

Appendix E: Examples of Completed Templates for Core ERP Descriptors and Measures

The Consortium encourages states to use the templates provided in Appendices B and C when reporting on the core descriptors and measures.¹ The templates are intended to promote consistency and to make the reporting process easier for states.

This appendix provides copies of templates that have been completed with sample data to illustrate the use of the templates. This appendix is presented in two parts:

- Part 1: Filled-in Example Template for Core ERP Descriptors
- Part 2: Filled-in Example Template for Core ERP Measures

¹ Reporting templates in Microsoft Word format are available from the Consortium website (<http://erpstates.org>).

Appendix E, Part 1: Filled-in Example Template for Core ERP Descriptors

Table 1: General Information about This Report

State Reporting	Hampachusetts ¹
Lead Agency Implementing ERP	Department of Environmental Preservation
ERP Sector/Group	Retail Gas Stations (UST)
Types of Data Included in this Report and Year Data Collected [Mark an "X" for all options that apply]	X Baseline [2006] X Self-Certification [2007] X Post-Certification Inspection [2008]
Date of This Report	December 22, 2008
Status of Results (Draft or Final)	Final
Revision Number of this Document (first version of this document submitted should be indicated by #1; if there are subsequent revisions of the document submitted, they should be numbered sequentially)	#1
Individual Reporting Who Can be Contacted with Questions about Data Reported, including: Name, Organization, Phone Number, Email Address	Mary Regulator Hampachusetts Department of Environmental Preservation (123) 456-7890 maryregulator@hdep.gov

Table 2: Core Descriptors of the ERP

Descriptor Name and Description	Info Reported by State
UNIVERSE (i.e., population of facilities eligible for ERP)	
1. Universe definition (who's in, who's out?) What characteristics define the group of facilities that are eligible for and/or required to submit self-certification forms in your ERP?	The universe consists of all retail gas stations with underground storage tank systems, as regulated under Title 12 of the State Code. Facilities with underground storage tank systems that contain hazardous materials (e.g., petroleum or used oil) are required to obtain permits for operation under Section 18-04 of our Underground Storage Tank Rule. Our universe contains all permitted retail gas stations.
2. Geographic location of your universe Is your ERP statewide? [Yes/No] If no, please describe how it is targeted. If it has changed from prior years, please explain.	YES, our ERP is statewide.
3. Universe size # of facilities in universe at the point in time at which the state has determined that the most recent certification period has closed	1,394

¹ The data presented here are fictional; no inferences should be drawn from these examples about any existing ERP.

Descriptor Name and Description	Info Reported by State
<p>4. Confidence in universe size</p> <p>How confident are you that your reported universe is representative of all facilities? [Indicate one option: very confident, moderately confident, or not very confident] Why?</p>	<p>Very confident: Facilities are required to obtain permits to operate. It is illegal for fuel suppliers to deliver product to unpermitted facilities. We would be very surprised to find out that there's a retail gas station doing business without a permit.</p>
<p>5. Key environmental concerns</p> <p>In approximately one paragraph, explain the key processes or aspects of facilities in this group that may impact environmental, occupational, and/or public health outcomes.</p>	<p>Our state has three primary concerns we are seeking to address through this ERP for gas stations: groundwater contamination, reducing the risk of fires and explosions, and contributions to ground level ozone. Gas stations without proper corrosion protection and leak detection for their USTs have the potential to impact human health and the environment by allowing petroleum or other hazardous substances to contaminate soil and groundwater. In addition, gas stations that have Motor Vehicle Waste Disposal Wells (i.e., Class V injection wells) can also contaminate groundwater. Since groundwater is the primary source of drinking water for nearly a third of our state's population, this type of pollution is a serious concern. Another concern related to gas stations is the risk of fires or explosions, which can be caused by inadequate corrosion protection and leak detection for USTs, as well as improper procedures for handling hazardous waste and inadequate emergency procedures. Finally, gas stations without required vapor recovery systems can release gasoline vapors to the environment. This type of release not only wastes fuel, but it also leads to the formation of ground level ozone, which can lead to a variety of human health problems such as asthma, which is a growing health concern among children in our state.</p>
<p>6. Similarity to federal requirements</p> <p>Briefly explain whether the requirements addressed by your ERP are the same as or more stringent than federal environmental requirements that apply to the same universe of facilities.</p>	<p>The compliance requirements for USTs, underground injection control (UIC) and Stage I vapor recovery are consistent with the federal requirements. Requirements for hazardous waste management are similar to the federal requirements, but our state's threshold for small quantity generators (SQGs) is different: in our state, an SQG is a facility generating any amount of hazardous waste up to 1000 kg per month.</p>
<p>POLICY APPROACH</p>	
<p>7. Substantive scope of ERP</p> <p>Briefly list the environmental media and any other policy issues (such as safety and health) that your ERP intends to address. Note if your ERP is not addressing one of the media with "key environmental concerns" described in the descriptor above, or is not addressing certain media in a comprehensive way.</p>	<p>Our ERP focuses on compliance requirements and best management practices related to corrosion protection and leak detection for underground storage tanks (USTs), Stage I vapor recovery, emergency procedures, UIC for Motor Vehicle Waste Disposal Wells, and hazardous waste management.</p>
<p>8. ERP tools/ components used</p>	<p><u>Which tools are you using in your ERP? (Mark an "X" for all that apply)</u></p> <ul style="list-style-type: none"> X Statistical measurement X Compliance assistance X Self-certification by a responsible company official X Compliance assurance and enforcement program

Descriptor Name and Description	Info Reported by State
<p>9. Certification type (i.e., voluntary or mandatory)</p> <p>Is submission of the certification form mandatory for all facilities, or voluntary? If certification type has changed or is expected to change in the future, explain. If certification is mandatory, but responses to some questions on the certification form are voluntary, explain.</p>	<p>Certification is mandatory.</p>
<p>10. Certification motivators</p> <p>If certification is voluntary, identify motivators used to increase certification rate (both incentives for certifying and disincentives against not certifying).</p>	<p>Certification is mandatory. Non-reporting facilities can face fines up to a maximum of \$1000.</p>
<p>11. ERP's interface with regulatory structure</p> <p>Explain the extent to which your ERP integrates with or replaces key aspects of the regulatory structure in your state. For example:</p> <ul style="list-style-type: none"> • Does certification replace permits or a notification requirement? Does it help facilities meet a training requirement? • Do your inspections count toward inspection obligations your state has with regard to EPA-delegated programs? • Does your ERP address no regulatory issues at all? 	<p>ERP has a direct interface with our UST program regulations. As part of those regulations, all facilities with an underground storage tank must obtain a permit for operation. To receive this permit, they must complete the compliance certification checklist and certification statement that comes with the ERP materials. Certification is mandatory and works in direct conjunction with state regulations. Facilities must certify annually, or face stiff fines and a mandatory state inspection, in order to receive their operating permits.</p>
<p>12. Permanence of ERP</p> <p>Is your ERP a pilot or a permanent program? If pilot, please describe your future plans.</p>	<p>Our ERP program is ongoing. The next round of certification is planned for 2009.</p>
<p>13. External stakeholder involvement approach</p> <p>Describe the external stakeholders that have been involved in developing and/or implementing the ERP approach, and identify the activities they've been involved in.</p>	<p>We contacted 20 facilities from our target universe, to solicit their feedback on the materials we developed for the program, including facility checklists. We held two meetings with the 12 facility personnel willing to participate. Many of the participating stakeholders were owners/operators of small independently owned gas stations. They provided feedback and advice for improving the materials that we incorporated into the final workbook and other materials.</p>

Descriptor Name and Description	Info Reported by State
MEASUREMENT APPROACH	
<p>14. List of EBPIs</p> <p>Provide list of EBPIs, identifying voluntary versus compliance-related EBPIs and identifying the corresponding media category [Indicate all that apply: air, water, solid waste, hazardous waste, USTs, health, safety, other]</p> <p>Also please note any changes to EBPIs from prior years.</p>	<ol style="list-style-type: none"> 1. Required corrosion protection for all tanks and pipes is properly operated and maintained (compliance; USTs) 2. Appropriate leak detection is present for all tanks and piping (compliance; USTs) 3. All leak detection systems are operating properly (compliance; USTs) 4. All required leak detection records are maintained and available (compliance; USTs) 5. Stage I vapor recovery equipment is present at this facility, if required (compliance; air) 6. Facility has tight fill caps and adapters for Stage I vapor recovery (compliance; air) 7. Facility has posted up-to-date emergency response procedures and contact information (voluntary; emergency response) 8. Potential floor drain discharges are permissible (compliance; UIC) 9. Facility has correctly determined which wastes are hazardous wastes (compliance; hazardous waste) 10. Facility properly stores its hazardous wastes (compliance; hazardous waste)
<p>15. EBPI selection approach</p> <p>Were your EBPIs selected because you feel they are the most important issues in the sector? [Yes/No]</p> <p>If no, please explain your process of selecting EBPIs.</p>	<p>YES, we feel the EPBIs selected are the most important issues in the sector.</p>
<p>16. Random sample approach</p> <p>Did you take a simple random sample of the entire universe of facilities for all rounds of random inspections being reported? [Yes/No]</p> <p>If no, or if there are any other unusual issues associated with your random samples or with your analysis of them, please explain.</p>	<p>YES, we used only simple random samples of the entire universe of facilities.</p>
<p>17. Random sample size</p> <p>What was the total sample size for each round of random inspections being reported?</p>	<p>Baseline Random Inspections: 100 Post-Round 1 Random Inspections: 100</p>
<p>18. Data collector skills/training</p> <p>Describe skill level and training of the individuals who collected data during the random facility visits.</p>	<p>Our data were collected by highly trained and skilled UST program inspectors, all with over two years experience. Inspectors were cross-trained in other programs as well.</p>

Descriptor Name and Description	Info Reported by State
<p>19. Data entry approach</p> <p>If using web-based certification and another option, please provide the percentage of certifications that were submitted online.</p>	<p><u>Form of data submission/data entry for inspection data: (Mark an “X” for all that apply)</u></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Electronic field collection <input type="checkbox"/> Scanning of paper forms <input checked="" type="checkbox"/> Manual data entry of paper forms Other (specify) _____ <p><u>Form of data submission/data entry for certification data? (Mark an “X” for all that apply)</u></p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Web-based (70% submittal rate) <input type="checkbox"/> Scanning of paper forms <input checked="" type="checkbox"/> Manual data entry of paper forms Other (specify) _____
MISCELLANEOUS DESCRIPTORS	
<p>20. Timeframe of key ERP activities</p> <ul style="list-style-type: none"> • Year for each round of random inspections to date in your ERP • Year of each round of certification to date • Are there any timing issues that have come up in your ERP that would impact how your data should be interpreted? 	<ul style="list-style-type: none"> • Baseline Random Inspections: Fall 2006 • Round 1 Facility Certification: deadline 12/16/07 • Post-Round 1 Random Inspections: April to June 2008 • Round 2 Facility Certification: deadline 11/22/2008 • Post-Round 2 Random Inspections: April to June 2009 <p>NO, there are no unusual timing issues with our ERP.</p>
<p>21. External factors influencing ERP</p> <p>Are there any factors outside the ERP that may affect the universe of facilities and/or impact how data should be interpreted, how the ERP was implemented, the potential environmental impact of ERP?</p>	<p>Between our Baseline Random Inspections and Post-Round 1 Random Inspections, we inspected approximately 800 additional facilities in order to meet federal requirements under the 2005 Energy Policy Act. We believe this large number of inspections complemented the standard ERP approach in terms of improving facility performance.</p>
<p>22. Changes to ERP since the last ERP cycle</p> <p>If not discussed already, briefly describe any important changes in the ERP since your last ERP cycle. For instance, describe important changes to regulatory requirements, certification type, universe, EBPIs, etc.</p>	<p>Not applicable (only one cycle of ERP completed).</p>

Appendix E, Part 2: Filled-in Example Template for Core ERP Measures

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Individual Reporting Who Can be Contacted with Questions about Data Reported, including: Name, Organization, Phone Number, Email Address	Mary Regulator Hampachusetts Department of Environmental Preservation (123) 456-7890 maryregulator@hdep.gov

Table 2: Core Measures of the ERP

Measure Name and Definition	Info Reported by State
Key Statistical Metadata	
Confidence Level	95%
Population Size (Baseline)	1,375 facilities
Population Size (Post-Certification)	1,394 facilities
Sample Size (Baseline)	100
Sample Size (Post-Certification)	100
Certification-Related Measures	
1. Final certification rate *	1,021 (73.2%)
<ul style="list-style-type: none"> ▪ Number of facilities submitting self-certifications (reported by itself and as a percentage of all facilities). ▪ Whether the rate was finalized before or after any post-certification follow-up activity by the agency intended to boost certification rate. 	Finalized 1 month after we completed follow-up with facilities that failed to meet the first certification deadline. Follow-up included letters and phone calls and escalated to notices of violation and fines.

¹ The data presented here is fictional; no inferences should be drawn from these examples about any existing ERP. Please also note that, in many cases, statistical metadata have been invented rather than calculated, to streamline preparation of this example. Consequently, attempts to recalculate results based on the same underlying data may not succeed.

KEY TO MEASURES: * = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>2. Rate of facility certification, "Yes"/"NA"/"Blank" and inspector "No" responses on EBPIs *</p> <p>Percentage of EBPI responses on which an inspector, during random inspections, determined that the EBPI was not achieved, but the facility reported something else (i.e., facility reported achieving the EBPI or that the EBPI was not applicable to the facility, or the facility simply did not provide a valid answer).</p>	<p><u>Post-Certification Inspections Compared to Previous Facility Certification:</u> 7.4%</p> <p>Confidence interval: We did not calculate a confidence interval for this measure.</p>
<p>3. Rate of self-disclosed noncompliance *</p> <p>Number of facilities self-disclosing one or more instance of noncompliance (reported by itself and as a percentage of all certifiers).</p>	<p>351 (34.4% of all certifying facilities)</p>
<p>4. Rate of RTC plan submission *</p> <p>Number of facilities submitting one or more RTC plans (reported by itself and as a percentage of all certifiers).</p>	<p>313 (22.5% of certifying facilities)</p>
<p>5. Rate of self-disclosing facilities submitting one or more RTC plans ▼</p> <p>Percentage of self-disclosing facilities submitting one or more RTC plans.</p>	<p>89.2%</p>
Inspection-Related Measures	
<p>6. Achievement rate for each EBPI *</p> <p>Percentage of randomly sampled facilities achieving each EBPI.</p>	<p>Please refer to "Attachment 1: Results for Measure 6" for reported values.</p>
<p>7. Summary of EBPI performance changes *</p> <p>Number of EBPIs worsening/improving/not changing, and for those worsening/improving, number of each that are statistically significant.</p>	<p><u>Number of EBPIs improving (and number significant):</u> 8 (2)</p> <p><u>Number of EBPIs worsening (and number significant):</u> 1 (0)</p> <p><u>Number of EBPIs not changing:</u> 1 (N/A)</p>

KEY TO MEASURES: * = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>8. Achievement rate across all compliance-related measures ▼</p> <p>(Note: this measure is commonly called a traditional compliance rate.)</p> <p>The percentage of randomly sampled facilities that are achieving all relevant compliance-related measures.</p>	<p><u>Baseline Random Inspections:</u> Effective Sample Size: 100 # of Facilities Achieving Measure: 52 % of Facilities Achieving Measure: 52.0% Confidence Interval: 52.0 – 62.0% (Wald)</p> <p><u>Post-Round 1 Random Inspections:</u> Effective Sample Size: 100 # of Facilities Achieving Measure: 63 % of Facilities Achieving Measure: 63.0% Confidence Interval: 53.3 – 72.7% (Wald)</p> <p><u>Performance Change:</u> Effective Sample Size: 100 Observed Difference Between Rates: +11.0 percentage points Significant? Not significant</p>
<p>9. Media-specific achievement rates across all compliance-related measures ▼</p> <p>The percentage of randomly sampled facilities that are achieving all relevant compliance-related measures within each environmental medium being tracked.</p>	<p><u>Baseline Random Inspections for USTs:</u> Effective Sample Size: 100 # of Facilities Achieving Measure: 47 % of Facilities Achieving Measure: 47.0% Confidence Interval: 37.0 – 47.0% (Wald)</p> <p><u>Post- Round 1 Random Inspections for USTs:</u> Effective Sample Size: 100 # of Facilities Achieving Measure: 64 % of Facilities Achieving Measure: 64.0% Confidence Interval: 54.4 – 73.6% (Wald)</p> <p><u>Performance Change for USTs:</u> Effective Sample Size: 100 Observed Difference Between Rates: +17.0 percentage points Significant? Significant, determined through confidence interval assessment 1-Sided or 2-Sided? 2-Sided P-value: 0.033 Confidence Interval: 3.9 – 30.1 percentage points</p> <p>Note: We did not calculate media specific achievement rates for any other medium besides USTs.</p>

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>10. Average facility score for all EBPIs ★</p> <p>The percentage of all relevant EBPIs being achieved, on average, by randomly sampled facilities.</p>	<p><u>Baseline Random Inspections:</u> Effective Sample Size: 100 Average Facility Score: 72.53% Confidence Interval: 68.23 – 76.64% Standard Deviation: 4.51</p> <p><u>Post-Round 1 Random Inspections:</u> Effective Sample Size: 100 Average Facility Score: 82.46% Confidence Interval: 74.21 – 87.53% Standard Deviation: 3.76</p> <p><u>Performance Change:</u> Effective Sample Size: 100 Observed Difference Between Averages: +9.93 percentage points Significant? Significant 1-Sided or 2-Sided? 2-Sided P-Value: 0.037 Confidence Interval: 8.81 - 11.04 percentage points</p>

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>11. Distribution of facility scores for all EBPIs ▼</p> <p>Distribution of facility scores for all EBPIs among randomly sampled facilities.</p>	<p><u>Baseline Random Inspections:</u></p> <p>0-9.9% 3% of facilities 10-19.9%: 7% 20-29.9%: 7% 30-39.9%: 9% 40-49.9%: 11% 50-59.9%: 11% 60-69.9%: 10% 70-79.9%: 17% 80-89.9%: 13% 90-100%: 12%</p> <p>Total number of randomly sampled facilities: 100 Minimum score: 2.3% Maximum score: 99.6% Median score: 73.2%</p> <p><u>Post-Round 1 Random Inspections:</u></p> <p>0-9.9%: 0% of facilities 10-19.9%: 0% 20-29.9%: 5% 30-39.9%: 5% 40-49.9%: 9% 50-59.9%: 10% 60-69.9%: 15% 70-79.9%: 21% 80-89.9%: 21% 90-100%: 19%</p> <p>Total number of randomly sampled facilities: 100 Minimum score: 22.3% Maximum score: 100.0% Median score: 81.6%</p>

KEY TO MEASURES: * = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>12. Average facility score for compliance-related EBPIs ▼</p> <p>The percentage of all relevant compliance-related EBPIs being achieved, on average, by randomly sampled facilities.</p>	<p><u>Baseline Random Inspections:</u> Effective Sample Size: 100 Average facility score: 65.72% Confidence Interval: 61.12 – 70.33% Standard Deviation: 3.12</p> <p><u>Post-Round 1 Random Inspections:</u> Effective Sample Size: 100 Average facility score: 87.29% Confidence Interval: 81.23 – 92.13% Standard Deviation: 3.56</p> <p><u>Performance Change:</u> Effective Sample Size: 100 Observed Difference Between Averages: +21.7 percentage points Significant? Significant 1-Sided or 2-Sided? 2-Sided P-Value: 0.027 Confidence Interval: 18.37 – 24.22 percentage points</p>

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>13. Distribution of facility scores for compliance-related EBPIs ▼</p> <p>Distribution of facility scores for all compliance-related EBPIs among randomly sampled facilities.</p>	<p><u>Baseline Random Inspections:</u></p> <p>0-9.9%: 0% of facilities 10-19.9%: 0% 20-29.9%: 1% 30-39.9%: 3% 40-49.9%: 3% 50-59.9%: 7% 60-69.9%: 26% 70-79.9%: 24% 80-89.9%: 17% 90-100%: 19%</p> <p>Total number of randomly sampled facilities: 100 Minimum score: 21.3% Maximum score: 97.6% Median score: 63.6%</p> <p><u>Post-Round 1 Random Inspections:</u></p> <p>0-9.9%: 0% of facilities 10-19.9%: 0% 20-29.9%: 0% 30-39.9%: 1% 40-49.9%: 5% 50-59.9%: 12% 60-69.9%: 17% 70-79.9%: 22% 80-89.9%: 24% 90-100%: 19%</p> <p>Total number of randomly sampled facilities: 100 Minimum score: 32.3% Maximum score: 100.0% Median score: 85.2%</p>

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>14. Average facility score for all compliance-related measures ▼</p> <p>The percentage of all relevant compliance-related measures being achieved, on average, by randomly sampled facilities.</p>	<p><u>Baseline Random Inspections:</u> Effective Sample Size: 100 Average Facility Score: 71.33% Confidence Interval: 64.56 – 75.88% Standard Deviation: 3.22</p> <p><u>Post-Round 1 Random Inspections:</u> Effective Sample Size: 100 Average Facility Score: 84.92% Confidence Interval: 80.11 – 89.36% Standard Deviation: 2.89</p> <p><u>Performance Change:</u> Effective Sample Size: 100 Observed Difference Between Averages: +13.61 percentage points Significant? Significant 1-Sided or 2-Sided? 2-Sided P-Value: 0.032 Confidence Interval: 9.36 – 18.52 percentage points</p>

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p>15. Distribution of facility scores for all compliance-related measures ▼</p> <p>Distribution of facility scores for all compliance-related measures among randomly sampled facilities.</p>	<p><u>Baseline Random Inspections:</u></p> <p>0-9.9%: 1% of facilities 10-19.9%: 1% 20-29.9%: 3% 30-39.9%: 15% 40-49.9%: 12% 50-59.9%: 11% 60-69.9%: 17% 70-79.9%: 23% 80-89.9%: 9% 90-100%: 8%</p> <p>Total number of randomly sampled facilities: 100 Minimum score: 7.5% Maximum score: 98.6% Median score: 73.4%</p> <p><u>Post-Round 1 Random Inspections:</u></p> <p>0-9.9%: 0% of facilities 10-19.9%: 0% 20-29.9%: 0% 30-39.9%: 7% 40-49.9%: 10% 50-59.9%: 12% 60-69.9%: 19% 70-79.9%: 17% 80-89.9%: 24% 90-100%: 11%</p> <p>Total number of randomly sampled facilities: 100 Minimum score: 33.6% Maximum score: 99.6% Median score: 83.6%</p>

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Measure Name and Definition	Info Reported by State
<p>16. Aggregate achievement rate for all EBPIs ▼</p> <p>Percentage of all relevant EBPIs being achieved, across all randomly sampled facilities.</p>	<p><u>Baseline Random Inspections:</u> 63.9%</p> <p><u>Post-Round 1 Random Inspections:</u> 76.4%</p> <p><u>Performance Change:</u> +12.5 percentage points</p>

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Measure Name and Definition	Info Reported by State
Measures of Environmental and Public Health Outcomes ²	
<p data-bbox="166 232 962 264"><i>17. Rate of managing/ controlling certain environmental aspects ☆</i></p> <p data-bbox="166 334 1354 399">Amounts of emissions, waste, discharges, or chemicals/materials used that are properly controlled or managed (reported as a raw number and as percentage of total).</p>	<p data-bbox="1464 217 2515 315">At baseline, we estimate that between 81.1 and 89.9% of the 5 billion gallons of gasoline being delivered to gas stations covered by the ERP in Hampsachusetts is properly controlled with Stage I vapor recovery systems.</p> <p data-bbox="1464 354 2542 483">In the post certification period, we estimate that the amount of gasoline delivered increased by 2%, and that between 92.0 and 99.1 % of the 5.1 billions of gasoline being delivered to gas stations covered by the ERP in Hampsachusetts is properly controlled with Stage I vapor recovery systems.</p> <p data-bbox="1464 522 2529 717">On an absolute basis, this means that between 105 million and 900 million additional gallons of gasoline are properly controlled by Stage I vapor recovery systems at the post-certification period, compared to baseline. If we hold the amount of gasoline delivered constant, this is equivalent to between approximately 197 million and 559 million additional gallons of gasoline are properly controlled by Stage I vapor recovery systems at the post-certification period, compared to baseline.</p> <p data-bbox="1464 756 2467 789">For more detail on our methodology, see our state ERP website (www.hdep.gov/erp).</p>

² Measures related to environmental outcomes may not be possible for all sectors or for all ERPs, but they are top priorities for communicating the story of ERP. The Consortium sees these measures as “aspirational” and heartily encourages states to gather and report information on environmental outcome measures whenever possible. The Consortium provides limited guidance on these measures here but intends to provide supplemental guidance in the future.

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p data-bbox="163 196 1360 261"><i>18. Level of group emissions, waste, discharges, or chemical usage related to certain environmental aspects</i> ☆</p> <p data-bbox="163 331 1440 396">Amounts of emissions, waste, discharges or materials/chemical usage (reported as a raw number and with a normalizing factor).</p>	<p data-bbox="1462 180 2564 480">We are 95% confident that between 738.8 and 3,746.6 tons of VOC emissions were reduced between the baseline and post-certification period as a result of increased adoption of Stage I vapor recovery systems. Note: this is an absolute (not normalized) figure. We believe that the number of deliveries of gasoline to gas stations is an appropriate normalization factor. The number of deliveries increased by 2% between baseline and post certification. If we assume that the number of deliveries had stayed constant over time, we estimate that between 393.8 and 3,375.0 tons of VOCs emissions would have been reduced between the baseline and post-certification period as a result of increased adoption of Stage I vapor recovery systems.</p> <p data-bbox="1462 516 2564 581">Also note: this estimate does not account for any other potential changes in VOC emissions in gas stations that may have occurred during the same period.</p> <p data-bbox="1462 617 2564 1214">These calculations are based on the premise that Stage I vapor recovery requirements apply to all facilities in the ERP universe. Vapor recovery captures an amount of vapor equivalent to 10 gallons of gasoline each time a tanker truck unloads. At baseline, we estimated that there were approximately 500,000 deliveries of gasoline to gas stations covered by the ERP in our state each year. In the post certification period, we estimated that this figure increased by 2%, to 510,000. Therefore, if all these facilities had proper Stage I vapor recovery systems installed, there would be 5 million gallons of gasoline vapors recovered at baseline, and 5.1 million gallons of gasoline vapor recovered in the post certification period. This is equivalent to 18,750 tons of VOCs not emitted into the air at baseline, and 19,125 tons of VOCs not emitted into the air in the post certification period. At baseline, between 81.1 and 89.9 % of all facilities in the universe had Stage I equipment installed, and at the time of post-certification inspections between 92.0 and 99.1 % of these facilities had the equipment installed. For each period (baseline and post-certification), we multiply the minimum and maximum percentage of facilities with Stage I vapor recovery equipment installed times the total amount of VOC emissions reduced if all facilities have the equipment installed. We then calculate the lowest and highest possible changes in VOC emissions to give the range of emissions reductions above. For more detail on our methodology, see our state ERP website (www.hdep.gov/erp).</p>

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
<p data-bbox="166 196 1381 261"><i>19. Ecological, occupational and public health impacts related to certain environmental aspects of the group ☆</i></p> <p data-bbox="166 331 1419 396">Impacts of the group on measures of ecological, occupational and public health (reported as a raw number and with a normalization factor).</p>	<p data-bbox="1464 185 2558 514">We did not observe any change in the percentage of facilities that had permissible floor drains between baseline and post-certification. However, during the course of random inspections, inspectors did identify 5 facilities with illegal Class V motor vehicle waste disposal wells. Afterwards, Hampsachusetts DEP followed up with these facilities to clarify requirements for Class V wells, and required closure of the wells. Based upon this additional contact, and understanding the threat of enforcement, all 5 facilities closed their wells. These wells were located within the wellhead protection areas of three community water systems (CWS) that rely on ground water. These CWSs together supply over 15,000 people. Therefore, any pollution that had could be deposited into the wells that were closed had the potential to reach groundwater supplying over 15,000 people.</p>

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
Measures of Costs of Implementing ERP³	
<p>20. Agency level of effort, first cycle ☆</p> <p>Total number of staff hours expended in developing and implementing the first ERP cycle.</p>	<p><u>Level of Effort:</u> 8,800 staff hours</p> <p><u>Methodology for Calculating Level of Effort:</u> Our state does not formally track time spent on individual projects, but we are able to estimate that four individuals averaged about 50% of their time developing and implementing the first cycle of ERP over the course of two years. Each staff person worked full time (2,080 hours per year, including leave time). In addition, we assigned 2 inspectors full time for 1.5 months to conduct baseline and post-certification inspections. Consequently, for the 2 years involved in planning and implementing the first round of ERP, we estimate that we invested a minimum of 8,800 hours of staff time (4 workers x 50% time x 2 years x 2,080 hours plus 2 inspectors x 6 weeks x 40 hours per week).</p> <p>This estimate accounts for time spent coordinating with stakeholders, writing ERP-related rules, developing ERP materials, conducting inspections, entering and analyzing data, and reporting results. This estimate does not include time contributed by our information technology and legal departments, or by senior management only occasionally involved in the program. Including those staffing categories could add up to 10% to the overall estimate.</p>
<p>21. Agency level of effort, subsequent cycles ☆</p> <p>Total number of staff hours expended in developing and implementing later ERP cycles being reported.</p>	<p>Our state has only conducted one cycle of ERP to date, however we anticipate that future rounds would be much less resource-intensive, because we would not require time to develop materials, write the ERP-related rules, or establish the program.</p>

³ Measures related to ERP costs may not be possible for all sectors or for all ERPs, but they are top priorities for communicating the story of ERP. The Consortium sees these measures as “aspirational” and suggests states gather and report information on program costs, whenever possible. The Consortium provides limited guidance on these measures here but intends to provide supplemental guidance in the future.

KEY TO MEASURES: ★ = Tier 1, True Core; ☆ = Tier 2, Aspirational Measures; ▼ = Tier 3, Additional Measures.

Measure Name and Definition	Info Reported by State
Miscellaneous Measures	
<p>22. Other benefits of ERP ★</p> <p>Are there any other benefits of ERP -- to your agency, to the public, to business etc. -- that you would like to share?</p>	<p>Some facilities reported (informally, to inspectors) that improving their leak detection systems has led to a decrease in costs, as they are losing less fuel due to leaks in their tanks.</p> <p>Though difficult to measure quantitatively, we also believe that there are positive impacts on human health as a result of improvements in the vapor recovery systems at some facilities. Improvements to these systems mean that fewer vapors are escaping to be inhaled by the public and workers. We also note that there are likely benefits to ground-level ozone, which we expect will help us reach our SIP goals.</p> <p>Quote from participating local business: “Participating in the ERP has helped us immensely in understanding our regulatory requirements. Before the program, we weren’t sure what our responsibilities were or how to be in compliance with state and federal regulations. Now we know that we are in compliance, and furthermore, we know that we are doing our part to improve the local environment.” <i>Bob Johnson, Bob’s Gas, November 16, 2008.</i></p>
<p>23. Other key measures you have identified ★</p> <p>Open-ended placeholder question.</p>	<p>During our initial round of workshops, we had 14 workshops across the state that were attended by representatives from over 400 facilities. This means that over one-quarter of the universe of facilities participated in one of the workshops.</p> <p>In addition, we also had seven enforcement actions, five of which resulted from targeted inspections, with targeting based upon certification data received. All of the facilities settled, leading to \$356,000 in fines and \$254,000 in Supplemental Environmental Projects (SEPs).</p>

**Attachment 1: Results for Measure 6
Achievement Rate for Each EBPI**

Baseline Random Inspections

EBPI # ¹	Observed # Facilities Achieving Measure	Effective Sample Size	Observed % Facilities Achieving Measure	95% Wald Confidence Interval
1	95	100	95.0%	90.4 – 99.6%
2	85	90	94.4%	89.3 – 99.6%
3	62	95	65.3%	55.4 – 75.1%
4	38	65	58.5%	46.6 – 69.4%
5	97	100	97.0%	92.3 – 100.0%
6	88	100	88.0%	81.3 – 94.7%
7	85	100	85.0%	77.7 – 92.3%
8	48	88	54.5 %	43.8 – 64.2%
9	86	96	89.6%	83.1 – 96.0%
10	59	100	59.0%	49.2 – 68.8%

Post Round-1 Random Inspections

EBPI #	Observed # Facilities Achieving Measure	Effective Sample Size	Observed % Facilities Achieving Measure	95% Wald Confidence Interval
1	92	96	95.8%	91.4 – 100.0%
2	96	100	96.0%	91.8 – 100.0%
3	83	100	83.0%	75.4 – 90.6%
4	64	86	74.4%	64.9 – 84.0%
5	93	100	93.0%	87.7 – 98.3%
6	89	95	93.7%	88.4 – 99.0%
7	85	100	85.0%	77.7 – 92.3%
8	52	95	54.7%	44.5 – 65.0%
9	92	100	92.0%	86.4 – 97.6%
10	64	100	64.0%	54.4 – 73.6%

Performance Change

EBPI #	Observed Difference (Percentage Points)	Significant Difference?	95% Confidence Interval (If Calculated)
1	+0.8	Not significant	N/A
2	+1.6	Not significant	N/A
3	+17.7	Significant (2-tailed test)	10.4 – 24.4
4	+15.9	Significant (2-tailed test)	12.2 – 21.1
5	-4.0	Not significant	N/A
6	+5.7	Not significant	N/A
7	0.0	N/A	N/A
8	+0.2	Not significant	N/A
9	+2.4	Not significant	N/A
10	+5.0	Not significant	N/A

¹ Numbering for EBPIs corresponds with the numbered list in the descriptors table.