

Appendix C

Guidance for Submitting Environmental Measures

I. Introduction. Applicants will be evaluated on the significance of the environmental results they expect to achieve. Applicants must also provide a concise discussion and quantification of expected outputs and outcomes, and a planned format for clearly relating implementation activities to outcomes achieved, at the disaggregate level. This guidance is provided to assist applicants in being responsive to the above mentioned sections. **To accommodate the increased importance that EPA is placing on the transparency of outcomes, EPA is simplifying the expectations for submitting estimated results.**

II. Presenting Discussions. Applicants are encouraged to present their expected outputs, outcomes, and measurement approaches with both numbers and descriptive narrative. Applicants should also highlight significant results and note their planned format for relating implementation activities to outcomes achieved, at the disaggregate level. The following is a suggested approach for describing and presenting measurement data.

A. Presenting the Numbers and Narrative on Projects Yielding Environmental Outcomes.

1. Name the project and give a brief description of what it is.
2. Quantify one year's worth of expected environmental outcomes from the project. Applicants should use the annual outcome measures of the P2 Program i.e., (1) pounds of hazardous inputs and hazardous emissions reduced (to air, land, and water), (2) greenhouse gas reductions (GHG) measured in metric tons of carbon dioxide equivalent (MTCO₂Eq) reduced, (3) gallons of water savings, and (4) dollars of economic savings associated with hazardous pounds, GHG, and water reductions. Refer to Table 1.

Separate out any quantification of expected nonhazardous pollutant/material pounds reduced. Pounds of nonhazardous inputs and waste reduced can be reported as ancillary results, but cannot serve as a primary outcome of grant activities and are not reportable results under EPA's P2 Program. EPA's P2 Program may convert ancillary non-hazardous pound reductions into reportable GHG reductions (using EPA's Waste Reduction Model (WARM) – refer to <http://epa.gov/epawaste/conserves/tools/warm/index.html>), and applicants may do the same in their estimation of expected GHG reductions. Applicants should not convert expected ancillary nonhazardous pound reductions into estimated cost savings, since EPA's P2 Program does not report cost savings from nonhazardous pound reductions.

Table 1 – Estimated Annual Environmental Outcomes (refer to Section C of this Appendix for definitions)

(a) P2 Activity	(b) Haz. Inputs Reduced	(c) Haz. Waste Reduced	(d) Air Poll. Reduced	(e) Water Effluent Reduced	(f) Total Haz. Lbs. Reduced	(g) MTCO _{2e} Reduced	(h) Water Gallons Reduced	(i) Dollars saved from (a) – (h)
1.								
2.								
3.								
4.								
Total:								

3. If appropriate, highlight the quantity of the results. Applicants that believe their volume of expected environmental outcomes will be significantly high, or believe a subset of new outcomes will continue beyond the end of the grant are encouraged to draw EPA’s attention to these aspects of significant outcomes.
4. Briefly explain how you arrived at your quantified estimates. If an educated guess is made based on prior experience from P2 projects, please note it. If estimates will be informed by statistics, studies, models or anything else of that nature, please note it. Estimates based on an educated guess and estimates based on studies and things of that nature are equally adequate.
5. Briefly explain how actual results will be collected (onsite revisit, self-reported data, etc.) A sentence or two on each project area will be adequate.
6. Briefly explain how actual results will be measured (metered data, managerial estimates, product performance data, EPA P2 Program measurement tools on website, other measurement tools, etc.). A sentence or two on each project area will be adequate.
7. Briefly explain how actual outcome results will be formatted to relate them to implementation activities at the disaggregate level. Refer to **Section D** of this Appendix for further guidance. A paragraph on each project area will be adequate.
8. Describe the qualitative significance of expected environmental outcomes. Significance will vary according to regional economies and the nature of proposals. Whether a state economy is more industrial or agricultural will affect significance, and the geographic distribution of results (e.g., the relative importance of maintaining a P2 presence within a state) may affect significance. Whether a proposal is research-based, facility-based implementation, or training-based (just for examples) will also affect the nature of significance. Potential pay-off in reducing hazard or toxicity, or the volume or breadth of results achieved during the grant period, or the anticipation of continuing results beyond the grant period are just some examples of what might be significant depending on your proposal. If references to expected participants, partners, activities, and behaviors will add value to the discussion, please add them.

B. Presenting Information on Projects Yielding Environmental Outputs.

1. Name the project and briefly describe it.
2. Quantify the environmental outputs (including behavior changes) expected from the project.

P2 Activity	Outputs	Behavior Changes

Explain the assumptions and calculations used to produce the expected numbers, such as degree of participation, P2-practice-adoption rate of workshop participants.

3. Explain how actual outputs and behavior change data will be collected. Please note that voluntary tests and voluntary surveys can be used and are exempt from the Paperwork Reduction Act (PRA) if administered under a grant agreement, but not exempt if administered under a cooperative agreement with EPA. Data collection approaches include testing participants before and after for changes in knowledge and behavior and surveys by phone, mail, email, or online. Describe any particular significance of expected outputs and behavior changes. If the sheer volume of expected outputs and/or behavior changes is of significance, this can be highlighted here.

C. References for P2 Outcome Categories (refer to Table 1).

1. **P2 Activity [column a]:** List the source reduction activities expected to yield P2 outcome results.
2. **Pounds of Hazardous Inputs and Wastes Reduced [columns b-c]:** Materials used as process inputs (such as chemical ingredients, paints, and solvents), products applied to land (such as pesticides) and hazardous wastes. Nonhazardous wastes are excluded from this category (like packaging, paper, glass and aluminum cans).
3. **Pounds of Air Pollutants [column d]:** Toxic air emissions include: Clean Air Act Section 112b hazardous air pollutants (HAPs), Toxic Release Inventory (TRI), and others), nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter (PM) and Volatile Organic Compounds (VOCs). Air pollutants also include NO_x and SO_x from boilers, but exclude NO_x or SO_x from utilities (due to cap and trade limitations).

Pounds of Pollutants in Wastewater [column e]: This refers to biochemical oxygen demand (BOD), chemical oxygen demand (COD), toxics, nutrients, total suspended solids (TSS), contaminants in storm water and pathogens discharged to sewer systems, septic systems, injection wells, and ground water. Pounds of pollutants in wastewater are calculated by estimating the quantity of contaminant rather than the quantity of water; EPA assumes this equals 1/100,000 of the weight of the water.
4. **Total Pounds of Hazardous Materials (includes Pollutants) [column f]:** Total of

subcomponents from hazardous inputs and wastes, air releases, and water pollutants.

5. **MTCO₂Eq [column g]:** Metric Tons of Carbon Dioxide Equivalent reduced.
6. **Gallons of Water Reduced [column h]:** This column lists the reduction in gallons of incoming raw water from outside sources through the implementation of P2 activity.
7. **Dollars Saved [column i]:** This refers to cost savings associated with reducing hazardous pounds, MTCO₂Eq, and water usage.

The following section is guidance on answering II.A.7 above. II A. 7 asked applicants to briefly explain how actual outcome results will be formatted to relate them to implementation activities at the disaggregate level.

D. Formatting Actual Outcome Results and Implementation Activities at the Disaggregate Level.

1. In addition to other requirements noted in the terms and conditions of the SRA assistance agreement, grantees will be expected to provide transparent semi-annual (*if applicable*), annual and final reports about implemented activities at the disaggregate level and the corresponding actual outcomes. Applicants should briefly describe in their proposals their planned format for clearly linking implementation activities to the resultant outcomes at the disaggregate level in grant reports, or state what impediment they would face in doing so. EPA is using the term “disaggregate” to mean facility by facility, if applicable or, for a sector initiative with standard elements, the number of participating facilities plus average sector-facility results.
2. Please note the following:
 - a. The examples that follow relate to reporting outcome results and not output results because past reporting on grant output results has been adequate and EPA is not placing increased importance on grant output reporting.
 - b. EPA’s P2 Program will protect the identity of any named entity and will not identify entity to any other EPA office or any other party unless it receives permission from the grantee to request the direct permission of the entity. If applicants have remaining concerns, please state them. It will be adequate to address **Section II. A. 7** of this Appendix in a manner that protects the concerns raised.
 - c. If applicants face a particular burden in addressing II. A. 7 they should state that burden. It will be adequate to address II. A. 7 in a manner that does not impose an undue burden. Example: A proposed project involves a state leadership program where recurring (multiple years’) results are embedded in participant self-reporting and it would be burdensome to isolate annual results from implementation activities in current reporting year. The applicant makes EPA

aware of this situation. EPA could later make an appropriate adjustment in its own reporting of grant outcome results reported.

E. Examples for Formatting Actual Outcomes Results and Implementation Activities at the Disaggregate Level. The following list of examples provides some planning approaches for how actual outcomes could be linked to implementation activities at the disaggregate level:

- 1. Technical Assistance or Assessment.** In the sample format (refer to **Table 2** below), each entity is listed, with a brief description of the implementation activities and the outcomes achieved. Applicants could briefly describe a similar format in narrative, submit an illustrative row or two, or give a link to prior similar reporting to illustrate their intent. Applicants are also encouraged to indicate they can plan to identify outcomes as annualized or not and, if known, to indicate whether they will be identifying entities by company name, by sector (e.g., company, farm, manufacturer, etc.) or more generically (e.g., mid-sized manufacturer, large company, municipality, facility A, facility B, etc.).

Table 2: Sample format for an adequately transparent report.

(a) Example SOURCE	(b) Example P2 ACTIVITY	(c) Example HAZ LBS REDUCED	(d) Example GALLONS WATER SAVED	(e) Example MTCO ₂ e REDUCED	(f) Example \$ SAVED from (c) – (e)
Company X	HVAC/lighting retrofits; using fewer haz products; GHG reductions from more plastics recycling; \$\$ savings from (c) – (e).	100,000 lb.	0	19,000	\$40,000
Farm	Substituted farm-derived methane for grid electricity; irrigation efficiency		100 M gallons	15,000	\$28,000
Adhesive manufacturer	Once-used solvent sold to vendor to be remanufactured	110,000 lbs			\$45,000
Medium-size manufacturer	Product reformulated (green chemistry)	80,000 lbs.			

- 2. State Environmental Leadership or Similar Voluntary Stewardship Programs with Self-Reporting Members or State Planning Law Programs.** Refer to Table 3 below for an example. Applicants could briefly describe a similar format in narrative, submit an illustrative row or two, or give a link to prior similar reporting to illustrate their intent. Applicants are also encouraged to indicate they can plan to identify outcomes as annualized or not, whether they will be identifying entities by company name, by sector

or more generically (e.g., mid-sized manufacturer, large company, municipality, facility A, facility B, etc.), and how non-hazardous reductions and related cost savings will either not be reported to EPA or will be clearly identified.

3. Table 3. Sample State Environmental Leadership Program results with adequate transparency.

Facility Name	Indicator	Specific Indicator	Baseline (if normalizing, add extra column)	Quantity (if normalizing, add extra column)	Cost savings	Cost savings explanation
Company X	Haz air emissions	Reduced VOC by reducing VOC products used, better spray gun	100 tons	Now 64 tons; 36 ton reduction	\$50,000	Reduced material purchasing costs by completing XYZ.
Company Y	Grid electricity	Set up common lunch break; shuts off named process system during break.	6500 kWh	5900 kWh; 1000 kWh reduction	\$500	Conserved energy by performing XYZ.
Company Z	Non-haz waste *	Scrap metal recycling			\$5,000	*Dealer buys scrap metal to accomplish XYZ.

* For State reporters who themselves count these results: EPA wants to see non-hazardous pound reductions and associated cost savings itemized separately as a means to allow EPA's P2 Program to subtract these items when reporting its performance on reducing hazardous releases/inputs and saving costs (only from lower hazardous pounds, GHG, and water use).

4. P2 Intern Programs. Many P2 intern programs produce reports that address the elements that EPA is looking for (clearly linked and disaggregated implementation activities and outcomes, and the outcomes stated as annualized or otherwise). If the applicant lists a P2 intern program that produces a similar report, it will be adequate to simply state that and provide a link to a prior report. Otherwise, consider following the example noted for technical assistance provided under item 1 above. Examples of P2 intern reporting that are sufficiently transparent:

- a. www.iowap2interns.com/
- b. <http://www.iowadnr.gov/Environment/LandStewardship/WasteManagement/PollutionPreventionP2/P2InternProgram.aspx#dltop>

5. **Sector Initiatives.** If an applicant has a project that covers a hospitality certification program or similar program with standard elements that participating entities adopt and apply, it will be adequate to indicate that the following can be provided: the number of facilities engaged in implementation and a formula to that averages sector-facility performance.
6. **Pilots in Chemical Product Formulation/Best Practices Formulation.** Three approaches are provided:
 - a. Pilot-scale formulation. An applicant with this type of project can simply indicate that it will report only pilot-test scale results.
 - b. Implementation of piloted approach at sector level. For an applicant with this type of project, the approach outlined for sector initiatives above is applicable.
 - c. Company-specific application. For an applicant with this type of project, the approach outlined for technical assistance above is applicable.
7. **Environmental Management Systems Training and Other Training Workshops/Roundtables.** If no surveys or other follow-up was conducted to assess actual implementation and outcomes, then note training or workshop results as outputs, not outcomes. If actual implementation and outcomes are assessed, the approach outlined for technical assistance above is applicable.