsite Revisit.** During an onsite revisit, evaluators return to facilities that previously received a compliance assistance visit. Revisiting facilities can provide excellent data since facilities are likely to spend the necessary time to answer questions while you are onsite. In addition, the revisit itself might spur additional compliance or pollution prevention activities. Onsite revisits also provide you the added benefit of observing environmental changes in person.

> **COLLECTING DATA TO EVALUATE THE CHARLESTON CBEP PROJECT**
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> The overall goal of the Charleston/North Charleston CBEP NPMS Set 3 Pilot Project is to improve the quality of the land, air, water, and living resources in the Charleston/North Charleston, South Carolina area. The project team is assisting paint/body shops and small automotive repair shops primarily through onsite visits. The team plans to evaluate results through onsite revisits.

- **Review Self-Reported Data.** Another option for assessing results is to track compliance data that your audience is required to report, such as Toxic Release Inventory submissions, EPCRA §312 reports, and permit applications. If you conduct a workshop for dry cleaners about air permitting requirements, for example, check to see how many of the attendees applied for permits 6 months after the workshop.

You can also consider a combination approach—mail and/or online survey with a phone survey to selected participants, for example. Such an approach enables you to potentially reach a large number of respondents, yet also collect detailed information from selected participants. In addition, it enables you to ask followup questions and clarify any unexpected results from the mail survey. The combination approach yields detailed responses, plus a large number of general responses. In general, as resources expended increase, both the detail and the number of responses increase.

Selecting the Proper Evaluation Method

In general, the evaluation method used should match the intensity of the compliance assistance activity. It makes more sense, for example, to use onsite visits to follow up on previous visits than it does to use them to follow up on those who simply received a guidebook or called for telephone assistance. Table 4 offers some suggestions for matching the intensity of the compliance assistance activity with the data collection method. Table 5 highlights the uses of the different tools, the resource implications, likely response rates, and tips for lowering costs and improving response rates.

IOWA DEVELOPS MAIL SURVEY TO DEVELOP AND ASSESS GUIDEBOOK

The Iowa Waste Reduction Center (IWRC) developed a mail survey to assess the knowledge base and information needs of agribusinesses on state and federal environmental regulations to effectively develop a guidebook on this topic. To encourage businesses to respond to the survey, IWRC offered respondents a free copy of the guidebook and a postage-paid return envelope. In addition, the personal cover memo stressed that the survey should take fewer than 10 minutes to complete. IWRC achieved a response rate of approximately 23 percent on the initial survey and plans to mail a followup survey along with the guidebook. The followup survey will enable IWRC to assess the change in awareness and understanding as a result of the guidebook.

Table 4. Matching the Intensity of the Evaluation Method to the Compliance Assistance Activity

DATA COLLECTION TOOL	COMPLIANCE ASSISTANCE ACTIVITY			
	Compliance Assistance Tools (e.g., Web site)	Helpline	Workshops	Onsite Visits
Mail-Back Comment Card	✓			
Online Survey	✓			
Mail Survey	✓	✓	✓	✓
Telephone Survey		✓	✓	✓
Focus Group			✓	✓
Onsite Revisit				✓

Table 5. Compliance Assistance Data Collection Tools

METHOD	WHEN TO USE	RESOURCE CONSIDERATIONS	RESPONSE RATE CONSIDERATIONS
MAIL-BACK COMMENT CARD	When evaluating a publication or other mailed tools, such as videos.	Only cost is the upfront cost of printing the tear sheet and the prepaid postage. Perforated tear sheets on cardstock cost more than nonperforated sheets, but also tend to achieve better response.	To improve the response rate, make sure the comment card is noticeable and easy to fill out. To make the card more noticeable, consider a brightly-colored tear sheet and placing the card in the center of the document. Affixing postage will also help improve response.
ONLINE SURVEY	When evaluating electronic services such as Web sites. Online surveys can also be used as an alternative to a mail survey.	Upfront costs include posting the survey on the Web site and programming electronic data entry capabilities, if desired.	Might have a higher response rate than mail survey, as online surveys are easier to respond to. Prompt Web users to respond to the survey by making it noticeable on the site. Announce the availability of the online survey to the target audience through electronic means such as list servers and nonelectronic channels such as a conferences or newsletters. Keep in mind that online surveys exclude compliance assistance users without access to Internet.
MAIL SURVEY	When trying to reach a large number of potential respondents. When data needed are amenable to yes/no answers or scales.	Requires postage costs for mailing the initial survey as well as postage for the respondents to return the survey, if using postage-paid envelopes. If sending out reminder postcards, will require additional postage costs.	Likely to have a low response rate if used alone. Follow up with a reminder postcard or phone call to improve response rate. Send subsequent mailings on colored paper. Consider using a third party such as a trade association or nonprofit to administer.
TELEPHONE SURVEY	When more detailed data is required.	If interviewing respondents in a large geographical area, long distance charges will apply. Staff time to administer the survey over the telephone is higher than the mail or online survey.	Consider using non-EPA employees to conduct the survey to improve perception of anonymity. Phone surveys can also be used to improve the rate of response for a mail survey. To improve the response rate for a telephone survey, attempt calling the respondent on several occasions. In addition, calling respondents either early or late in the day might help the interviewer bypass secretarial screening.
FOCUS GROUPS	When the evaluation goal is to improve services, compare a variety of services, or brainstorm new approaches. Before launching a new compliance assistance or expanding assistance to new sectors.	Professional facilitators tend to be costly. As an alternative, consider using an impartial EPA staff person with experience in facilitation.	Not usually an issue for focus groups since there are a small number of participants. Working with a trade association might increase response. Make the timing and location of the meeting as convenient as possible. Consider conducting the focus group during the evening or weekend.
ONSITE REVISITS	When highly detailed data or difficult-to-collect data (such as environmental changes) are required. When observed data are preferred or required.	Often resource intensive as staff time is required to set up and administer the survey to participants. Evaluators will also incur travel costs to the facilities. Resource constraints often limit the number of facilities that can participate.	Some evaluation teams try to get a commitment for a revisit from the facility prior to the initial assistance visit.

SECTION IV: CONDUCTING AN EVALUATION

Based on the answers to the planning steps above, you should now have an understanding of: the purpose and scope of the evaluation effort, the measures to be used to evaluate if the goals have been achieved, and the method to obtain the data needed to quantify the measures. This section includes tips and suggestions for implementing the evaluation, from identifying the starting point to developing the data collection instrument and selecting the sample population.

A.   Identifying a Starting Point

When possible, before conducting a compliance assistance activity, identify a starting point (e.g., the level of understanding of environmental regulations of the target audience). This will allow you to compare results before and after compliance assistance. To develop a starting point, consider the following options:

■   **Develop a preassistance survey or "test."** Before conducting the compliance assistance activity, consider developing a survey that asks respondents to describe their level of awareness, understanding, and practices related to the regulations on which you plan to supply compliance assistance. Comparing the results of the preassistance survey and a postassistance survey can help you determine the perceived impact of your assistance. Similarly, you can "test" how well your audience understands applicable regulations by asking them questions about what the regulations require. These tools can also

> **PNEAC ASSESSES UNDERSTANDING BEFORE AND AFTER VIDEOCONFERENCE**
>
> To assess changes in awareness and understanding as a result of the May 1996 "Green and Profitable Printing" videoconference, PNEAC conducted a brief survey at the conclusion of the videoconference. The survey asked participants to rate their understanding of compliance requirements and pollution prevention opportunities before and after the conference. On a scale of 1 to 10, participants estimated that their understanding of compliance and pollution prevention issues increased by 2 to 3 points. The survey also asked those printers interested in participating in followup surveys to include their name and contact information. In a subsequent survey of these participants, 92 percent of the respondents indicated that they had improved compliance since participating in the conference. An impressive 97 percent said they adopted at least one of the pollution prevention recommendations discussed. Ninety-five percent of the respondents said the videoconference influenced their decision to make the above changes. The followup survey is available on the Internet at <www.smallbiz-enviroweb.org/perfmeas.html>.

help you target the compliance assistance program toward specific industry needs identified in the survey or "test."

■ **Examine historical data on ambient environmental conditions.** Several compliance assistance initiatives have been conducted with the goal of reducing emissions of specific pollutants from industrial sectors. Historical pollutant release data from facilities in these sectors can serve to identify the starting point. For example, Region 9 has had problems with the discharge of copper into the San Francisco Bay. As a result, Region 9 has implemented several compliance assistance activities to reduce the discharge of copper in waste water from metal finishing facilities. In this case, Region 9 can use historical discharge monitoring reports (DMRs) to establish current levels of discharge. After completion of compliance assistance activities, the Region can once again review the DMRs to evaluate the reduction of copper discharge.

■ **Examine historical compliance rates.** EPA has undertaken several compliance assistance initiatives to improve compliance rates in industrial sectors or geographic regions. For these types of initiatives, the historical compliance rates with specific regulations in the

> **"DRIVE-BY" EVALUATIONS IN REGION 4**
>
> Most of the small businesses participating in the Charleston CBEP project lack a compliance history. To assess these paint/body and automotive repair shops, the project team has conducted "drive-by" evaluations to assess the number of facilities in each category and visible environmental problems.

sectors or Region could serve as the starting point. Note that using only the year prior to or the year of the compliance assistance activity as the starting point might bias the data if that year was an anomaly. The NPMS Set 3 Task Group recommends that several years of previous data be evaluated in quantifying the starting point. Since many compliance assistance activities are geared towards small businesses, however, you might not have historical compliance information on the targeted businesses.

B.   Developing the Data Collection Instrument

Regardless of the data collection method (mail, telephone, or online survey, mail-back comment cards, site revisits, or focus groups) used, you will need to prepare a data collection instrument. For mail surveys, online surveys, and mail-back comment cards, most evaluators develop a standard questionnaire for all recipients. This section presents some tips on developing an effective data collection instrument and sample questions tailored for specific compliance assistance activities.

For compliance assistance activities, most mail and online surveys and mail-back comment cards are voluntary requests of the regulated community. To be useful, the clarity and ease of completion of these surveys are critical in obtaining a sufficient response rate. Below are some formatting tips to make the surveys easier to complete for the recipient.[10]

- **Keep it simple.** When developing a survey, endeavor to keep it simple. Because the survey is voluntary, it should be designed to help the respondent complete the survey as easily as possible.

- **Keep it short.** Limit the survey to one to two pages. This format will likely result in a higher response rate, as longer surveys can overwhelm the recipient.

- **Be clear.** Give clear instructions to the respondent, so that he/she understands what to do. Spell out acronyms, use terminology known by your audience, and carefully word questions to help ensure that the audience understands the questions.

- **Ask one question at a time.** Compound questions can confuse respondents and the evaluation team.

- **Define what is being asked for.** Avoid the use of relative terms like frequently, seldom, and occasionally as these terms mean different things to different users. Instead, define or quantify the number of times. Asking the respondent to "check all that apply" can help save space, but might result in incomplete answers compared with the more explicit "Yes/No" question. Open-ended questions can assist you in obtaining additional detail, but use them only as a supplement to scaled question since open-ended questions are subject to interpretation and often require additional burden for the respondent.

- **Use a balanced scale.** Give respondents an opportunity to select from an equal number of positive and negative responses. In addition, the scale should move from negative on the left to positive on the right, and with strongly disagree on the left to strongly agree on the right. Scales should also be comprehensive and not overlap.

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[10] These and other tips can be found in: Conway, Mal. 1998. Getting results from paper and electronic surveys and questionnaires. IBM Global Services. Hamilton, New Jersey. September.

■ **Use a consistent scale.** If you begin with asking respondents to identify whether or not they "agree" or "disagree" with a particular statement, keep this structure throughout the survey. For example, do not switch from "agree/disagree" to "like/dislike" midway through the survey.

■ **Be logical.** There are several ways to make a survey more logical to the recipient:

— Leave sufficient space with lines for open-ended responses, and tell respondent what to do if more room is needed.

— Group similar question types together.

— Provide section headings.

— Use a vertical format, sufficient font size, and plenty of white space for ease of reading and comprehension.

For telephone surveys and site visits, evaluators often use a discussion guide, which provides a consistent set of questions and enables the evaluator to change the order and phrasing of questions and add clarifying questions as needed during the interview. For focus groups, evaluators typically develop specific questions for the group to discuss. Many of the tips listed above can be applied to a discussion guide and focus group questions.

Linking the Questions to Outcome Measures

When designing the survey instrument, you will need to include questions that will provide information on selected outcome measures. Appendix F provides sample questions, organized by outcome measure, which were developed from EPA and state surveys used to measure compliance assistance outcomes. These surveys are available on the Internet at <www.smallbiz-enviroweb.org/perfmeas.html>. Appendix F also includes questions to gauge customer satisfaction[11] and supplemental questions for specific compliance assistance activities.

The NPMS Set 3 Task Group encourages you to tailor the questions in Appendix F to your individual evaluation efforts. You can add, subtract, or alter the questions as appropriate. At a minimum,

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[11] For more information on conducting customer satisfaction surveys, see U.S. EPA. 1998. Hearing the voice of the customer: customer feedback and customer satisfaction measurement guidelines (OP-235-B-98-003). November. Information about EPA's Customer Service Program (CSP), CSP's generic ICR for customer satisfaction surveys, and the guidelines are available on the Internet at <www.epa.gov/customerservice> or by contacting Patricia Bonner at 202 260-0599.

however, you should include the bolded questions to measure compliance assistance outcomes. As discussed on page 13, OECA's goal is to have a nationally consistent set of outcome measures for compliance assistance for national implementation beginning in FY 2000. Table 6 reviews the outcome measures and the associated codes. Appendix G includes examples of actual surveys developed to measure compliance assistance outcomes.

Measuring Changes in Levels of Compliance

To assess changes in the level of compliance (code: B R 2), you will need to first assess a baseline compliance rate. If you are assessing changes at a facility that is a major source, consult EPA media-specific databases to determine the compliance baseline. When assessing changes in level of compliance for small businesses, for which compliance information might not exist in EPA media-specific databases, you will need to develop a surrogate measure of compliance. Sector-specific checklists, like the one in Appendix H, can help illustrate key indicators of compliance. Note, however, that when you are trying to determine compliance rates for an industry sector, it makes sense to conduct a statistically valid evaluation so that you can generalize your results to the entire sector. Please remember that OECA's "generic" ICR (1860.01 OMB Control #2020.0015) cannot be used for statistically valid surveys.

Table 6. Outcome Measures and Associated Codes

Outcome Measure	Specific Measures	Code
Awareness and Understanding	Number who improve their understanding of regulatory requirements.	A 1
Behavioral Change	*Regulatory:*	
	Number of regulatory requirements adopted (includes notifications, permits adopted, labeling, reporting, etc.).	B R 1
	Changes in level of compliance (multimedia, subset, compliance indicators).	B R 2
	Nonregulatory:	
	Number of process changes adopted.	B NR 1
	Number of environmental management changes or reviews adopted.	B NR 2
	Number of best management practices adopted.	B NR 3
	Number of self-audits conducted.	B NR 4
	Number of recommendations adopted.	B NR 5
	Number of facilities changing regulatory status.	B NR 6
Environmental and Human Health Improvements	Number of facilities that reduce emissions or other pollutants.	E 1
	Number of human health worker protection improvements.	E 2
	Amount of emissions reduced, pollutants reduced, and/or risk reduced.	E 3

C.   Pretesting the Data Collection Instrument

Regardless of the instrument selected, you should also "pretest" or "pilot-test" the data collection instrument. To do so, select a small group of participants willing to answer the questions and give feedback on their responses. This process will enable you to identify confusing questions, add missing questions, or delete irrelevant questions. The pretest also helps reduce bias in the evaluation by identifying leading or inappropriate questions.

D.   Selecting the Sample

For the bulk of compliance assistance activities, statistically valid probability sampling will not be required. In fact, you do not need to sample at all in some cases. If the target audience of your compliance assistance activity is small (e.g., 30 people attending a workshop), for example, you can survey all of the people in your target audience. In this case, sampling is not necessary since you are talking with everyone. Using online surveys and comment cards also eliminate the need for sampling, as anyone with

> **NEWMOA PRETESTS STATE SURVEY**
>
> Prior to conducting its 1998 survey on compliance assistance providers, the Northeast Waste Management Officials Association (NEWMOA) pretested its survey instrument to a group of 15 people representing different subsets and organizations included in the 700-person sample. Pretesters provided valuable suggestions to clarify questions, improve survey flow, and eliminate unnecessary questions. In fact, NEWMOA reduced the survey from 12 to 9 pages as a result of the suggestions from pretesters.

Internet access can respond to an online survey and comment cards are sent automatically with publications.

In contrast, if your audience is large, the principles of probability sampling can assist you in determining with whom to speak. First, consider developing a sample that is *representative* of your target audience. For example, if your goal is to evaluate the impact of your compliance assistance activity on both large and small businesses, make sure that representatives of each business size are in your sample. Second, exclude those outside your target population. For example, if you are evaluating a workshop and are interested in documenting behavioral change, remove the consultants and state government officials from the sample pool. For more information on sampling, see Appendix C.

Remember that if you are conducting an anecdotal assessment, and not a statistical study that uses probability sampling, you *cannot* generalize the results of your evaluation to all users of the compliance assistance tool or all members of an industry sector or geographic region. Although 60 percent of workshop participants understand particular best management practices for the dry cleaning industry, for example, this does not mean that 60 percent of all dry cleaners understand the regulations. In order to make this kind of statement, you would need to take a large random sample of dry cleaners and ask them awareness questions, using an appropriate statistically valid methodology.

E.   **Improving the Response Rate**[12]

An improved response rate will yield better survey results and add more confidence to your findings. In general, you can expect a response rate of about 25 percent. Typical response rates (20 to 40 percent) vary by the type of survey, length, customer interest, and incentives. In addition, if you are surveying a number of small businesses, your response rate might be low given the limited resources available to small businesses. In addition to suggestions to listed in Table 5 (page 21), consider the following to improve response rate:

- **Use a third party to conduct your evaluation.** An overall approach to improving response rates is to conduct the survey in conjunction with a trade association. Since trade associations have a great deal of credibility with their membership, they can often help improve response rates by cosponsoring a survey or mailing out the survey on association letterhead. In addition, if a third party is conducting a survey of its membership, it can do so without the constraints of the PRA.

- **Identify survey intentions at the outset of compliance assistance.** When you initiate compliance assistance activities, let recipients know that you will be following up later on to determine the impact of the assistance. If possible, let the recipients know when and how you will be contacting them.

- **Send a reminder postcard or replacement questionnaire** to your audience or call recipients to encourage them to submit the survey or to complete the survey over the phone.

- **Use a personal cover letter** to generate a higher response rate than a formal form letter. In the letter, try to convince the respondent of the survey's significance and explain that it is an EPA-sponsored survey.   Be sure to note if there are any compliance or enforcement ramifications for either submitting a response or not submitting a response. Also consider enabling the respondent to submit the survey anonymously.

- **Provide a stamped, self-addressed envelope** for returns, and use first-class postage.

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[12] Tips for increasing response rate can be found in: Nachmias, David. 1992. Research methods in the social sciences. New York, New York: University of Wisconsin.

- **Send any followup survey on different color paper.**

- **Consider the option of an online survey** (many recipients find these easier to use, since they don't have to worry about misplacing the survey instrument).

- **Consider offering incentives for survey completion.** Respondents to an online survey to evaluate the effectiveness of Internet compliance assistance centers, for example, were offered a free mouse pad. Also, through a cooperative agreement, EPA and a nonprofit organization offered respondents to a compliance assistance evaluation survey a free coupon at a national ice cream vendor.

- **Use a logical format** (see "Developing the Data Collection Instrument" page 23), provide clear directions, and tailor the questionnaire to the target audience as much as possible.

SECTION V: ANALYZING AND PRESENTING DATA

Now that you have collected the data, how do you best present the results to management? Most analysts begin the data analysis process by first compiling the raw data to each of the survey questions. The remainder of this section uses an example developed by EPA's Office of Policy to illustrate how to compile, analyze, and present data.[13]   The hypothetical question used by the Office of Policy is as follows:

> *On a scale of **1 to 6** where 1 represents "highly dissatisfied" and 6 represents "highly satisfied," how would you rate your satisfaction with the ABC booklet you received from EPA?*

The first step in analyzing the results of this question would be to plot the responses or raw data to that question, as done in Table 7. The table shows that 450 people responded to the survey and the frequency of each response received. Another interesting piece of data that could be noted is the number of people who did not respond to the survey, which enables you to track your response rate.

Table 7. Raw Data on Customer Satisfaction with ABC Booklet (n=450)

Score	Number
1 Highly Dissatisfied	42
2	27
3	122
4	132
5	38
6 Highly Satisfied	32
Don't Remember Receiving the ABC Booklet	22
Don't Know or No Opinion	35
TOTAL	**450**

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[13] This example from U.S. EPA. 1998. Hearing the voice of the customer: customer feedback and customer satisfaction measurement guidelines (OP-235-B-98-003), pp. 36-41, was slightly modified for this document.

A.   Where Do We Go from Here?

Now that you have your raw data compiled, think about ways to make the data more meaningful to decision-makers. Consider using descriptive statistics, removing data subsets, collapsing the data, and analyzing alternative subsets of the data.

Using Descriptive Statistics

Policy analysts commonly use descriptive statistics—the mean, median, and mode—to describe the central tendency of the data:

- ■   **Mean:** represents an average response. The mean is the most common measure of central tendency.

- ■   **Median:** represents the mid-point response, or the 50th percentile (i.e., the value below which 50 percent of the responses fall). Some analysts call this the middle value.

- ■   **Mode:** represents the most frequent response. Generally, the mode is *not* a good measure of central tendency, since often it depends on how the analyst groups the data.

In our example, the mean, or average response, to how satisfied customers are was 3.5. The median response falls at about 4. The most frequent response given was also 4. The descriptive statistics tell us that the data is skewed slightly to the right, meaning that customers are more satisfied than dissatisfied. At this point, most analysts will consider other ways of grouping the data and describing it to make it more meaningful, as the statistics of 3.5 and 4 are not all that meaningful as presented here.

Removing Data Subsets

To focus attention on those who did have opinions to express, you can separate out respondents who did not have an opinion about the document or who could not remember receiving it. Of the 450 customers asked the question in our example, 22 did not remember receiving the booklet and 35 said they had no opinion or did not know how they would rate their satisfaction with the booklet. Table 8 presents the responses, both the raw number and percentage, who expressed an opinion. Thus, the percentages of those with opinions is based on the 393 respondents who expressed opinions. If it is important to determine the percentage of customers who don't remember or who have no opinion about the booklet, you would calculate those figures using 450—the total number who were asked the question—as the

denominator. By including the sample size in the table (the information that "n = 450"), readers can do these calculations, should they be interested.

Table 8. Customer Satisfaction with ABC Booklet (n=450)

Score	Number	Percent Expressing An Opinion
1 Highly Dissatisfied	42	11
2	27	7
3	122	31
4	132	34
5	38	9
6 Highly Satisfied	32	8
SUBTOTAL	**393**	**100**
Don't Remember Receiving the ABC Booklet	22	n/a
Don't Know or No Opinion	35	n/a
TOTAL	**450**	

Collapsing Like Responses

The information presented in Table 8 might be at too great a level of detail for those examining the example data. The difference between a "2" and a "3" rating, for example, might not be meaningful for them. Thus, you may find it useful to *collapse* the information into a smaller number of categories. One possibility is to create three categories: dissatisfied (scores 1 and 2), neutral (scores 3 and 4), and satisfied (scores 5 and 6). Table 9 presents the collapsed categories:

Table 9. Collapsed Categories for Customer Satisfaction with ABC Booklet

Rating	Number	Percent Expressing An Opinion
Dissatisfied	69	18
Neutral	254	65
Satisfied	70	18
TOTAL	**393**	**101***

* Total is greater than 100 due to rounding

Most readers will be able grasp the information more easily once the categories are collapsed. It is reasonable to ask: If you will eventually collapse responses, why does the question posed to customers have six possible answers? Research has shown that people answering survey questions prefer to have a fairly wide range of responses because they don't like to feel "forced" into a limited set of options. In addition, analysts might have different approaches to collapsing categories.

When collapsing data, consider what makes sense for your evaluation. For instance, in the above example, you could group the data differently. You could, instead, make two groups: satisfied (responses 3-6) and dissatisfied (responses 1-2). Table 10 presents the results grouped this way. Note the difference in the analysis.

Table 10. Alternate Collapsed Categories for Customer Satisfaction with ABC Booklet

Rating	Number	Percent Expressing An Opinion
Dissatisfied	69	18
Satisfied	324	82
TOTAL	**393**	**100**

Analyzing Data by Subgroup

Subgroup analyses examine whether different kinds of customers have different kinds of responses. Suppose you want to examine whether printers and other technical assistance providers have the same or different opinions about the ABC booklet. You could collapse categories and sort respondents by their status as printers or technical assistance providers. Table 11 presents hypothetical findings:

Table 11. Selected Customers' Satisfaction with the ABC Booklet

Rating	Printers		Technical Assistance Providers	
	Number	Percent	Number	Percent
Dissatisfied	27	17	17	16
Neutral	94	60	78	73
Satisfied	35	22	12	11
TOTAL	**156**	**99***	**107**	**100**

* Total is less than 100 due to rounding

B.   Presenting the Data

Presenting the data in a clear, concise manner that provides the proper context and does not distort the results is an essential element in a compliance assistance evaluation.[14] You have many options for displaying results. In addition to raw data, descriptive statistics, and percentages, you can use graphics such as pie charts and bar graphs. How you present the data will determine how others interpret your results. In general, the display of data should:

■   Encourage the viewer to think about the substance of the data rather than the methodology, graphic design, or technology of graphic production.

■   Encourage the viewer to compare different pieces of data.

■   Present the data at several levels of detail, from a broad overview to the fine details.

■   Disaggregate the data as much as possible. For example, give the mean value for small versus large facilities.

<u>Using Graphics</u>

Graphics, including pie charts, bar graphs, histograms, and scatter diagrams, will often enable you to present your analysis more effectively than tables with numbers alone. For example, rather than

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[14] Many of the tips can be found in: Tufte, Edward R. 1983. The visual display of quantitative information. Graphics Press.

presenting decision-makers with the data from Table 9, "Collapsed Categories of Customer Satisfaction with the ABC Booklet," consider using a pie chart, such as the one in Figure 3.

**Figure 3. Pie Chart Showing Customer
Satisfaction with ABC Booklet**
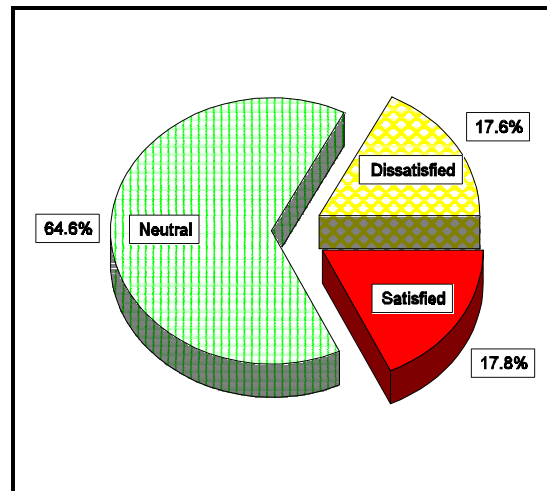
Appendix I provides additional information on using graphics. Table 12 illustrates four types of comparisons that you might want to illustrate through graphics:[15]

- Components or proportions of the topic being examined

- Number of items or differences

- Frequency distribution of characteristics

- Co-relationships between variables

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[15]   See Alman, Stanley M. 1976. Teaching data analysis to individuals entering the public service. Journal of Urban Analysis. Vol. 3, No. 2. pp. 211-37. October.

Table 12. Potential Graphics for Presenting Data[16]

COMPARISON TYPE	KEY WORDS	GRAPHICAL FORM	EXAMPLES
Components	Contribution Share Proportion Percentage of total	Pie chart—illustrates percentages of the whole.	Proportion of workshop attendees from different sectors. Percentage of Web site users who say they better understand regulations as a result of visiting the site.
Items	Item A more/less than B Differences Rank A is greater/ less than B	Bar chart — compares the magnitude and difference among mutually exclusive categories.	Pounds of pollutants discharged into a waterbody over different years.. Types of control technologies or pollution prevention techniques implemented as a result of a training.
Frequency Distribution	Variation Distribution Concentration Relative Frequency	Histogram—shows both magnitudes and differences among categories .	Variation in understanding of environmental regulations by different workshop participants.
Co-relationships	A is related to B A increases/ decreases with B A does not increase/ decrease with B	Scatter diagram—plots ungrouped data.	Analysis of changes in awareness, behavioral change, and environmental impacts as a result of compliance assistance.

C.   Understanding the Context of the Results

One of the pitfalls of data evaluation is not placing the results in the proper context. With compliance assistance, other factors come into play that might influence the behavior of the target audience. These factors might be completely unrelated to the compliance assistance activity being evaluated. Not considering such factors could mislead the results. For example, as mentioned previously, the goal of the Chesapeake Bay program was to reduce the percent of noncompliers with NPDES permits.

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[16] Ibid, page 217. Also see: Patton, Carl and David Sawicki. 1986. Basic methods of policy analysis and planning. Prentice-Hall. Englewood Cliffs, New Jersey.

At the beginning of the program, the rate of noncompliance was 16 percent, which was consistent with the national average. Through various compliance assistance activities, the noncompliance rate for facilities discharging to the Bay was reduced to 1 percent. While this number implies that the compliance assistance was very effective, if the national average was also reduced to 1 percent, it would indicate that other factors were at play. In the case of the Bay program, the national average remained at 16 percent, indicating that the Bay program compliance assistance was indeed effective.

Considering Data Anomalies

When presenting your data, consider if there are any data anomalies of which the reader should be aware. This is primarily of concern when evaluating compliance rates and pollutant discharges. For example, if a workshop were conducted in January 1997 with the intent of reducing perchloroethylene emissions from dry cleaners, a likely starting point would be perchloroethylene emissions in 1996. If for some reason 1996 was an anomaly in terms of these emissions, however, the comparison to 1996 emissions might not be valid. A more likely scenario would be that over the years prior to 1996, perchloroethylene discharges were being reduced because of regulatory drivers. Comparison of 1997 data only to 1996 data would show an apparent decrease because of compliance assistance, but when compared to trends prior to 1996 would simply show a continuation of the trend. Instead, it might be more appropriate to present emissions data from several years prior to 1996 to determine the true impacts of compliance assistance.

SECTION VI: COMPLIANCE ASSISTANCE EVALUATION CHECKLIST

This checklist summarizes key steps discussed in the guide. You can use this checklist to monitor your progress throughout the evaluation.

Planning an Evaluation

❑ Reviewed original goals of compliance assistance project.

❑ Defined the purpose and scope of the evaluation.

❑ Selected the approach (i.e., anecdotal or statistical study).

❑ Identified appropriate outcome measures for evaluation (see Table 2, p. 14).

❑ Selected the appropriate data collection tools (see Table 5, p. 21).

❑ Determined the necessary steps to obtain OMB approval.

Conducting an Evaluation

❑ Identified a way, if feasible, to assess the "starting point" or baseline for the evaluation.

❑ Reviewed the guidelines for developing survey instruments.

❑ Tailored sample questions from Appendix F to meet evaluation needs.

❑ Pretested data collection instrument.

❑ Obtained OMB approval.

❑ Selected an appropriate sample.

❑ Made efforts to improve response rate.

Analyzing and Presenting Data

❑ Consolidated raw data.

❑ Analyzed data using descriptive statistics.

❑ Collapsed data, as appropriate.

❑ Determined appropriate graphics to present key data findings.

❑ Assessed context of results.

APPENDICES

APPENDIX A

PERFORMANCE PROFILE FOR
EPA's ENFORCEMENT AND COMPLIANCE ASSURANCE PROGRAM

Impact on Environmental or Human Health Problems

Measured through annual evaluation studies of selected EPA objectives.

Effects on Behavior of Regulated Populations

Levels of Compliance in Regulated Populations

> Set 1. Rates of noncompliance for --
> a) fully-inspected populations
> b) self-reported compliance information
> c) populations targeted for special initiatives
> d) priority industry sectors

Environmental or Human Health Improvements by Regulated Entities

> Set 2. Improvements resulting from EPA enforcement action
> Set 3. Improvements resulting from compliance assistance tools and initiatives
> Set 4. Improvements resulting from integrated initiatives
> Set 5. Self-policing efforts by using compliance incentive policies

Responses of Significant Violators

> Set 6. Average number of days for significant violators to return to compliance or enter enforceable plans or agreements
> Set 7. Percentage of significant violators with new or recurrent significant violations within two years of receiving previous enforcement action

Enforcement and Compliance Assurance Activities

Monitoring Compliance

> Set 8. Number of inspections, record reviews, responses to citizen complaints, and investigations conducted

Enforcing the Law

> Set 9. Number of notices issued, civil and criminal actions initiated and concluded, and self-policing settlements concluded

Providing Assistance and Information

> Set 10. Facilities/entities reached through --
> a) compliance assistance tools and initiatives
> b) distribution of compliance information

Building Capacity

> Set 11. Capacity building efforts provided to state, local, or tribal programs

APPENDIX B

NPMS SET 3

ENVIRONMENTAL AND HUMAN HEALTH IMPROVEMENTS BY REGULATED ENTITIES

WORK GROUP MEMBERS

Region 1

John Moskal   617 918-1826

Region 2

Patrick Durack   212 637-3767
Ken Stoller   732 321-6765

Region 3

Janet Viniski   215 814-2999

Region 4

Dave Abbott   404 562-9631

Region 5

Linda Beasley   312 353-2071

Region 6

Barry Feldman   214 665-7439
Bonnie Romo   214 665-8323

Region 7

Pam Johnson   913 551-7480

Region 8

Judy Heckman-Prouty   303 312-6358

Region 9

Greg Czajkowski   415 744-2107
Angela Baranco   415 744-1196
Marvin Young   415 744-1847

Region 10

Kathy Veit   206 553-1983

APPENDIX C

Fact Sheet II: Sampling – the basics

If you have decided to use a survey approach for obtaining customer feedback, you need to determine what sample size to use. This Fact Sheet first discusses sample sizes, sampling error, and confidence intervals—all of which factor into decisions about the sample size. It then presents a table for you to use in determining what sample size to use -- and tells you step by step how to make use of that table. This Fact Sheet then describes how to go about randomly selecting that number of customers from the total list of customers you have served during the time period to be covered by the survey.

What Kinds of Sample Sizes Are We Talking About?

Before we give specific guidelines on how to choose the sample size, it will be useful to set some general expectations. National public opinion polls like the Gallup Poll and the Roper Poll typically use sample sizes in the range of 1,350 to 1,800. These polls use fairly large sample sizes to obtain a result that represents the entire adult U.S. population with a sampling error on the order of plus or minus 2.5% to 3%. Such small levels of sampling error are needed because the polls often address matters of national importance. The decisions made, based in part on the results of these national polls, may be far-reaching, long-lasting, and affect millions of people.

The surveys you will be conducting to obtain customer feedback will be of a very different nature. The target group whose opinions you need will be much smaller: it will probably be the people who have come to you and your colleagues in one specific program area within EPA, within a limited time (e.g., during one year) to request certain products or services. We are therefore talking about a target group of maybe as many as 500 to 1,000 people (few EPA programs directly serve more customers than that) and in some cases 50 people or fewer. Furthermore, although the decisions that will be affected by customer feedback are important, they will probably not be far-reaching and long-lasting. The scope of decisions to be made in most cases will be, for example:

•   Should we change a process to reflect customer comments?

•   Should we revise some of our written products?

•   Should we provide a half day of customer feedback training to each staff member?

Even in the worst case—we make the wrong decision about whether our products need to be revised and whether the staff members need further training—we will (if we continue to obtain feedback from our customers at least once each year) discover our error soon enough and be able to correct it, without incurring excessive or irreparable damage in the meantime.

Based on these considerations, it is reasonable to have higher sampling errors than those associated with national surveys like the Gallup poll. We can feel comfortable with sampling errors of 5 percent or even 10 percent.

Additionally, for getting feedback from EPA customers, we have relatively small target groups who were served by a specific program during the time period of immediate interest. For this reason, it is reasonable for you to use a much smaller sample size than is used in the Gallup and Roper polls, which seek to accurately capture the opinions of millions of people.

Sampling Error

"Sampling error" is normally presented as a percentage with a plus or minus sign in front of it. For example, the sampling error in one particular situation may be ± 3.5 percent. That means that the *true* value of a given measure for the entire population—that is, the whole target group you are getting feedback from—is the value obtained from your sample of customers, plus or minus 3.5 percent. If for example, 62.4 percent of your sampled customers are satisfied, the actual percentage of satisfied customers lie within the range between 58.9 percent (62.4 percent - 3.5 percent) and 65.9 percent (62.4 percent + 3.5 percent).

But that is not quite true. In fact, there is no range of reasonable size that we can identify for which we can be certain that the true value for the full list of customers lies in that range.

Why is that so?

Because there's always the possibility of very flukey, very unlikely circumstances occurring -- with the result that the characteristics of the customers in the sample are very different from the characteristics of the customers not in the sample. In such circumstances, the true value for all customers will be very different from the value obtained from the customers in the sample surveyed. The only way to get around this statistical fact is to specify "how certain we want to be" that the true value does, in fact, fall with a specific range around the value we obtain from the sample. This degree of certainly we are looking for is known as the "confidence level."

Confidence Level

The "confidence level" indicates how confident we want to be that the true value lies within a specific range.

There is no one confidence level that is the "right" one to use. There are many different possible confidence levels, and only you can decide which confidence level is appropriate for your survey.

Much of the work in the area of public opinion surveys uses the 95 percent confidence level. That means that if you determine the sampling error using the 95 percent confidence level, you can be 95 percent certain that the true value for all your customers will lie within a specific percentage band (one equal to the size of the sampling error) around the result you obtain from the sample of customers you contact.

Another confidence level commonly used is the 90 percent confidence level. With a 90 percent confidence interval, you can be confident that 9 times out of 10, the true value falls within the value obtained from your sample of customers, plus or minus the sampling error. Some analysts use 80 percent confidence intervals.

To decide what confidence level to use, you might want to think of a scale running from 80 to 95, where 95 represents a high level of confidence and 80 represents a lower level of confidence. Decide which confidence level to use based on the way in which your results will be used, how products and

services may be affected by the results, and the frequency with which you will collect additional information to confirm or revise your findings.

Determining the Sample Size

Now that we have established appropriate expectations with regard to sampling error and sample size, we will provide you with some guidance on selecting your sample size. Please recognize that there are several factors to consider in determining the sample size. The information provided here is intended to help get you started. Please refer as well to the additional information provided in Fact Sheets III, IV and V. If you wish, you may also consult a statistician within your Office at EPA. A list of EPA statisticians showing the EPA Office in which each of these statisticians is located can be obtained from the Office of the Chief Statistician of EPA within EPA's Center for Environmental Information and Statistics by calling 202-260-5244.

Number in Target Group	Sampling Error	Confidence Level	Sample Size
1000	±5	80	141
1000	±5	90	214
1000	±5	95	278
500	±5	80	124
500	±5	90	176
500	±5	95	218
200	±5	80	90
200	±5	90	116
200	±5	95	132
100	±5	80	62
100	±5	90	74
100	±5	95	80
50	±5	80	39
50	±5	90	43
50	±5	95	45
1000	±10	80	39
1000	±10	90	64
1000	±10	95	88
500	±10	80	38
500	±10	90	60
500	±10	95	81

200	±10	80	34
200	±10	90	51
200	±10	95	66
100	±10	80	29
100	±10	90	41
100	±10	95	50
50	±10	80	23
50	±10	90	29
50	±10	95	34

The above table is that appropriate for *simple random sampling* (SRS), which is a sampling procedure based on sampling without replacement. Simple random sampling is the most commonly used sampling procedure. The table is based on the *approximate formula* given in Fact Sheet IV. This approximate formula includes an adjustment comparable to the finite population correction factor for each combination of target population and sample size.

The *precise formula* that can be used instead of this *approximate formula* is also given in Fact Sheet IV. For a discussion of the *finite population correction factor*, see Fact Sheet IV. For a discussion of the meaning and significance of *sampling without replacement* (as contrasted with *sampling with replacement*), see the discussion of this matter in the last section of Fact Sheet V.

The procedure described below in this Fact Sheet for randomly selecting a sample from the full list of customers served in a specific period of time is *simple random sampling* and is therefore consistent with the above table.

Here's How to Use the Above Table

The instructions that follow assume that the unit of analysis for the survey will be the "person served." (See Fact Sheet VII for a discussion of "Unit of Analysis.")

 (1) Identify the number of persons you have served in the time period of interest. Find that number in the column labeled "Number in Target Group."

(2) Select the confidence level that you consider to be the most appropriate given the magnitude of the decisions that will be made based (in part) on the results obtained from the survey:

> o If the decisions to be made using the survey results will be far-reaching, long-lasting and/or costly, use the 95% confident level.

> o If the decisions to be made using the survey results will be less far-reaching, less long- lasting or less costly, use the 90% confidence level.

o If the decisions to be made using the survey results will have more limited consequences, mostly in the short-term (e.g., in the next 6-12 months) and the cost implications of the decisions will be moderate, you may use the 80% confidence level.

(3) Select the level of sampling error you consider to be acceptable given the magnitude of the decisions that will be made using the results obtained from the sample.

o For most EPA customer satisfaction surveys, a sampling error of ±10% should be acceptable.

o In cases where the decision to be made based (in part) on the survey results are of such a nature that a smaller level of sampling error is needed, a sampling error of ±5% can be used instead.

(4) Read off the corresponding sample size.

(a) If the total number of customers served falls between two of the values shown above in the column "Number in Target Group," you can use interpolation to obtain an initial estimate of the appropriate sample size.

(b) You can then use the approximate formula for determining sample size presented in Fact Sheet IV to obtain a much better estimate of the sample size needed.

(c) You can stop here and make use of *the approximate value for the sample size* obtained in step (4)(b) immediately above. Alternatively, you can, if you wish, now make use of ***the trial and error approach*** presented in Fact Sheet IV or, even better, ***the combined approach***, also presented in Fact Sheet IV, to calculate *the precise value for the sample size* needed.

Here's How to Randomly Select a Sample of Customers Once You Have Determined What Sample Size to Use

Once you have determined the appropriate sample size to use, the next step is to randomly select that number of customers from the total number served in the time period of interest. Here is a procedure you can use to make that random selection:

(1) Make a complete list of all the persons served in the period of interest for which you already have (or can obtain, with a reasonable expenditure of effort) the needed contact information (i.e., name, plus address or phone number). Put the customers in alphabetical order to ensure that there are no duplicate names. Eliminate any duplicate names.

(2) Once all duplicate names have been eliminated (so that each name appears only once), starting at the top of the list, number each name.   The result is the "*master list*" of customers served. The number next to each name is that person's "customer number."

(3) Here is a computer based approach for selecting a sample of customers from the *master list*:

(a) You will use spreadsheet software (like Lotus 1-2-3 or Excel) to carry out the remaining steps of this procedure. Before you begin to make use of any particular spreadsheet software, first make sure that it has a "randomize" function. Not all spreadsheets do.

(b) Enter the customer numbers in numerical order into the spreadsheet, one number per row. Place each of these numbers in the second column of the spreadsheet, leaving the first column in each row blank. The result will be a spreadsheet with the number of rows equal to the number of customers and with the rows having the numbers "1", "2", "3", and so on (up to the total number of customers served), with these numbers in the second column of each row.

(c) Use the "randomize" function on the second column of the spreadsheet. The numbers in the second column are now in random order.

(d) Enter numbers into the first column of each row. Enter the number "1" into this column in the first row, enter "2" into this column in the second row, and so on. These new numbers are the row labels.

(e) Mark off the number of rows corresponding to the sample size chosen above. For example, if the sample size is 65, mark off the first 65 rows.

(f) The numbers appearing in the second column of the rows marked off in step (e) above are the customer numbers corresponding to the customers to be included in the sample. For each of these customer numbers, read off the name of the customer appearing next to this number on the master list prepared in step (2) above and place it in a new list. This is new list is the list of customers selected for inclusion in the sample – the people you will contact during the survey and ask to respond to the survey questions.

(g) If due to a lower than expected response rate, the number of customers from whom responses are received is less than the desired sample size, and all reasonable followup efforts have already been made to increase the response rate, go back to the spreadsheet and mark off the additional number of rows needed to reach the desired sample size. The numbers appearing in the second column of these additional rows are the customer numbers for the additional customers to be added to the sample.

For an equivalent procedure that does not make use of a computer or a computer spreadsheet, see the last section of Fact Sheet V.

APPENDIX D

OFFICE OF COMPLIANCE

GUIDANCE

ON THE NEED FOR

INFORMATION COLLECTION REQUESTS
(ICRS)

FOR THE EVALUATION OF

COMPLIANCE ASSISTANCE ACTIVITIES

SEPTEMBER 1997

Produced by the Office of Compliance Regional Compliance Assistance Work Group
Lynn Vendinello, Work Group Chair

Federal agencies are generally required, by the Paperwork Reduction Act (PRA), to receive Office of Management and Budget approval prior to collecting substantially similar information from ten or more non-Federal respondents.   A "collection of information" means the obtaining or soliciting of information by an agency by means of identical questions, or identical reporting or record keeping requirements, whether such collection of information is mandatory, voluntary, or required to obtain a benefit. This includes any requirement or requests to obtain, maintain, retain, report or publicly disclose information. 5 CFR § 1320.3(c)

There are exceptions to this rule and depending on your particular situation, your compliance assistance evaluation task may or may not fall within an exception. This guidance will help determine whether or not an Information Collection Request (ICR) is necessary for your task. You may also contact the PRA experts in the Cross-Cutting Issue Division of the Office of General Council to assist you with individual questions. They are Hale Hawbecker at 202-260-4555 and Tanya Hill at 202-260-1486.

What is the Paperwork Reduction Act?

The PRA is a law (PL 104-13) originally enacted by Congress in 1980, reauthorized in 1986 and revised in 1995, that essentially attempts to minimize the Federal paperwork burden on the public. Section 3501 of the law clearly states the eleven purposes of this Act.

" §3501. Purpose

The purposes of this chapter are to-

1.   Minimize the Federal paperwork burden for individuals, small businesses, State and local governments, and other persons resulting from the collection of information by or for the Federal Government;

2.   Ensure the greatest possible public benefit from and maximize the utility of information created, maintained, used, shared and disseminated by or for the Federal Government;

3.   Coordinate, integrate, and to the extent practicable and appropriate, make uniform Federal information resources management policies and practices as a means to improve the productivity, efficiency and effectiveness of Government programs, including the reduction of information collection burdens on the public and the improvement of service delivery to the public;

4.   Improve the quality and use of Federal information to strengthen decision making, accountability, and openness in Government and society;

5.   Minimize the cost to the Federal Government of the creation, collection, maintenance,

use, dissemination, and disposition of information.

6.   Strengthen the partnership between the Federal Government and State, local, and tribal governments by minimizing the burden and maximizing the utility of information created, collected, maintained, used, disseminated, and retained by of for the Federal Government;

7.   Provide for the dissemination of public information on a timely basis on equitable terms, and in a manner that promotes the utility of the information to the public and makes effective use of information technology;

8.   Ensure that the creation, collection, maintenance, use, dissemination, and disposition of information by or for the Federal government is consistent with applicable laws, including laws relating to--(a) privacy and confidentiality,

9.   Ensure the integrity, quality and utility of the Federal statistical system;

10.   Ensure that information technology is acquired, used, and managed to improve performance of agency missions, including the reduction of information collection burden on the public; and

11.   Improve the responsibility and accountability of OMB and all other Federal agencies to Congress and to the public for implementing the information collection review process, information resources management, and related policies and guidelines established under this chapter."

What is an ICR?

An Information Collection Request (ICR) is a document submitted by federal agencies to OMB in order to obtain approval of an information collection and/or a reporting and record keeping requirement that falls under the purview of the PRA. The ICR must receive OMB approval prior to the initiation of the information collection.

The term "collection of information" according to the Paperwork Reduction Act of 1995 (PL 104-12(S.244)) means: "(A) the obtaining, causing to be obtained, soliciting, or requiring the disclosure to third parties or the public, of facts or opinions by or for an agency, regardless of form or format, calling for either-
"(i) answers to identical questions posed to, or identical reporting or record keeping requirements imposed on, ten or more persons, other than agencies, instrumentalities, or employees of the United States; or
"(ii) answers to questions posed to agencies, instrumentalities, or employees of the United States which are to be used for general statistical purposes."

For guidance on how to complete an ICR, you can visit the "EPA's Information Collection Request (ICR) Homepage" at www.epa.gov/icr on the Internet or consult Rick Westlund in OPPE at 202 260-2745 and/or your OPPE Desk Officer.

When is an ICR Needed?

An ICR is generally required for any activity involving the collection of identical information from ten (10) or more non Federal respondents in any twelve month period. ICRs may be approved for up to a three-year period and can be extended through subsequent approval requests. An approved ICR is required as long as the activity continues.

Examples of information collection activities that commonly require an ICR:

● Information requirements in a rule (e.g. reporting, record keeping, waiver provisions).

● Other information collection activities (e.g. studies, surveys, application forms, audits, standardized data collection activities).

Certain activities are not subject to the Act. For example:

● An ICR is not required when the information is collected during the conduct of a criminal or civil enforcement action.

● An ICR is not needed when the collection falls under one of the categories of items that OMB has concluded do not generally meet the definition of "information" contained in 5 CFR §1320.3(h).

Many of the compliance assistance activities that the Office of Compliance is currently undertaking as well as those of the compliance assistance programs in the regions fall under one of the categories. To assist in the determination of the need for an ICR, the following guidance is provided:

● Examples of scenarios that do and do not require ICRs.

● A copy of OMB's implementing regulations (5 CFR § 1320).

● A copy of a Fact Sheet, "How to Obtain Clearance for Customer Satisfaction Surveys."

ICR Applicability Scenarios

■   **Category A: Web -Sites:**

Scenario One: I am establishing a web site for my regional compliance assistance program (or for a compliance assistance center) and would like to establish a "comments" button or "feedback" feature.

Response: Generally, no ICR would be required for this activity. According to OMB, "an undifferentiated 'suggestion box' format--such as one requesting 'ideas, comments, suggestions, or anything else you would like to tell us,' or one asking, 'if you experience any technical problems with our site, or have any suggestions for improving it, please let us know'--are not considered to be 'identical questions'. [1] Such general solicitations of comments from the public do not require OMB clearance. However, should the agency request specific information from web site users, OMB approval would be required as explained in Scenario Two.

Scenario Two: I would like to put an on-line survey on my web site to determine what features of the web site are most useful and to ask for suggestions for improving the web site.

Response: The fact that your survey is on-line does not affect the decision as to whether or not the survey requires OMB clearance. What will affect whether or not the survey requires an ICR is the nature of your questions. According to OMB guidance, if your questions are non-identical then you will not need OMB clearance. Identical questions ask each respondent to supply the same level of information on the same subject. For example, they often supply a specific set of answers for the user to select from. Non-identical questions are non-specific and allow the responder to apply "facts or opinions" of their own choosing without any direction from the government. In addition, if your survey is primarily for the purposes of assessing customer satisfaction with your web site, you may want to consider using an existing ICR Clearance (see attached pamphlet). If your survey attempts to get at behavioral changes and/or compliance improvements, then you may need a separate clearance again depending on the nature of your questions. In

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[1]"The Paperwork Reduction Act of 1995: Implementing Guidance", February 3, 1997, pg. 17

general, if you feel that your questions are non-identical you may want to ensure a certain degree of brevity with respect to your survey so that your survey does not appear to follow a plan of inquiry.

Scenario Three: I would like to ask the users of my web site to identify themselves by name or by category (e.g. auto service repair shop, car dealer, consultant).

Response: No ICR would be required for this activity. According to 5 CFR 1320.3 (h)(1), this category of an inquiry is not deemed to constitute an information collection and therefore would not require clearance. The Paperwork Reduction Act states that "Affidavits, oaths, affirmations, certifications, receipts, changes of address, consents, or acknowledgment," do not constitute information. Merely, asking users to identify themselves by name or category is a request for an "acknowledgment" not generally subject to the PRA.

■　　**Category B: Workshops/Seminars/Training Sessions**

Scenario Four: I am planning to hold a compliance assistance workshop for air permits. This workshop is open to anyone who would like to attend (with limits on total numbers able to physically attend). After the workshop is over, I would like to hand out a voluntary questionnaire that asks the attendees questions such as: a) Has this workshop provided information that will help you improve your ability to comply with environmental regulations?

Response: No ICR would be required for this activity. Exemption #8 of the Paperwork Reduction Act that states that, "facts or opinions submitted in connection with public hearings or meetings"[2] would apply to this scenario. To provide for more certainty of this exemptions application, it would be best to provide a Federal Register notice making it clear that the workshop is open to all interested members of the public. A second-best option would be to adopt an open-door policy with respect to the workshop so that no one would be excluded (except for obvious space limitations) from attending. In addition, you could also conduct an on-the-spot evaluation of the workshop, since category #8 would most likely apply to that activity, as well. You could also send a follow-up questionnaire within a short time period following the seminar (e.g. one week).

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[2]5 CFR 1320.3 (h) (8)

Scenario Four A: My compliance assistance program has funding for four seminars this year. We would like to determine the topics that would be of the greatest interest to our clients, so we would like to mail out a voluntary questionnaire that lists potential seminar topics.

Response: An ICR would probably not be required for this activity. Category #8 of the PRA would apply to this scenario as well. OMB guidance explains that, "included in this category are questions which ask the proposed participants to identify themselves and the topic(s) about which they desire to speak."[3] Your request for topics to be discussed is similar to asking for a request to speak on a particular topic. Further, the requested items are "in connection with" the public workshop and category #8 appears to apply to such inquiries.

Scenario Four B: After the completion of a workshop, we would like to send a follow-up survey out which asks questions about behavioral changes that resulted from attendance at the workshop.

Response: In this scenario you would probably need OMB clearance, especially if there was a significant time delay before the survey was mailed out because the information collected would no longer pertain directly to the public meeting that was held. If you were looking for behavioral changes that facilities later adopted after the workshop had educated them about environmental requirements, for example, this information request is not directly related to evaluating the immediate impact of the workshop (e.g., their satisfaction with the workshop and their improved awareness/understanding of requirements).

Scenario Five: I will be holding a printing compliance training workshop that will be made generally available to printers. I would like to administer a "test" before and after the training to determine if understanding of environmental requirements changes as a result of the training.

Response: No ICR would be required for this activity. Category #7, "Examinations designed to test the aptitude, abilities or knowledge of the persons

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[3]"The Paperwork Reduction Act of 1995: Implementing Guidance", February 3, 1997, pg 26

tested and the collection of information for identification or classification in connection with such examinations,"[4] would apply to this scenario. The nature of your test should be with respect to their knowledge of the subject matter at hand. If you wish to use the test to collect socioeconomic information about the respondents, an ICR will probably be required.

Scenario Six: My office has given a grant to a state to develop a compliance guide that integrates federal and state rules for metal finishers in my state. One of the criteria for awarding the grant was that the grantee have a component for program evaluation. The grantee plans to include a comment card in the compliance guide that would get mailed back to the state office.

Response: According to OMB guidance, "In general, collections of information conducted by recipients of Federal grants do not require OMB approval. On the other hand, an agency is the sponsor of a collection of information...if the grant recipient is: 1) collecting information at our specific request; and/or 2) the terms and conditions of the grant require that the we specifically approve the collection of information or the collection procedures."[5] One can ask for a program evaluation component of a grant proposal and/or measures of success; however, we can not ask that a particular survey method be used without getting an ICR approved.

If, however, the award is a cooperative agreement, then the agency is considered a sponsor of the information and all of the PRA restrictions on information collection would apply.

■   **Category C: Mailed or Phoned Surveys**

Scenario Seven: An EPA employee or contractor would like to know how many states have a small business policy and plans to call them to ask for a copy of their policy, if they have one.

Response: No ICR would be necessary to conduct this activity. Category #2 of

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[4]5 CFR 1320.3(h)(7)

[5]IBID, pg 14

the Paperwork Reduction Act states that the request for "samples of products or any other physical objects"[6] does not constitute a collection of information. According to OMB, this category "includes requests for information that is already available in a form suitable for distribution and is provided in that form to all requesters. (This request is a collection of information if the information has to be compiled or if it is not provided to any person who requests it)."[7]

Scenario Eight: An EPA employee or contractor would like to follow up with those states that have sent us a copy of their small business policy to ask specific questions about their individual state policies.

Response: No ICR would be required for this activity. Since you will be asking each of the states questions that pertain only to their specific policy and not identical questions of each state, Category #6 of the PRA would apply. Category #6 of the PRA states that "a request for facts or opinions addressed to a single person"[8] does not constitute a request for information. However, if EPA asked the same questions following a plan to more than nine states, the PRA would apply.

Scenario Nine: My EPA program would like to ask states to voluntarily answer a survey that asks them to quantify the benefits of their compliance assistance program.

Response: It is important to understand that the PRA applies not only to industry and individuals but also to requests for information from states and local governments. Further, the fact that the survey is voluntary does not mean that the PRA does not apply. In this case OMB clearance would be required because you are asking identical questions and are directing them to specific entities.

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[6] 5 CFR 1320.3(h)(2)

[7] "The Paperwork Reduction Act of 1995: Implementing Guidance," draft, February 3, 1995 pg. 24

[8] 5 CFR 1320.3(h)(6)

APPENDIX E

For Appendix E, please see

www.epa.gov/oeca/perfmeas/icrfacts.html

Fact Sheet

How to Obtain Clearance
for
Regional Compliance Assistance Evaluation Surveys
Under the Generic ICR 1860.01
OMB Control # 2020.0015

EPA

U.S. Environmental Protection Agency
Office of Compliance
Office of Enforcement and Compliance Assurance

QUESTION 1: WHEN CAN I USE THE GENERIC COMPLIANCE ASSISTANCE ICR?

The generic clearance shall be used for strictly voluntary collections of program evaluation type information from customers of regional compliance assistance programs.[1] This generic ICR can be used for the bulk of the planned program evaluation/outcome measure work planned in the regions, where your goal is to determine the effectiveness of your compliance assistance activities on the audience that receives the compliance assistance (e.g. participants at a workshop). The generic ICR shall not be used for measurement work that would require a statistically-valid methodology (e.g. when generalizing to an overall population). In those cases a separate ICR must be undertaken to allow the public the opportunity to comment on the survey methodology. This restriction; however, is not meant to discourage the use of sound survey methodology. Programs are encouraged to use good survey design, methodology and implementation in all of their program evaluation work.

QUESTION 2: HOW DO I RECEIVE APPROVAL FOR MY SURVEY, IF IT MEETS THE CONDITIONS OUTLINED ABOVE?

Below are the instructions for submitting your survey for clearance:

Prior to initiating the survey, sponsoring regional programs must seek final approval from OMB. To obtain approval, sponsoring regional programs must submit a clearance package consisting of a memorandum and a copy of the survey instrument through the Regulatory Information Division of the Office of Policy. The memorandum will be addressed from the program to Lynn Johnson, the OECA Desk Officer in RID, Office of Policy (2137). Lynn can be reached at 202-260-2964 A brief one-page memorandum must address the following:

o   Survey title, identification of survey originator (office, point of contact, phone number);

o   Description and intended purpose of the survey as it relates to compliance assistance program evaluation; and

o   Costs and burden to the Agency and respondents, and the number of respondents.

RID staff will review each submission to ensure that it meets the requirements of the Paperwork

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[1] In cases where a state or other party is conducting the survey through a cooperative agreement clearance would still be necessary because in these cases OMB considers the Agency as sponsoring the information collection and it is therefore covered by the Paperwork Reduction Act.

Reduction Act and any conditions of the generic approval, and may reject any proposed survey that does not meet the criteria above.

QUESTION 3: HOW LONG WILL THE PROCESS TAKE?

Following review within RID, RID will submit surveys and attached materials to OMB for a 30 working-day review. During that time you should first check in both with OP to make certain that it was sent over and then with OMB to remind them of their deadline. The OMB examiner who will be reviewing all the surveys under this ICR is Eric Godwin. Eric can be reached at 202-395-3087 or (eric_k._godwin@omb.eop.gov) It would be wise to call or e-mail Eric to remind him of the deadline around 15 days after it has been sent to OMB. In addition, you can also include in your cover note to OMB that if you do not hear back from OMB within the thirty-day period, you will assume that they have no comments on the survey and that it is approved.

QUESTION 4: CAN I SEND A LIST OF SURVEY QUESTIONS THAT I PLAN TO USE OVER AND OVER AGAIN AT WORKSHOPS, TRAINING SEMINARS, ON-SITE VISITS TO OMB FOR APPROVAL?

Yes. If you are going to be repeating your compliance assistance activities over the course of the year(s) you can send a comprehensive list of survey questions for pre-approval. The list of questions would be broader than the list for any one survey. For example, you may know that you will be conducting MACT training seminars for wood finishers, drycleaners and paint coaters next year. You also know that you want to follow-up on the seminars by asking those that attended what changes they made at the facility as a result of the training. You would develop your list of questions that applied to all three sectors plus the sector-specific ones for OMB approval. When you delivered the surveys you would only use those questions that were appropriate to the audience being assisted. In calculating burden, however, you will need to base it on the overall number of respondents to all of the surveys (see BURDEN section below).

QUESTION 5: WHAT DO I HAVE TO DO TO MY SURVEY TO SHOW THAT IT HAS BEEN APPROVED BY OMB?

The OMB Control Number and expiration date must appear on the front page of an OMB-approved form or survey, or on the first screen viewed by the respondent for an on-line application. The rest of the burden statement must be included somewhere on the form, questionnaire or other collection of information, or in the instructions or cover letter for such collection.

The following information must appear on the first page of the survey:

OMB Control No. 2020-0015

Public reporting burden for this collection of information is estimated to average eleven (11) minutes per response, including the time for reviewing instructions, gathering information, and completing and reviewing the collection of information. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggestions for reducing the burden, including the use of automated collection techniques to the Director, OP Regulatory Information Division, United States Environmental Protection Agency (Mail Code 2137), 401 M Street, SW, Washington, D.C. 20460; and to the Office of Information & Regulatory Affairs, Office of Management & Budget, 725 17th Street, NW. Washington, DC 20503, Attention: Desk Officer for EPA. Include the EPA ICR 1860.01 and the OMB control number 2020-0015 in any correspondence. Do not send your completed surveys to this address..

QUESTION 6: IS THERE A STANDARD COVER LETTER FOR THE SUBMITTAL OF SURVEYS TO EPA OFFICE OF POLICY? AND HOW DO I CALCULATE THE NECESSARY BURDEN ESTIMATES?

For each survey, you will need to send a cover memorandum to EPA Office of Policy. A sample memorandum is attached as Attachment 1. The memo will be addressed to Lynn Johnson of the Office of Policy. In the memo you need to address five areas:

1) *Background*: Briefly describe the compliance assistance activity being undertaken

2) *Survey Purpose and Description*: Briefly describe the goals that you are attempting to measure through the survey and attach the actual survey (or list of survey questions)

3) *Survey Methodology and Use of Results*: Explain how you plan to conduct the survey (comment card, mail-back form, phone etc...)

4) *Respondents Burden*: You will need to calculate total respondents' burden hours and total respondents' cost. Follow the approach below and see the example in Attachment One.

a) Number of Respondents: How many respondents do you anticipate responding to the survey.

b) Minutes per response: How long will it take to complete the survey. In the ICR, our estimates were as follows: phone surveys-10 minutes; mailed/faxed back surveys-10 minutes; on-line surveys- 5 minutes; comment cards-5 minutes.

c) Cost per hour: In the ICR, we estimated the costs per respondent at $33/hr. This figure

is based on Bureau of Labor Statistics "Employer Costs for Employment Compensation" for the typical types of small businesses that we serve through our compliance assistance program and is the figure you should use in your calculation of respondents cost.

Total Burden Hours = (# of Respondents X Minutes per response)/60
Total Respondents Cost=$33 X Total Burden Hours

5) *Agency Burden*: This refers to the time that it will take you to review the responses and conduct your analysis. You will need to supply Total Agency Burden which will be calculated by multiplying EPA staff time in hours X cost per hour. In the ICR, we estimated cost per hour as **$34.98/hr**. This rate is based on a 1998 GS-13/01 salary of $55,969 or $26.91/hr with 30% overhead the hourly rate is $34.98. This figure should consistently be used in your calculation of Agency Burden.

Total Agency Burden= Hours of EPA staff time X $34.98.

If you choose to supply OMB with a list of survey questions that you will use throughout your regional compliance assistance program, you will still need to conduct the above calculations; however, you provide OMB with the aggregate burden that totals up the individual burden for each time a survey that pulls of questions from the overall list is used.

QUESTION 7: HOW CAN I LEARN WHAT OTHER REGIONS ARE DOING IN THIS AREA?

This generic ICR is a pilot ICR to enable us to learn how to conduct outcome measurement of compliance assistance activities. To facilitate information sharing on survey development, regions are asked to submit copies of their actual surveys to Lynn Vendinello in the Office of Compliance at vendinello.lynn@epa.gov. OC in conjunction with EPA's Office of the Small Business Ombudsman, will post the surveys on an EPA web site, at http://www.smallbiz-enviroweb.org/perfmeas.html/
The web site has been developed in part to educate state programs to compliance assistance efforts, including measurement activities. The Office of Compliance will be working with EPA's Office of the Small Business Ombudsman to have the surveys categorized according to type of compliance assistance activity and intended outcome.

QUESTION 8: DOES THE APPROVED ICR CHANGE THE OFFICE OF COMPLIANCE EXPECTATIONS WITH RESPECT TO RECAP MEASUREMENT FOR FY'99?

The Annual Program Goals for OECA for FY'2000 anticipates that we will be implementing a nationally consistent methodology for outcome measurement of compliance assistance. In FY'99 OC will ask the regions to collect outcome measures for their compliance assistance efforts in a manner that is consistent with forthcoming FY'99 RECAP guidance. As

part of the National Performance Measures Strategy Implementation, OC in concert with regional Task Group members is exploring ways to facilitate RECAP compliance assistance reporting, including the entry of output and outcome data into a PC-Based database system. Until that system is available to all regions, regions are encouraged to save data on :

1) response rates, follow-up strategies, important lessons related to survey design and implementation; and

2) actual survey results.

and to submit this data as part of the FY'99 RECAP reporting process.

QUESTION 9: IS THE OFFICE OF COMPLIANCE GOING TO PROVIDE ME WITH ANY ADDITIONAL ASSISTANCE ON SURVEY METHODOLOGY AND DESIGN?

In support of the National Performance Measures Strategy Implementation, OC has enlisted the services of a contractor to assist the regions in their survey work. The contractor will be producing additional guidance on survey design and will assist in the development of survey questions based on our current categorization of outcome measures for compliance assistance. See Attachment 3 for the NPMS Set 3/10 Task Group's Current Categorization of Compliance Assistance Outcome Measures. In addition, to see examples of surveys that others have used, please visit the EPA Small Business Office's Web Site at: http://www.smallbiz-enviroweb.org/perfmeas.html/

ATTACHMENT 1: SAMPLE COVER MEMO FROM REGIONAL PROGRAM TO OFFICE OF POLICY

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION
60 WESTVIEW STREET, LEXINGTON, MA 02173-3185

MEMORANDUM

DATE: September 9, 1999

SUBJ: Request for OMB Approval of Compliance Assistance Program Evaluation
Survey: Pilot Generic ICR # 1860.01

FROM: John Moskal
New England Environmental Assessment Team

TO: Lynn Johnson, OECA Desk Officer
Regulatory Information Division
Office of Policy

EPA's Region 1, New England Office is preparing to distribute copies of the *New England Auto Repair & Refinishing Compliance Manual.* In order to learn whether the document improves the readers understanding of their federal and state regulatory requirements, we are including with the document a mail-back survey.

Approximately 12,000 copies of the checklist will be distributed upon request to auto service and repair shops in the EPA Region 1 states, with the survey form as an insert. We expect to receive approximately 3,000 responses..

If you have any questions or concerns about this request, please contact John Moskal at 617-565-2735.

Attachments

Request for Approval of Information Collection Activity

I. Background

The *Auto Service and Refinishing Compliance Manual* is an outreach tool, designed to inform the auto service and repair shops of their federal and state multi-media compliance obligations in "user-friendly" plain-English. It was produced through a cooperative agreement with the New England Waste Management Officials' Association (NEWMOA) under Section 215 of the Small Business Regulatory Enforcement and Fairness Act. The purpose of this manual is to provide clear and concise information to the auto service and repair shops and local technical assistance providers that meets their informational needs and allows them to better understand the integration of their federal and state multi-media rules.

II. Survey Purpose and Description

The New England Waste Management Officials' Association (NEWMOA) in cooperation with EPA Region One is planning on conducting a program evaluation survey in the form of a mail-back card to evaluate whether the manual provided auto service and repair shops with the information they need to understand their federal and state compliance obligations in a way that is easy to read and use. The results will be used to improve the reports content, readability and use.

III. Survey Methodology and Use of Results

The potential target audience for the evaluation forms consists of approximately 12,000 auto service and repair shops in the three New England States as well as government personnel (local, state and national). EPA Region I plans to distribute the forms as inserts to copies of the *New England Auto Service and Repair Compliance Manual*. We anticipate that approximately 3,000 readers will respond. We estimate that it will take a respondent approximately five minutes to complete and evaluation form.

EPA Region I will create a database to track evaluation form responses. The information will be used to prepare a report which will summarize the findings and make recommendations to NEWMOA and Regional managers on how to improve the readability, use and content of this report and other similar compliance assistance activities.

IV. Respondents' Burden

Number of Respondents	3,000
Minutes per Response	5 minutes x 3,000 = 15,000 minutes = 250 hours
Cost per Hour	$33.00*
Total Burden:	**250 Hours; $8250**

* Based on Bureau of Labor Statistics "Employer Costs for Employment Compensation". This is the estimated used in the generic ICR.

V. Agency Burden

EPA Staff Time   100 hours
Cost per Hour $34.98**
Total Burden   **100 hours; $3,498**

**This rate is based on a 1998 GS-13/01 salary of $55,969 or $26.91/hr with 30% overhead the hourly rate is $34.98. This is the estimated used in the ICR.

ATTACHMENT TWO: Sample Cover Note from Office of Policy to OMB

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION VII
OFFICE OF WATER WETLANDS & PESTICIDES
726 MINNESOTA AVENUE, KANSAS CITY, KS.

MEMORANDUM

DATE: September 14, 1998

SUBJECT: Request for OMB Approval of Program Evaluation Survey under Generic ICR #1860.01

FROM: DAVID WILCOX
IOWA SBREFA PROJECT OFFICER

TO: Steve Vineski, IPB Desk Officer
Information Policy Branch
Office of Policy

EPA's Region 7, Water Wetlands & Pesticides Office in cooperation with the Iowa Waste Reduction Center (IWRC) is preparing to develop a "*Handbook of Environmental Regulations for Agribusiness*". In order to help the IWRC and EPA assess the knowledge base and needs of the agribusiness community and help identify the information types that will be most useful, they are asking agribusiness facilities to fill out the attached mail back survey.

Approximately 1,900 survey forms will be distributed to Iowa agribusiness facilities. We expect to receive approximately 190 responses..

If you have any questions or concerns about this request, please contact David Wilcox at 515 284-4606.

Attachments

Request for Approval of Information Collection Activity

I. Background

The *Handbook of Environmental Regulations* is an outreach tool, designed to inform the agribusiness facilities of their federal and state multi-media compliance obligations in "user-friendly" plain-English. It will be produced through a cooperative agreement with the Iowa Waste Reduction Center (IWRC) under Section 215 of the Small Business Regulatory Enforcement and Fairness Act. The purpose of this manual is to provide clear and concise information to the agribusiness community that meets their informational needs and allows them to better understand the integration of their federal and state multi-media rules and regulations.

II. Survey Purpose and Description

The Iowa Waste Reduction Center (IWRC) in cooperation with EPA Region 7 is planning to conduct a needs evaluation survey in the form of a mail-back form, to evaluate how to make the handbook more useful, assess the knowledge base and needs of the agribusiness community, and help identify the information that will be most useful.

III. Survey Methodology and Use of Results

The potential target audience for the evaluation forms consists of approximately 1,900 agribusiness facilities. IWRC plans to distribute the forms with a postage paid envelope for easy return. We anticipate that approximately 190 readers will respond. We estimate that it will take a respondent approximately 10 minutes to complete and evaluation form.

IWRC will use the survey results to help them tailor the contents and format of the "Handbook of Environmental Regulation for Agribusiness". The survey answers will help the Iowa Waste Reduction Center and the Iowa Department of Economic Development Small Business Liaison, who has contracted with IWRC to develop and distribute the survey, to assess the knowledge and needs of the Iowa agribusiness community.

IV. Respondents' Burden

Number of Respondents:	190
Minutes per Response:	10 minutes x 190 = 1,900 minutes = 32 hours
Cost per Hour:	$33.00*
Total Burden:	**32 Hours; $1056**

* Based on Bureau of Labor Statistics "Employer Costs for Employment Compensation". This is the estimated used in the generic ICR.

V. Agency Burden: EPA Staff Time: 10 hours

ATTACHMENT 3: NPMS WORKING DRAFT CATEGORIZATION OF OUTCOME MEASURES FOR COMPLIANCE ASSISTANCE

Outcome Categories

I. Changes in Awareness/Understanding of Compliance Assistance Opportunities and Regulatory Requirements:

a) # who seek assistance

b) # who improve their understanding of a regulatory requirements

II. Changes in Behavior:
a) # of recommendations adopted
regulatory:
a) # of regulatory requirements adopted (includes notifications, permits adopted, etc...)

non-regulatory:
a) # of EMRs adopted
b) # of BMPs adopted
c) # of industrial process changes adopted

III) Improvements in Compliance:
a) change in compliance indicator level (e.g. using a simplified compliance checklist)
b) change in compliance rate

IV) Environmental and Human Health Improvements:
a) # of facilities that reduce emissions or other pollutants
b) # of human health/worker protection improvements
c) amount of emissions reduced, pollutants reduced and/or risk reduced

APPENDIX F

MENU OF SAMPLE SURVEY QUESTIONS BY OUTCOME MEASURE

This appendix provides a menu of sample survey questions you can tailor for your specific evaluation efforts. Use them as a guide to get you started. Add questions, as appropriate, and delete questions that are unrelated to your evaluation effort. Modify the questions to fit the sector you targeted as well as for the type of compliance assistance activity. If your workshop did not discuss the importance of self-auditing, for example, you do not need to include that as a potential response to Question 7, under Behavioral Changes. Similarly, if your assistance focused on dry cleaners and their obligations under the Clean Air Act Amendments, you can delete the questions related to water and waste discharges.

Section I of this document focuses on outcome measurement, which is central to OECA's commitments under the National Performance Measures Strategy (NPMS) and the Government Performance and Results Act. Section II lists supplemental questions for onsite visits, workshops, and Web sites. Some of these questions are also related to the outcome measures—specifically, the number of audit recommendations implemented. Section III of this document includes sample questions to assess the background of the respondent and customer satisfaction.

SECTION I: OUTCOME MEASUREMENT

Measuring the outcomes of compliance assistance—changes in awareness and understanding, behavioral change, and environmental and human heath impacts—is a central component of OECA's performance measurement strategy. Questions related to the key measures that OECA plans to track are listed in **bold** text and coded accordingly. Table 1 lists the outcome measures and the associated codes.

Table 1. Outcome Measures and Associated Codes

Outcome Measure	Specific Measures	Code
Awareness and Understanding	1. Number who improve their understanding of regulatory requirements.	A 1
Behavioral Change	*Regulatory:*	
	1. Number of regulatory requirements adopted (includes notifications, permits adopted, labeling, reporting, etc.).	B R 1
	2. Changes in level of compliance (multimedia, subset, compliance indicators).	B R 2
	Nonregulatory:	
	1. Number of process changes adopted.	B NR 1
	2. Number of environmental management changes or reviews adopted.	B NR 2
	3. Number of best management practices adopted.	B NR 3
	4. Number of self-audits conducted.	B NR 4
	5. Number of recommendations adopted.	B NR 5
	6. Number of facilities changing regulatory status.	B NR 6

Outcome Measure	Specific Measures	Code
Environmental and Human Health Improvements	1. Number of facilities that reduce emissions or other pollutants.	E 1
	2. Number of human health worker protection improvements.	E 2
	3. Amount of emissions reduced, pollutants reduced, and/or risk reduced.	E 3

A.   Outcome Measurement Category: Awareness and Understanding

1.   Would you say that you are more aware of and knowledgeable about environmental requirements and opportunities as a result of this compliance assistance?[1]

> ❑   Yes **(Code: A 1)**
>
> ❑   No
>
> ❑   N/A

2.   As a result of the assistance you received, how has your understanding of the environmental regulations that apply to your business improved?

> ❑   A great deal. I feel that I understand what is required.
>
> ❑   Somewhat. I am still a bit confused about the regulations.
>
> ❑   Not at all.
>
> ❑   N/A

Comments:_____

_____

3.   What would have helped you to understand the environmental regulations more fully?

> ❑   More clearly written regulations.
>
> ❑   Better written guidance materials.
>
> ❑   A more knowledgeable staff person.
>
> ❑   A training class or workshop.
>
> ❑   More time to read the materials.
>
> ❑   Other:_____
>
> _____

---

[1] Questions addressing compliance assistance outcome measures are listed in **bold** text.

4.   What did you learn that will be most useful to you?

    ❑   How to apply for a permit.

    ❑   Information on new equipment or techniques to use to lower emissions.

    ❑   How to implement an environmental management system.

    ❑   The name of a contact in another regulatory department.

    ❑   Information on how similar companies have reduced emissions or improved compliance.

    ❑   Other:_____

B.   Outcome Measurement Category: Behavioral Change

1.   Did you share the awareness/knowledge gained through this compliance assistance activity with others in your organization or company?

    ❑   Yes

    ❑   No

2.   Did you make changes in environmental practices or otherwise take action to comply with specific federal, state, or local environmental regulations as a result of the compliance assistance?

    ❑   Yes **(Code: B R 1)**

    ❑   No

    ❑   N/A

    ❑   Not yet, but we are planning on taking action.

3.   To comply with specific federal, state, or local environmental regulations, has your facility filed a new notification form or letter?

    ❑   Yes **(Code: B R 1)**

    ❑   No

    ❑   N/A

    ❑   Not yet, but we are planning on doing so soon.

If yes, please identify what type of form or letter. Check all that apply:

Hazardous Waste (RCRA): ❑ Generator **(Code: B R 1)**

                                     ❑ Treatment/Storage/Disposal Facility **(Code: B R 1)**

Air Emissions:	❑ NESHAP/MACT **(Code: B R 1)**
	❑ New Source Performance Standards **(Code: B R 1)**
	❑ Refrigerant Recovery/Recycling Device Certification **(Code: B R 1)**
Toxic Chemicals:	❑ TRI Report Form "R" **(Code: B R 1)**
	❑ TRI Alternate Threshold Certification Report **(Code: B R 1)**
Hazardous Chemicals:	❑ Tier 1 or Tier 2 Chemical Inventory Report **(Code: B R 1)**
Oil Spills ("OPA - 90"):	❑ Facility Response Plan **(Code: B R 1)**
	❑ SPCC Plan **(Code: B R 1)**

4. **To comply with specific federal, state, or local environmental regulations, has your facility applied for a new permit or permit modification?**

  ❑ Yes **(Code: B R 1)**

  ❑ No

  ❑ N/A

  ❑ Not yet, but we are planning on doing so soon.

  If yes, please specify the permit type. Check all that apply:

Hazardous Wastes (RCRA):	❑ Treatment **(Code: B R 1)**
	❑ Storage **(Code: B R 1)**
	❑ Disposal **(Code: B R 1)**
Air Emissions:	❑ Title V Operating Permit **(Code: B R 1)**
Water Discharges:	❑ General Permit for Discharge of Storm Water **(Code: B R 1)**
	❑ Individual Permit for Discharge to Surface Water **(Code: B R 1)**

5. **Has your facility improved labeling/manifesting, recordkeeping, monitoring, or reporting as a result of EPA's compliance assistance?**

  ❑ Yes **(Code: B R 1)**

  ❑ No

  ❑ N/A

  ❑ Not yet, but we are investigating this option.

If yes, please indicate the area where the change was made. Check all that apply:

❑ Labeling/manifesting change. **(Code: B R 1)**

❑ Recordkeeping change. **(Code: B R 1)**

❑ Monitoring/sampling change. **(Code: B R 1)**

❑ Reporting change. **(Code: B R 1)**

❑ Testing change. **(Code: B R 1)**

6. **Has your facility installed pollution control equipment or changed industrial processes as a result of EPA's compliance assistance?**

❑ Yes **(Code: B R 1 or B NR 1)**

❑ No

❑ N/A

❑ Not yet, but we are investigating this option.

If yes, please indicate the type of change made. Check all that apply:

❑ Installed emissions control equipment. **(Code: B R 1)**

❑ Installed a waste treatment system. **(Code: B R 1)**

❑ Purchased new industrial process equipment. **(Code: B NR 1)**

❑ Made a process change without purchasing new equipment. **(Code: B NR 1)**

7. **Has your facility implemented procedures to improve environmental practices as a result of EPA's compliance assistance?**

❑ Yes **(Code: B NR 2, 3, or 4)**

❑ No

❑ N/A

❑ Not yet, but we are investigating this option.

If yes, please indicate the type of change made. Check all that apply:

❏   Implement an environmental management system. **(Code: B NR 2)**

❏   Provide training to improve awareness and/or practices in your organization. **(Code: B NR 2)**

❏   Change the type of raw materials (including chemicals) used at your facility. **(Code: B NR 2)**

❏   Negotiate with suppliers or waste handlers to improve information or practices. **(Code: B NR 2)**

❏   Institute new best management practices. **(Code: B NR 3)**

❏   Conduct a self-audit. **(Code: B NR 4)**

8.   **As a result of the changes indicated in Questions 6 and 7 above, has your facility changed regulatory status (e.g., found that the regulations do not apply to you or reduced emissions to avoid permitting all together)?**

❏   Yes   **(Code: B NR 6)**

❏   No

❏   N/A

❏   Not yet, but my facility is investigating this option.

If yes, please indicate how your regulatory status has changed. Check all that apply:

❏   Changed status from a small quantity hazardous waste generator status to a nonregulated status. **(Code: B NR 6)**

❏   Changed from a "major" source to a "minor" source of air emissions. **(Code: B NR 6)**

❏   Changed from a discharger to zero discharger of industrial waste water. **(Code: B NR 6)**

❏   Other:_____

9.   Are there other ways you have changed environmental practices or procedures, as a result of EPA's compliance assistance, which are not captured in the above questions?

_____

_____

C. Outcome Measurement Category: Environmental and Human Health Improvements

1. Have you been able to reduce your emissions and/or wastes as a result of the behavioral changes identified in Section I B above? This reduction could be the result of implementing compliance requirements and/or pollution prevention projects.

    ❑   Yes **(Code: E 1)**

    ❑   No

    ❑   N/A

    ❑   No changes yet, but we plan to.

If yes, identify areas of success and provide the amount of emissions, pollutants, and/or risk reduced, and associated cost savings, if possible: (Code: E 3)

Activity	Reduction	Cost Savings
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

2. If your facility made changes in environmental practices in Section I B above, do you believe these changes have resulted in a safer environment for your employees?

    ❑   Yes **(Code E 2)**

    ❑   No

    ❑   N/A

    ❑   No changes yet, but we plan to.

If you answered yes, please describe how the workers' environment is safer (e.g., workers are now exposed to fewer chemicals):

_____

_____

_____

_____

SECTION II: **SUPPLEMENTAL QUESTIONS FOR ONSITE VISITS, WORKSHOPS, AND WEB SITES**

A.   **Supplemental Questions for Onsite Visits**

1. **Have you implemented any of the opportunities discussed during the site visit regarding waste reduction or pollution control? If so, please describe which ones and the results.   (B NR 5)**

Activity	Pollutant/Reduction	Cost Savings
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

2.   As a result of the assistance you received, have you come up with any additional ideas regarding waste reduction? If so, please describe what ideas, and any results, if available.

Activity	Pollutant/Reduction	Cost Savings
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3.   Have you contacted other state or federal agencies (e.g., Air Quality, Water Quality) as recommended on your site visit information sheet?

❑   Yes

❑   No

❑   Not yet, but we plan to.

❑   N/A

B.   Supplemental Questions for Workshops

In addition to the questions in this section on technical content and logistically issues, you can also modify the questions on behavioral change (see Section I B, above) to assess intent of facilities, based on the information presented. For example, one question might be:

> ***Based on what you learned in today's workshop, do you plan to make improvements in labeling/manifesting, recordkeeping, monitoring or reporting?***
>
> ❑   *Yes **(Code: B R 1)***
>
> ❑   *No*
>
> ❑   *N/A*
>
> ❑   *Not yet, but we will investigate further.*

If yes, please indicate the area where you plan to make a change. Check all that apply:

> ❑   *Labeling/manifesting change. **(Code: B R 1)***
>
> ❑   *Recordkeeping change. **(Code: B R 1)***
>
> ❑   *Monitoring/sampling change. **(Code: B R 1)***
>
> ❑   *Reporting change.**(Code: B R 1)***
>
> ❑   *Testing change. **(Code: B R 1)***

You can then follow up with facilities at a later date to determine the changes actually made. Keep in mind the amount of time facilities need to make these types of changes when conducting your followup surveys.

Technical Content and Logistical Questions for Workshops

1. Was the material presented clearly and in a logical sequence?

> ❑   Yes
>
> ❑   No

2. How would you rate the handouts and materials?

> ❑   Excellent
>
> ❑   Very Good
>
> ❑   Good
>
> ❑   Fair
>
> ❑   Poor

3. Would you like more seminars like this one made available to you?

❑   Yes

❑   No

If yes, please list topics:

_____

_____

4. What was the most useful part(s) of the workshop?

_____

_____

_____

5. What was the least useful part(s) of the workshop?

_____

_____

_____

6. What topic(s) would you have liked to have spent more time on:

_____

_____

_____

7. Would you be willing to spend more than 2 hours at a workshop in order to cover more topics?

❑   Yes

❑   No

8. Do you have any suggestions to help us reach more people like yourself to have them attend these seminars?

_____

_____

_____

9. Was the location of this meeting convenient for you?

❑   Yes

❑   No

❑   Somewhat

Comments:_____

_____

_____

10.   What other locations would you recommend for future seminars?

_____

_____

11.   Was the time of the seminar convenient for you?

❑   Yes

❑   No

❑   Somewhat

12.   What other times might be more convenient?

❑   Morning (8:00 a.m. - 11:00 a.m.)

❑   Lunch (12 noon - 2:00 p.m.)

❑   Afternoon (2:00 p.m. - 5:00 p.m.)

❑   Evening (7:00 p.m. - 9:00 p.m.)

13.   Did the speakers show knowledge of the subject?

❑   Yes

❑   No

14.   Was the technical level right for you?

❑   Yes

❑   No

15.   Were the questions handled appropriately?

❑   Yes

❑   No

16.   What did you learn that will be the most helpful to you?

_____

_____

_____

17.   On a scale of 1-10 (10 being the highest) how would you rate:

____   The workshop

____   The presenters

18.   Would you be interested in having a followup onsite compliance assessment?

❑   Yes

❑   No

C.   **Supplemental Question for Web Sites**

1.How did you learn about this Web site?

❑   Search engine (please specify):_____

❑   Link from another Web site (please specify): _____

❑   From an EPA document

❑   Referral from a colleague

❑   Other (please specify): _____

SECTION III: SUPPLEMENTAL BACKGROUND AND CUSTOMER SATISFACTION QUESTIONS

A. **Supplemental Background Questions**

1. What type of organization do you work for?

    ❑ Regulated facility or business

        Industry sector:_____

    ❑ Consulting company or law firm

    ❑ Government

    ❑ Trade association

    ❑ Nonprofit organization

    ❑ School or university

2. How did you become aware of this [insert name of compliance assistance activity]?

    ❑ Referral from another government agency, official, or hotline

    ❑ Referral from another business

    ❑ Trade association

    ❑ EPA letter or mailing

    ❑ EPA workshop, seminar, or conference

    ❑ Web site

    ❑ EPA publication or newsletter

3. In the past, have you used any other compliance assistance tools provided by EPA, such as (check all that apply):

    ❑ Hotline

    ❑ Fact sheets

    ❑ Guidance documents

    ❑ Web site

    ❑ Onsite visits

    ❑ Workshops, seminars, or conferences

4.   In what areas did you request assistance? (Check all that apply)

❑   Air permitting or regulations

❑   Water permitting or regulations

❑   RCRA/Hazardous waste permitting or safe handling of waste

❑   Community right-to-know regulations

❑   Toxic substances

❑   Pesticides

❑   Underground storage tanks

5. What prompted you to seek assistance? (Check all that apply.)

❑   To find out if a specific environmental regulation applies to my facility.

❑   General information about regulations.

❑   Need help filling out a permit application form.

❑   To identify ways to change status from regulated to unregulated business.

❑   To obtain information about equipment or processes that will help us save money complying with regulations.

❑   To learn about pollution prevention opportunities.

❑   Other:_____

6. Did the assistance provided adequately address the need you identified in Question 5 above?

❑   Yes

❑   No

B.   Supplemental Customer Satisfaction Questions

The first four questions are "core" customer satisfaction questions from EPA's customer feedback and customer satisfaction measurement guidelines. When using these questions alone, EPA recommends using a scale of 1 to 6 for customer satisfaction surveys for consistency. When combining customer satisfaction questions with questions to measure outcomes, you might want to adjust the scale for consistency. While a range of answers is good for customer satisfaction surveys, this approach makes less sense for outcome measurement as EPA needs precise answers to track outcomes.

1. Overall, how satisfied are you with the services and products you have received from EPA?

1	2	3	4	5	6
not at all					*very much*

2. How courteously did EPA staff treat you?

1	2	3	4	5	6
not at all					*very much*

3. How satisfied are you with the communications you have received from EPA?

1	2	3	4	5	6
not at all					*very much*

4. How fully did EPA respond to your needs?

1	2	3	4	5	6
not at all					*very much*

5. Would you recommend this [insert name of compliance assistance activity] to other businesses?

❑   Yes

❑   No

6. How would you rate the technical understanding of the person assisting you (for helplines, workshops, onsite assistance) or the technical quality of materials (for publications, Web sites, and other materials)?

❑   Excellent

❑   Good

❑   Fair

❑   Poor

❑   No way to tell

7. How can we improve delivery of this service?

_____

_____

APPENDIX G

EXAMPLES OF SURVEYS DEVELOPED TO MEASURE COMPLIANCE ASSISTANCE OUTCOMES

This appendix provides examples of 5 surveys developed to measure compliance assistance outcomes.

Sample 1:

EVALUATION OF DRY CLEANERS WORKSHOP
(AIR QUALITY REQUIREMENTS)
Date_____
Your comments are important. Please fill out and return this anonymous evaluation form.

1. Rate the usefulness and effectiveness of the workshop on a scale of 1 to 5

5 = very useful/effective, 3 = somewhat useful/effective, 1 = not useful or effective

Low		Medium		High	
1	2	3	4	5	Overall workshop
1	2	3	4	5	Handouts, materials
1	2	3	4	5	Workshop location
1	2	3	4	5	Advertisement/Notice of workshop schedule

2. Has the workshop had any of the following effects?

a.   I am more aware of, and knowledgeable about,
        the environmental requirements as a result of this workshop.   Yes ___ No ___

b.   I plan to make changes in my company's recordkeeping practices   Yes ___ No ___

c.   My company needs to install equipment to comply with the federal
        regulations (see question 5.)   Yes ___ No ___

3. Did you know before this workshop that (1) the requirements for using   certain emissions control equipment; and (2) the frequency for inspecting for leaks, both vary according to the type of dry cleaning equipment used, the date the machines were installed, and the amount of perc purchased per year?

Yes___   No___

4. What recordkeeping changes do you anticipate making at your facility?

	Plan to do	Already do	No plans
● keep receipts for the last 5 years of perc purchases	_____	_____	_____
● keep a monthly log showing the amounts of perc purchased and the calculation of yearly perc consumption	_____	_____`	_____

- keep an operation and maintenance manual on site _____   _____   _____

- keep a log of the results of leak detections and repairs_____   _____   _____

5. At your facility, where are you in the process of complying with the following requirements?

	Plan to install	**Already installed**	**No plans**
install required emissions control equipment	_____	_____	_____

For refrigerated condensers:

	Plan to install	**Already installed**	**No plans**
install temperature sensors at the outlet to measure outlet temperature (from dryer airstream)	_____	_____	_____
install temperature sensors at the inlet and outlet in order to measure temperature difference (from washer airstream of transfer machines)	_____	_____	_____

	Plan to do	**Already do**	
measure the above temperatures weekly	_____	_____	_____

For carbon adsorbers:

	Plan to do	**Already do**	
measure the concentration of perc in the exhaust of the carbon adsorber using a colorimetric detector tube weekly	_____	_____	_____

6. In what areas, if any, would you like further training?

Suggestions or comments regarding this workshop or other EPA assistance activities?

Sample 2:

Compliance Assistance Survey for Missouri Animal Feeding Operation Rule Pamphlet

Please assist us by completing the following questions and returning this card to the Missouri Department of Natural Resources (postage paid).

1. What was your level of knowledge about rules for Animal Feeding Operation in Missouri before reading the pamphlet? (Circle one)

        High   Medium   Low

2. How well did the information in the pamphlet answer your questions?

        Very well   Satisfactorily   Did not help

3. Did the pamphlet improve your understanding of the rules for Animal Feeding Operations?

    Very Effective Effective   Poorly   Not at all

4. What other information should have been included?

5. Do you have any suggestions on how the pamphlet could be improved?

Sample 3:

May ??, 1998

<CONTACT NAME>
<BUSINESS NAME>
<ADDRESS>
<CITY, STATE, ZIP>

Dear <CONTACT NAME>,

The Iowa Waste Reduction Center (IWRC) in cooperation with the Iowa Small Business Liaison will be creating a "Handbook of Environmental Regulations for Agribusiness." This handbook will fully integrate state and federal regulations into one easy-to-use reference book. Each regulation will be summarized with examples of how it could affect an agribusiness facility. Where appropriate, guidance in determining which regulations apply to your facility will also be included. The handbook will also give pollution prevention tips, provide state and regional contacts and give descriptions of applicable environmental assistance programs.

In order to make this handbook as useful as possible, we are asking agribusiness facilities to complete the attached survey. The survey will help the IWRC assess the knowledge base and needs of the agribusiness community. It will also help the IWRC identify the information types that will be the most useful. *All information reported in this survey will remain confidential.*

The survey will take you less than 10 minutes to complete and comes with a postage paid envelope for easy return. If you complete and return this survey you will receive a free copy of the handbook. Through the survey you may also request to be added to the IWRC's free newsletter mailing list and/or receive a free, confidential, on-site visit from the IWRC. The IWRC professional will review your operation, and provide practical guidance on environmental regulations and waste reduction in a confidential report sent directly to you.

Please complete the survey and return prior to July 10, 1998.

Thank you for your assistance. We will strive to make this document as user-friendly and as useful as possible.

Iowa Waste Reduction Center   Iowa Small Business Liaison
University of Northern Iowa   Iowa Department of Economic Development
800/422-3109   800/351-4668

Thank you for taking the time to complete this survey. This survey is to help us tailor the contents and format of the "Handbook of Environmental Regulations for Agribusiness". Your answers will help the Iowa Waste Reduction Center assess the knowledge base and needs of you and your colleagues.

Contact Information
Name _____
Title _____
Address _____
City, state zip code _____
Phone number _____
FAX _____
E-mail _____
SIC (if known) _____

Environmental Survey
Please indicate your knowledge level concerning the environmental regulations that apply to each portion of your business. If a particular sector does not apply, please check "not applicable". If you feel you are in compliance with this set of regulations please check "In Compliance." Also let us know if you would be interested in environmental information relevant to each business sector.

1)   Fertilizer storage and handling
        KNOWLEDGE ☐ No Knowledge   ☐ Some knowledge   ☐ Very knowledgeable ☐ Not applicable
        COMPLIANCE ☐ In Compliance   ☐ Not Sure   ☐ Would like information

2)   Pesticide and Chemical Storage and handling
        KNOWLEDGE ☐ No Knowledge   ☐ Some knowledge   ☐ Very knowledgeable ☐ Not applicable
        COMPLIANCE ☐ In Compliance   ☐ Not Sure   ☐ Would like information

3)   Fuel storage/fueling station
        KNOWLEDGE ☐ No Knowledge   ☐ Some knowledge   ☐ Very knowledgeable ☐ Not applicable
        COMPLIANCE ☐ In Compliance   ☐ Not Sure   ☐ Would like information

4)   Vehicle Maintenance
        KNOWLEDGE ☐ No Knowledge   ☐ Some knowledge   ☐ Very knowledgeable ☐ Not applicable
        COMPLIANCE ☐ In Compliance   ☐ Not Sure   ☐ Would like information

5)   Feed, Seed and Grain Handling
        KNOWLEDGE ☐ No Knowledge   ☐ Some knowledge   ☐ Very knowledgeable ☐ Not applicable
        COMPLIANCE ☐ In Compliance   ☐ Not Sure   ☐ Would like information

6)   Grain Drying and Storage
        KNOWLEDGE ☐ No Knowledge   ☐ Some knowledge   ☐ Very knowledgeable ☐ Not applicable
        COMPLIANCE ☐ In Compliance   ☐ Not Sure   ☐ Would like information

7)   Storm Water/Waste Water Issues
        KNOWLEDGE ☐ No Knowledge   ☐ Some knowledge   ☐ Very knowledgeable ☐ Not applicable
        COMPLIANCE ☐ In Compliance   ☐ Not Sure   ☐ Would like information

8) Pollution Prevention
   KNOWLEDGE ☐ No Knowledge ☐ Some knowledge ☐ Very knowledgeable ☐ Not applicable
   COMPLIANCE ☐ In Compliance ☐ Not Sure ☐ Would like information

Information Sources

Please indicate the sources currently used to gain environmental information, rate their helpfulness, and indicate if you would like additional information regarding these sources.

	1-helpful	5-not helpful		

Web pages   1 2 3 4 5   ☐ do not use   ☐ need additional information
List serves   1 2 3 4 5   ☐ do not use   ☐ need additional information
ISU extension services   1 2 3 4 5   ☐ do not use   ☐ need additional information
University assistance   1 2 3 4 5   ☐ do not use   ☐ need additional information
Chemical/seed representative   1 2 3 4 5   ☐ do not use   ☐ need additional information
Trade associations   1 2 3 4 5   ☐ do not use   ☐ need additional information
State agencies   1 2 3 4 5   ☐ do not use   ☐ need additional information
Federal agencies   1 2 3 4 5   ☐ do not use   ☐ need additional information
Trade publications   1 2 3 4 5   ☐ do not use   ☐ need additional information

Handbook Format and Content

The handbook format and content are in the development stages. To make this document most useful to you, please check which types of information you would like included.

☐ Federal regulations and references   ☐ Sample permits (water and air)   ☐ Case studies
☐ Iowa Code regulations and references   ☐ Practical tips
☐ Web page addresses
☐ Computer programs (emissions calculations, hazardous waste generation logs, etc.)
☐ Worksheets (for emissions calculations, hazardous waste generation logs, etc.)

Electronic Capabilities

Do you have computer capabilities?   ☐ YES   ☐ NO
Do you access the Internet?   ☐ YES   ☐ NO

Additional Resources

I would like to receive the IWRC's free "Closed Loop" newsletter   ☐ YES   ☐ NO
     covering current environmental regulations.

I would like the IWRC to contact me to set up a   ☐ YES   ☐ NO
     free, non-regulatory confidential site visit to my facility.

Additional Comments
_____
_____

Thank you again for completing this survey. All information contained in this survey will remain completely confidential. Please return this survey in the postage paid envelope provided by July 10, 1998. You will be mailed a copy of the handbook upon its completion.

Sample 4:

Please give us your comments on the video <u>Making Pollution Prevention Work for You: Opportunities for Wood Coaters</u>. Your feedback will help us produce better outreach products.

1. Overall, did you find the video worthwhile?
   _____ Yes   _____ Somewhat   _____ No

2. How helpful are the following portions of the video?

Materials:	___ Very	___ Somewhat	___ Not
Equipment:	___ Very	___ Somewhat	___ Not
Process Efficiency:	___ Very	___ Somewhat	___ Not
Operator Efficiency:	___ Very	___ Somewhat	___ Not

3. How convincing are the different types of speakers in the video?

Host:	___ Very	___ Somewhat	___ Not	
Assistance provider:	___ Very	___ Somewhat	___ Not	
Wood facility owners / operators:	___ Very	___ Mixed	___ Somewhat	___ Not
Vendors of coatings and equipment:	___ Very	___ Mixed	___ Somewhat	___ Not

4. The video offers several reasons for trying pollution prevention techniques and technologies. Which are most convincing for you? (Check any.)

   _____ Reducing your emissions to the environment.
   _____ Improving worker health and morale.
   _____ Preserving or improving product quality.
   _____ Reducing inefficiencies and waste in your process.
   _____ Saving money.
   _____ Avoiding accidents and liability.
   _____ Avoiding regulations.

5. Do you intend to test or adopt a pollution prevention practice or technology as a result of viewing this video?
   _____ Yes   _____ No
   If yes, what do you intend to do?_____
   _____

6. Do you intend to refer to the video in the future or pass it on to a colleague?
   _____ Yes   _____ No

7. Which of the following ways of receiving information on environmental issues work best for you? (Check any.)
   _____ Manuals (long, comprehensive)
   _____ Fact sheets (short, single-topic)
   _____ Newsletter or journal articles
   _____ CD Roms
   _____ Internet Web Pages
   _____ Workshops
   _____ Videos

8. What type of job do you have?

       _____ Operator at a wood coating or wood products manufacturing facility.
       _____ Manager (able to make purchasing decisions) at a wood facility.
       _____ Vendor of wood coatings or equipment.
       _____ Consultant.
       _____ Government assistance provider.
       _____ Other (please specify):_____

9. Would you like information on topics related to the environment that were not covered in the video or not covered in enough detail? If yes, please list topics: _____

_____

10. If you plan to test or adopt a new practice or technology at your facility as a result of this video, and may be willing to talk to us about your experience, please write your name and telephone number below. We ask because we want to know if our non-regulatory assistance efforts result in real improvements. Thank you!

_____

11. Other comments or suggestions: _____
_____

Thank you for your input!

Abby Swaine and Janet Bowen
The New England Environmental Assistance Team
EPA Region I

Sample 5:

CEIT PROGRAM OUTCOME MEASURES SURVEY

Name: _____   **Date:**   _____
Company: _____
Technology: _____

If you have comments or additional information on any question, please list in the comment section. Include the number of the question you are commenting on.

1.   In which of the CEIT programs did your company participate?   *(Check all that apply)*
               a. Trade Show   ❑
               b. Innovative Technology Inventory   ❑
               c. Innovative Technology Award   ❑
               d. *Technovation* Bulletin   ❑

2.   Do you feel that potential users of new technologies (i.e. local/state officials, consultants, engineers) are more educated about your product as a result of your participation?   Yes ❑   No ❑

3.   Has your involvement in any CEIT program resulted in speeding up or easing the permitting/approval for your technology?   Yes ❑   No ❑

4.   Did your involvement produce any new inquiries about your technology?   Yes ❑   No ❑

      If yes, please estimate the number of additional inquiries produced.   _____

5.   Did your involvement result in increased sales?   Yes ❑   No ❑

      If yes, please estimate the dollar amount. $_____

      Also, estimate the percent increase in sales.   _____%

6.   Of these sales, how many systems or technologies have already been installed?   _____

If there are no new installations as a result of your participation, please skip to question 10 and answer part a. only. Otherwise answer questions 7-10.

7.   Where are these new installations located?
      (Please give city and state)   _____

8.   Of these installations, how many are:
               New applications   _____
               Replacing a failing system   _____
               Improving an existing system   _____

For questions 9b and 10b, comparison should be made with comparable existing non-innovative technologies.

9.   Calculate the environmental improvements obtained from these
        installations: *(For example, a, b, or/and other method)*

        a. List the quantity of product treated by your technology.
        (For example, 1,500,000 gallons of stormwater)

        <u>Quantity</u>   <u>Unit</u>   <u>Media</u>
        _____   _____ of _____ has been treated.

        b. Compare the performance of the your technology with existing
        technologies. *(For example, 99% TSS removal vs. 40% TSS removal)*

          <u>Yours</u>   <u>Existing</u>
          _____   vs.   _____
          _____   vs.   _____
          _____   vs.   _____

        c. Other improvements _____

10.   Calculate other economic benefits from your technology as follows:
        (For example, a, b, or/and other method)

        a. Provide the number of jobs created within your company by your
        technology.   _____

        b. **Compare the cost of your technologies to existing technologies.**

          <u>Yours</u>   <u>Existing</u>
          _____   vs.   _____
          _____   **vs.**   _____

        c. Other benefits_____

Comments
(Please write the number of the question on which you are commenting. You may attach additional pages.)
_____
_____
_____
_____
_____
_____

APPENDIX H

C   C   A   R

GreenLink®

*Helping Automotive
Professionals Save Time and
Protect the Environment*

Tell Us How We Are Doing

<u>Disclaimer</u>

Consolidated Screening Checklist For Automotive Repair Facilities

This project has been funded, at least in part, with Federal funds from the U.S. Environmental Protection Agency (EPA) Office of Enforcement and Compliance Assurance under contract to SAIC, Contract Nos. 68-C4-0072, WA Nos. EC-2-2 (OC) and EC-2-3 (OC). The mention of trade names, commercial products, or organizations does not imply endorsement by the U.S. Government [or The Coordinating Committee For Automotive Repair--CCAR®].

1. INTRODUCTION

The United States Environmental Protection Agency (EPA) is providing this guidebook and screening checklist as a public service to the automotive service and repair industry. The Office of Compliance, through various meetings with industry representatives, shop owners and technicians, found that the main issue for automotive service and repair shops not in compliance with applicable environmental regulations was the lack of information available to the shop owner. This guidebook highlights for the user the various federal environmental programs a shop owner may be subject to, depending upon the activities that occur at the shop.

The information is correct and accurate, as of the date published. The guidebook and associated screening checklist highlights important or key environmental program requirements as they apply to the various federal environmental programs. **The checklist does not provide the complete environmental requirements necessary for a shop to be in total compliance.** State and local laws, requirements, and rules, may apply in lieu of, or in addition to, the federal rules. Remember, this guidebook and screening checklist is a beginning, it is NOT the final word on environmental compliance. By understanding the basics of each environmental program, the user can then seek appropriate assistance from various state and local agencies.

Company names, products, and processes identified in this guidebook are only used as sources of reference. These names are familiar and/or prototypical within the automotive service and auto body repair industry. They are intended to help the user better understand the checklist, its implications,

and his environmental responsibilities.

The use of corporate and/or organizational names by the EPA should NOT be construed as an official endorsement of the named companies, services, products, or processes. It is up to you, the shop owner or facility manager, to make the best business decision in order to achieve and maintain compliance with environmental requirements based upon your business environment and shop operation.

If you are not sure about your state and/or local environmental requirements, please contact your state and local environmental office. These offices can be found in the Blue Pages of your local telephone directory. If you don't know who to contact, you might consider the CCAR- *Green* Link ® Compliance Assistance Center.

CCAR-*Green* Link ® is a partnership between the EPA and the Coordinating Committee for Automotive Repair (CCAR®). CCAR® is an automotive industry organization whose mission is to increase the professionalism of automotive technicians.

There are five ways to reach CCAR-*Green* Link ®:

Toll-free: 1-888-GRN-LINK (476-5465)
Internet: http://www.ccar- greenlink.org
E-Mail: ccarinfo@unicom.net
Phone: 1-913-498-2227
Fax: 1-913-498-1770

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     o Paints and Thinners
4. Underground Storage Tanks/Emergency Spill Procedures
     o Underground Storage Tanks
     o Spill & Emergency Response

1. WASTE MANAGEMENT		
Waste Management	Has the facility determined which wastes are hazardous wastes?(see guidebook)	Yes / No
	Does facility generate more than 100kg (220lbs.) of hazardous waste per month? If yes, does facility have a U.S. EPA hazardous waste generator I.D. number?(see guidebook)	Yes / No Yes / No
Used Oil	Are used oil containers and piping leak free, segregated, and labeled "used oil"?(see guidebook)	Yes / No
	Are hazardous waste fluids mixed with used oil? (see guidebook)	Yes / No
	Is used oil collected and sent off site for recycling, or burned in an on site heater?(see guidebook)	recycle / onsite heater / burned off-site / other
	Does the facility accept household used oil? If yes, is it tested for hazardous waste (solvent/gasoline) contamination?(see guidebook)	Yes / No Yes / No
Used Oil Filters	Are used oil filters completely drained before disposal?(see guidebook)	Yes / No
	How are used oil filters disposed?(see guidebook)	scrap metal / service / trash / other
Used Anti-Freeze	Is used anti-freeze properly contained, segregated, and labeled?(see guidebook)	Yes / No
	Does the facility generate any antifreeze that is a hazardous waste (>5ppm lead)? If yes, is it recycled onsite in a closed loop system? If no, is it counted toward facility generator status? (see guidebook)	Yes / No / do not know Yes / No Yes / No
	If used anti-freeze is not recycled on site, how is it disposed?(see guidebook)	recycled off site / mixed w/other fluids / landfill / other
Used Solvents	Are used solvents stored in proper containers and properly labeled?(see guidebook)	Yes / No / N/A
	How are used solvents disposed?(see guidebook)	service / mixed w/other fluids / other
	Does facility have hazardous waste manifests or shipping papers on file?(see guidebook)	Yes / No / N/A
Batteries	Does facility return used batteries to new battery supplier? If not, how are used automotive batteries disposed? (see guidebook)	Yes / No / N/A recycle / hazardous waste landfill / other
	Are used batteries contained and covered prior to disposal?(see guidebook)	Yes / No
Rags	How are used rags and towels disposed?(see guidebook)	laundry service / burned for heat / trash
	How are used rags stored while on-site?(see guidebook)	separate container / shop trash can / floor
Tires	How are used tires disposed?(see guidebook)	resale / retreading / landfill / customer / N/A / other

Absorbents	Does facility use sawdust or other absorbents for spills or leaks?(see guidebook)	Yes / No
	Does facility determine whether used absorbents are considered hazardous before disposal?(see guidebook)	Yes / No
	How are absorbents used for oil spills disposed? (see guidebook)	N/A / burned for energy / disposed as hazardous waste / characterized as nonhazardous and landfilled

2. WASTEWATER MANAGEMENT

Floor Drains & Wastewater Management	How does facility clean shop floor and surrounding area?(see guidebook)	uses dry cleanup / uses water
	Are fluids (oil, antifreeze, solvent) allowed to enter floor drains for disposal?(see guidebook)	Yes / No / no floor drains on site
	How are fluids disposed?(see guidebook)	municipal sanitary sewer / storm sewer / street / other
	If floor drains discharge to municipal sanitary sewer, to storm sewer system, or the street, has facility notified POTW about potential contamination in wash water?(see guidebook)	Yes / No
	If drains discharge directly to surface waters or to an undergound injection well, does facility have an NPDES (surface), or UIC (underground) permit? (see guidebook)	Yes / No
Storm Water	Does facility store parts, fluids and/or other materials outside? Are materials protected from rain/snow in sealed containers or under tarp or roof?(see guidebook)	Yes / No Yes / No / N/A

3. AIR POLLUTION CONTROL

Parts Cleaners	If facility uses parts-cleaning sinks with halogenated solvents, has facility submitted a notification report to EPA? Are sinks kept closed and sealed except when actually cleaning parts? Does facility follow required work and operational practices?(see guidebook)	Yes / No / N/A Yes / No / N/A Yes / No / N/A
Motor Vehicle Air Conditioning (CFC's)	Are MVAC technicians trained and certified by an accredited program? If yes, are certificates on file?(see guidebook)	Yes / No N/A Yes / No
	Is CFC recovery and/or recycling equipment EPA approved?(see guidebook)	Yes / No / N/A
	Is equipment recovery/recycling or recovery only? (Circle one) If recovery only, is refrigerant reclaimed by an EPA-approved reclaimer?(see guidebook)	recover/recycling / recovery only / Yes / No
Catalytic Converters	Does facility replace CC's that are the correct type based on vehicle requirements?(see guidebook)	Yes / No / N/A
	Does facility replace CC's on vehicles covered under original manufacturer's warranty? If yes, was original CC missing or due to state/local inspection program requirement?(see guidebook)	Yes / No Yes / No

(CC's)	Does facility properly mark and keep replaced CC's on-site for at least 15 days?(see guidebook)	Yes / No
	Does facility completely fill out customer paperwork and maintain on-site for at least 6 months?(see guidebook)	Yes / No
Fuels	Is Stage I vapor recovery equipment operated properly during unloading of gasoline?(see guidebook)	Yes / No / N/A
	Is Stage II vapor recovery equipment installed and working at pumps?(see guidebook)	Yes / No / N/A
	Do fuel delivery records indicate compliance with appropriate fuel requirements?(see guidebook)	Yes / No / records not available
	Are pumps clearly labeled with the product they contain?(see guidebook)	Yes / No
	Do gasoline pump nozzles comply with 10 gallon per minute flow rate?(see guidebook)	Yes / No / don't know
	Is dyed, high-sulfur diesel/kerosene available for sale to motor vehicles?(see guidebook)	Yes / No
Paints and Thinners	Are paints and thinners properly contained and marked when not in use?(see guidebook)	Yes / No / N/A
	Does facility use low VOC paints?(see guidebook)	Yes / No
	Does facility determine whether paints are considered hazardous before disposal?(see guidebook)	Yes / No
	How are used paints, thinners and solvents disposed?(see guidebook)	reuse / recycle / mix w/other fluids / landfill
	Does facility mix paint amounts according to need? (see guidebook)	Yes / No
	Does facility use new, "high transfer efficiency" spray applications?(see guidebook)	Yes / No
	If hazardous paints are used, are spray paint booth air filters disposed of properly as hazardous waste? If filters are not hazardous, how are they disposed? (see guidebook)	Yes / No recycled / landfill

4. UST/SPCC/EMERGENCY SPILL PROCEDURES		
Undergound Storage Tanks	Has the State UST program been notified of any USTs located on-site?(see guidebook)	Yes / No / NA
	Does facility conduct leak detection for tank and piping of all on-site UST systems?(see guidebook)	Yes / No / N/A
	Do USTs at the facility meet requirements for spill, overfill and corrosion protection?(see guidancebook)	Yes / No / N/A
	Are records and documentation readily available (as applicable) for installation, leak detection, corrosion protection, spill/overfill protection, corrective action, financial responsibility, and closure?(see guidebook)	Yes / No / NA
	Does facility have a gasoline, fuel oil, or lubricating oil storage capacity total greater than 1,320 gallons (or greater than 660 gallons in any one tank) in above ground tanks or total	

Spill & Emergency Response	underground tank storage capacity greater than 42,000 gallons? If yes, could spilled gasoline, fuel oil, or lubricating oil conceivably reach navigable waters? If yes, does the facility have a SPCC plan signed by a professional Engineer?(see guidebook)	Yes / No Yes / No Yes / No
	Are phone numbers of the national, state and local emergency contacts available on site for immediate reporting of oil or chemical spills.(see guidebook)	Yes / No

Source: US EPA Office of Enforcement and Compliance Assurance, EPA 305-8-97-005, October, 1997.

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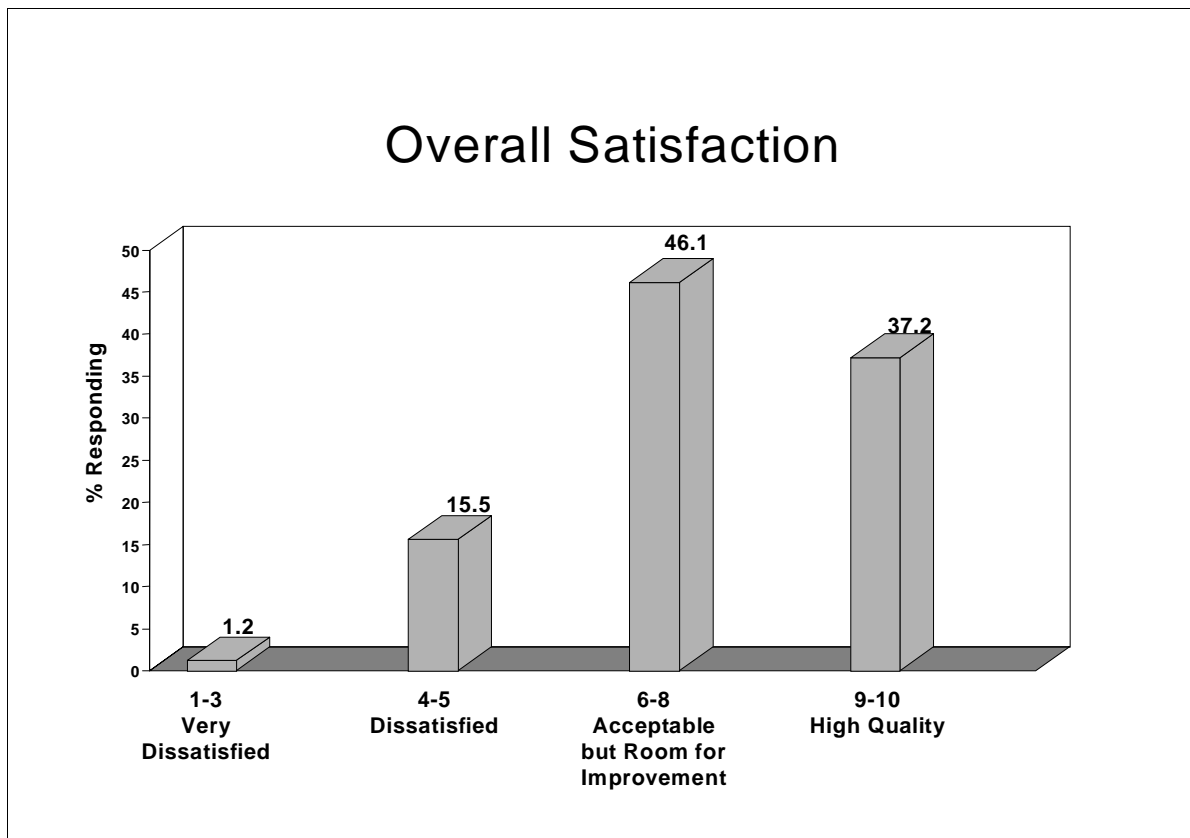Last Update - 14-Jan-98
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APPENDIX I

# act Sheet VIII: Examples of Graphs for Presenting Customer Feedback Results

Once data have been collected, think hard about how you want to present them. Often, we focus lots of attention on collecting feedback and performing complex analysis, and forget that we have to market the findings if we are going to help bring about change. The form you select for presentation can make or break all the previous work. Results need to be communicated clearly to the appropriate people before an organization can begin learning from its customers.

Overall Satisfaction

A bar graph showing "% Responding" on the y-axis (0 to 50) with four categories:
- 1-3 Very Dissatisfied: 1.2
- 4-5 Dissatisfied: 15.5
- 6-8 Acceptable but Room for Improvement: 46.1
- 9-10 High Quality: 37.2

There are many variables to consider when presenting data, such as the nature and level of the audience, the reasons the feedback was collected and how it will be used, and the nature of the data itself. Some of the more common forms are listed below, with a brief explanation of the unique use of each presentation.
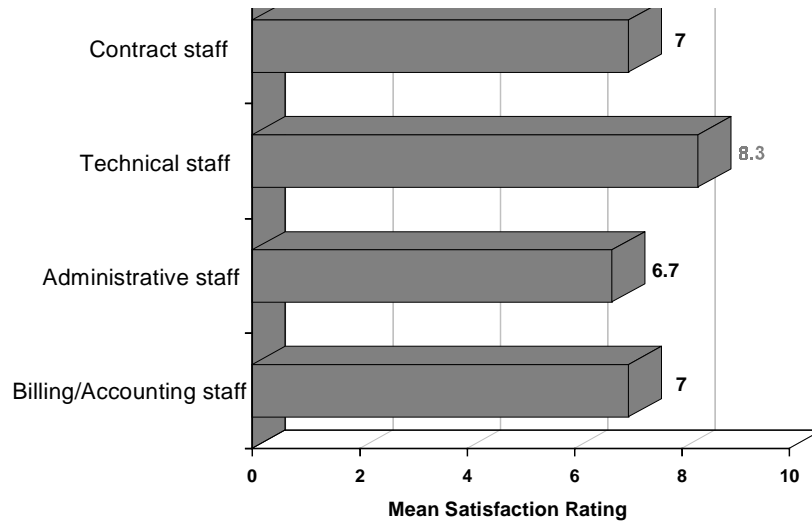
A very **basic bar graph** can be used to convey the percentage of the population that responds within a given range. For example, the graph above indicates that 1.2 % of the respondents rated their Overall Satisfaction as one, two or three on a scale of one to ten, 15.5% rated Overall Satisfaction as four or five, 46.1 % as six, seven or eight, and 37.2% as nine or ten. Note that these groupings of 1-3, 4-5, 6-8 and 9-10 are somewhat arbitrary, and can be changed to suit the needs of your project. Additionally, the labels '*Very Dissatisfied*', '*Dissatisfied*', '*Acceptable, but Room for Improvement*' and '*High Quality*' are also subject to change according to individual needs.
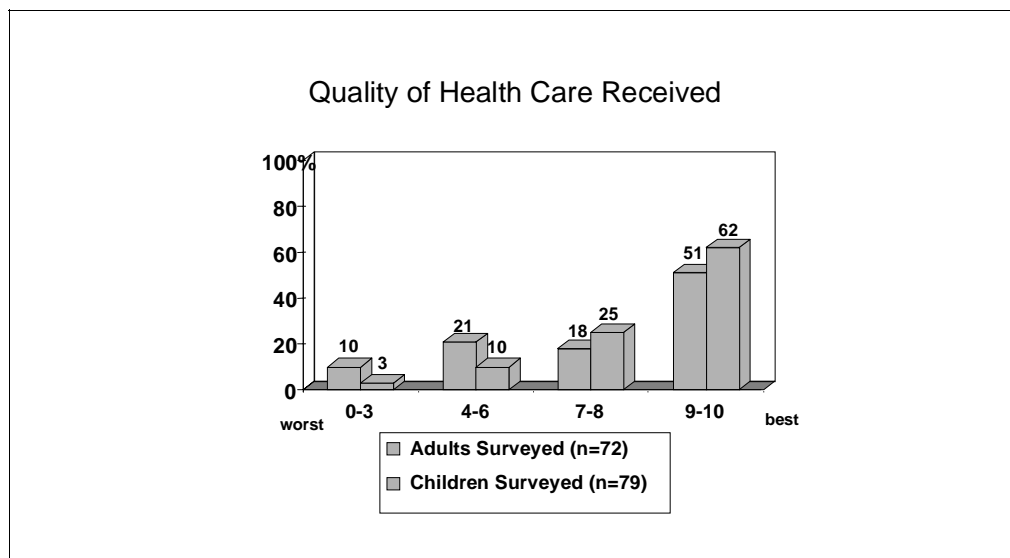
Overall Satisfaction by Region
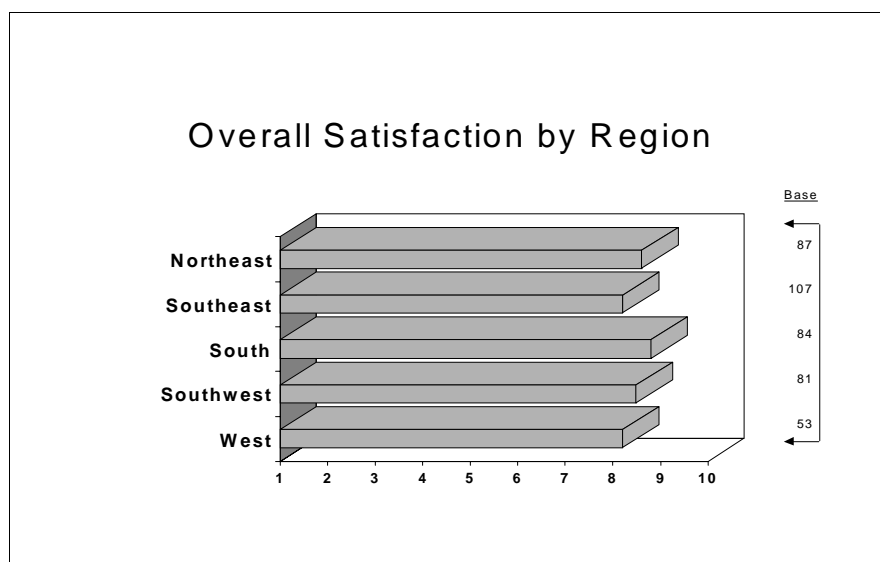
It is often useful to **organize responses by customer segments** that are meaningful to the survey audience. In the case above, the mean, or average, Overall Satisfaction ratings are organized by geographic regions. Note also that the base, or number of respondents in that region, is noted to the right of each bar. This can be important to identify the relative validity of the information.


Overall Satisfaction
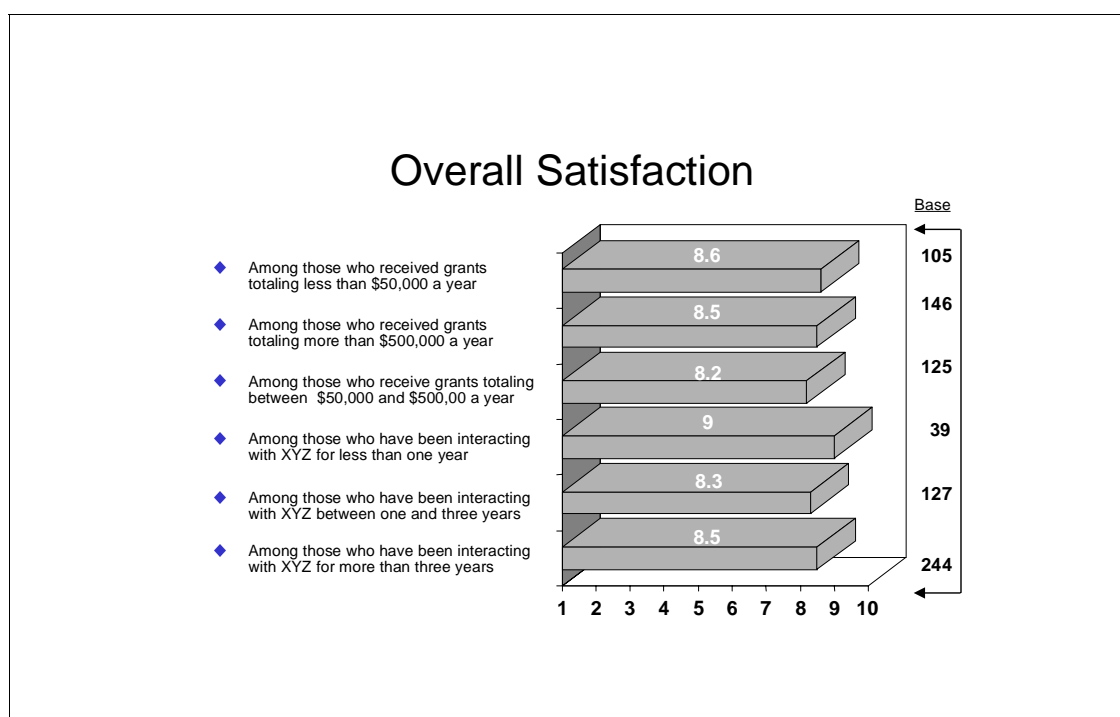
Responses can also be organized by other types of segments. In the case above, respondents answered questions about their length of use, and the amount of grant money they had received. Note that the numbers of respondent in each category is to the right of each bar.

Contract staff 7

Technical staff 8.3

Administrative staff 6.7

Billing/Accounting staff 7

0   2   4   6   8   10

Mean Satisfaction Rating

A bar graph can also be used to **identify the mean**, or average, response to various services received. This is useful to compare the levels of satisfaction between services offered.

Quality of Health Care Received

100%
80
60
40
20
0

worst   0-3   4-6   7-8   9-10   best

10   3
21   10
18   25
51   62

☐ **Adults Surveyed (n=72)**
☐ **Children Surveyed (n=79)**

A slightly more complex graph can allow the **comparison of responses between two segments** of a population. In the example above, 62% of the children surveyed considered the Quality of the Health Care they received to be nine or ten, on a scale of one to ten. In general, it appears that more children rated the Quality of Health Care as higher, while more adults provided lower ratings.
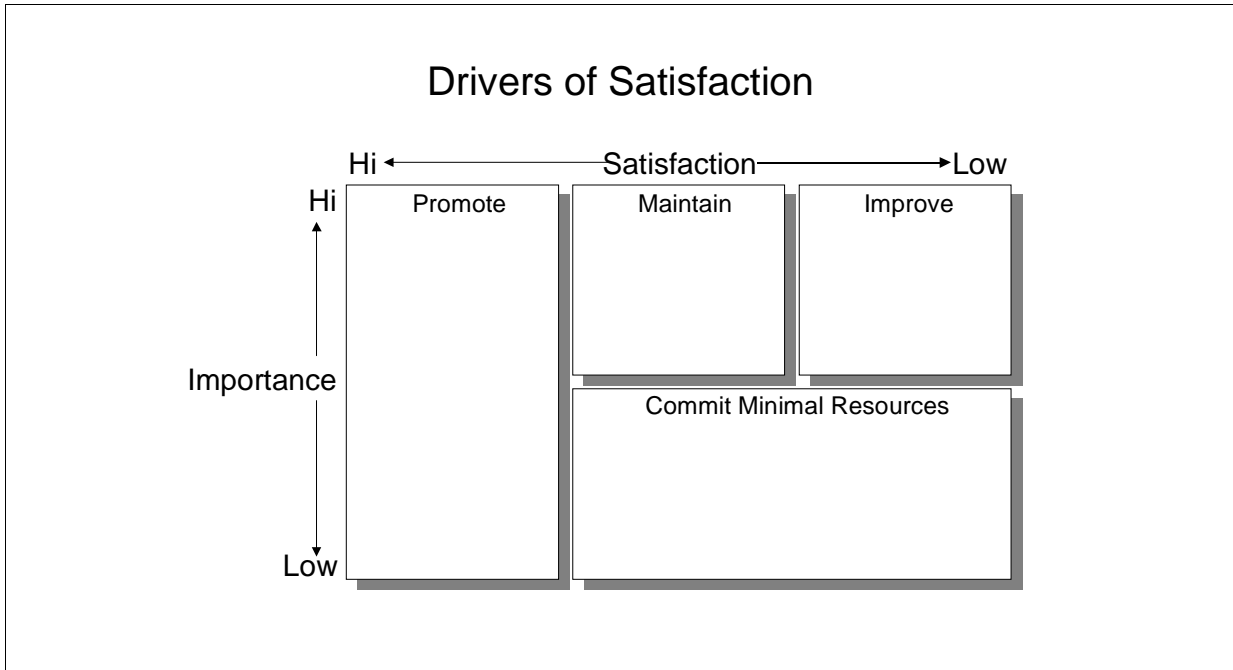
Getting the Care You Need When You Need It
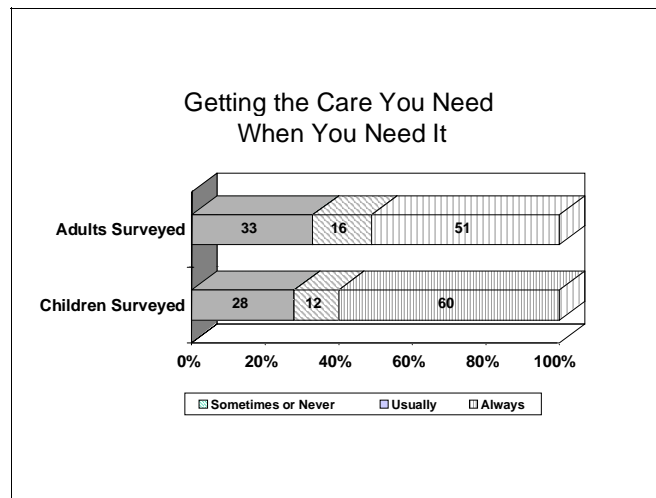
Another way to compare two populations is to use **segmented bar charts**, as shown above. The graph above indicated that children surveyed were more likely to feel they received the care they needed, when they needed it.

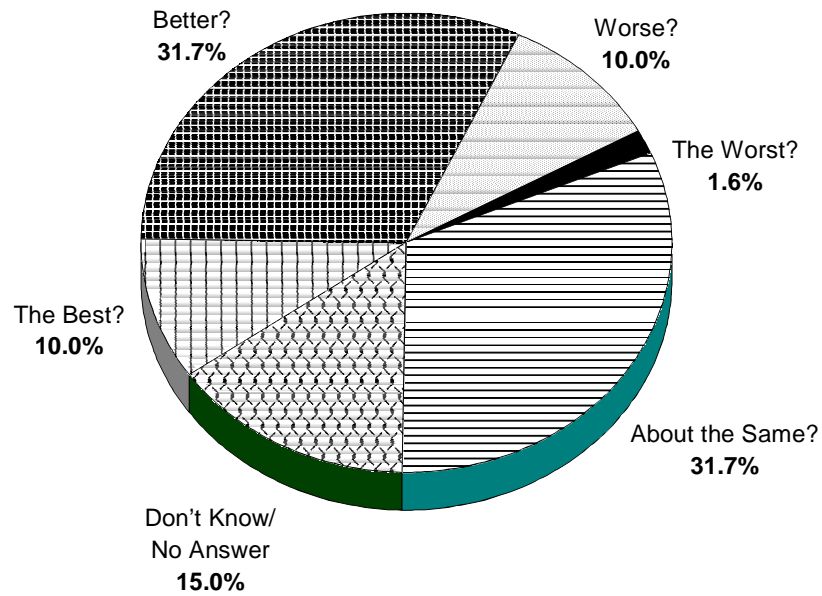**Priority Issues for Building Customer Loyalty**

If *driver analysis* is being performed, a useful way to present the results is in a **quadrant chart**, as in the example above. By comparing the levels of satisfaction with the levels of importance, we can prioritize results. In the example above, the services listed in the upper right quadrant are those that were very important to the customer and were rated as providing high levels of satisfaction. These services, *Information Clearinghouse* and *Interactions with Agency Staff* are identified as areas where the organization is meeting or exceeding the customers needs. In contrast, the upper left quadrant identifies services that are very important to the customer, but are rated as providing lo satisfaction. It is these services, *Contracts Management* and *Grants Management* that require immediate attention. The lower right quadrant identifies services that provide high levels of satisfaction, but are not important to the customer. In the example above, no services were found to be in the lower left

quadrant. This quadrant identifies services that are not important to the customer and provide low levels of satisfaction.

Drivers of Satisfaction

Hi ◄─────Satisfaction─────► Low

Hi	Promote	Maintain	Improve

Importance

Commit Minimal Resources

Low

Another example of a chart that related the results of driver analysis is above. In this case, subjective labels have been applied to the areas of the chart, according to the needs of the project

Compared to other government or government-like grant or funding processes would you say that your experience was...

Better?
31.7%

Worse?
10.0%

The Worst?
1.6%

The Best?
10.0%

About the Same?
31.7%

Don't Know/
No Answer
15.0%

A **pie chart** is another method useful for relating the proportions of a population that responded in a particular way to a question. In the example on the previous page, the majority of the respondents clearly felt that the funding process was *About the Same* as with others.

Examples of Customer Remarks
Concerning Billing Needs

◆ "Billing is sketchy and difficult to understand."

◆ "We are running approximately 6 months behind on billing."

◆ "I have had problems with billing, and would like XYZ to reassess the way they are billing; timeliness and accuracy."

◆ "Poorly itemized billing."

◆ "Billing report really hard to understand, very inconsistent."

◆ "More prompt billing, so that I can delete them off the records."

◆ "Billing is a twilight zone."

Open End **responses** are usually **organized according to subject matter**. In the example above, comments that refer to problems with a Billing Service are grouped together. This is a very effective way to communicate comments from customers to the audience. Following is an example of Open End responses being organized and grouped together. The actual statement by the customer is not listed, but the numbers of customers who felt a certain way is clearly communicated.

What Products or Services to XYZ
Customers Want to See Offered?
(# of responses)

◆ Information Distribution   34
- Internet   9
- Mailings   15
- Other   10

◆ Improved/Clarified Policies   20
(supplies, photographic printing, microfilm, signs, library, etc.)

◆ Improved Customer Service   7

◆ Informing Customers of Existing Services   8

Customer Satisfaction

Legend:
- Courtesy (yellow)
- Accuracy (green)
- Timeliness (red)
- Accessibility (blue)
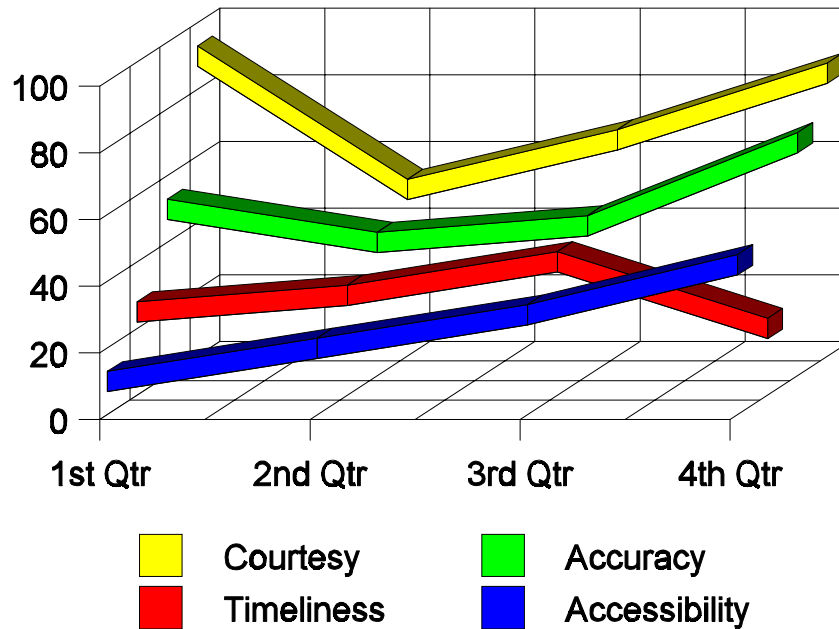
One additional type of chart which can be useful for presentations is the <u>trend or run </u>chart which is used to identify meaningful changes from year to year, or between feedback activities. Such charts are used to monitor progress and portray improvement. A time series chart not only can show trends, it can portray relationships. With time series, change and relationships in two or more items can be compared that would otherwise appear on different scales (apples and oranges) if the net change from one point to another is defined as a percentage.