



# **Environmental Stewardship Program (ESP) Forms: *Proposed Changes and Feedback***

Office of Program Support  
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# ESP Form Changes

- The Indiana Department of Environmental Management (IDEM) has decided to revise the following ESP forms:
  - ESP Application Form
  - ESP Annual Performance Report (APR)
- IDEM hopes to simplify the application, reporting, and renewal processes.
- Your feedback is appreciated!



# Proposed Additions/Deletions

## Additions

- Request additional facility information for IDEM's application packet.
- Allow facilities to report on multiple environmental initiatives at once.
- A streamlined renewal questionnaire on the APR.

## Deletions

- ISO 14001 Lead Auditor signature requirement.
- All "optional" questions from the forms.
- References to the Responsible Care Environmental Management System (EMS) format.



# APR/Table E

- Section E of the APR (Environmental Initiative Results) has the greatest number of changes.
- Changes should help members through the normalization process.



# **Aside:**

## **Measuring Environmental Indicators**

- Increases or decreases in environmental impacts of a business can be due to:
  - 1) Changes in production.
  - 2) Changes in efficiency/waste reduction.

## **How do you separate these effects?**



# Normalization

- Normalization is frequently confusing because the term is used differently in multiple disciplines.
- E.g., in data processing, normalization typically scales all data in the range of  $[0,1]$ .
- IDEM's ESP normalization policy follows from the U.S. EPA's National Environmental Performance Track program (NEPT).
- You might also call this a "production index."



# IDEM's Normalization Method

- IDEM uses a “normalizing factor” to normalize the value, removing the effects of changes in production.

$$\text{Normalizing Factor} = \frac{[\text{Production Measure}]_{\text{Current Year}}}{[\text{Production Measure}]_{\text{Prior Year}}}$$

## What does this mean?



# What's a Good Normalizing Factor?

- Uses a production measure that is:
  - Consistent
  - Relevant
  - Transparent





# Examples of Production Measures

- Number of circuit boards manufactured
- Gallons of paint produced
- Man-hours of labor used
- Pounds of copper sold

Never use profit or other monetary quantity to  
normalize!

## Why?



# Problems with Monetary Quantities

- Monetary values are subject to inflationary or deflationary effects.
- Using them introduces an additional variable.



# Finding a Normalizing Factor

- In 2014, Jack's Motor Manufacturing produced 18,000 engine blocks.
- In 2013, the same company produced 16,800 engine blocks.

$$\text{Normalizing Factor} = \frac{[18,000 \text{ engine blocks}]_{2014}}{[16,800 \text{ engine blocks}]_{2013}}$$

$$\text{Normalizing Factor} = 1.07$$



# Using the Normalizing Factor

- Jack's Motor Manufacturing has a 2014 normalizing factor of 1.07.

Year	Non-hazardous Waste (tons)	Normalized Waste (tons)
2013	425	$425/1.00 = 425$
2014	448	$448/1.07 = 418.7$



# Normalization Results

Year	Non-hazardous Waste (tons)	Normalized Waste (tons)
2013	425	$425/1.00 = 425$
2014	448	$448/1.07 = 418.7$

- Total production was up 1,200 units or 7%.
- Total waste was up 23 tons, or about 5%.
- Waste per unit was actually down 1.4%.



# Existing APR Normalization Table

Category: _____ Indicator: _____	Baseline Quantity	Future Goal Quantity	Current Quantity	Cost Savings
Calendar year	_____	_____	_____	_____
Actual quantity (per year)	_____	_____	_____	
Normalized quantity (per year)	_____	_____	_____	
Basis for your normalizing factor (e.g., gallons of paint produced)	_____			
Measurement unit (e.g., pounds)	_____			
Briefly describe how you achieved improvements for this environmental initiative or, if relevant, any circumstances that delayed progress. _____				
Please list any state, U.S. EPA, or other partnership programs to which you are reporting this data (e.g., Energy Star, Project XL). _____				
(Optional) If your facility has experienced continued results for environmental improvement initiatives pursued in past years of ESP membership, please share those results here. _____				



# Proposed Normalization Table (APR, Section E)

Category 1: _____ Indicator 1: _____	Baseline Quantity (Indicate measurement unit)	Current Quantity (Indicate measurement unit)	Cost Savings
Calendar year	<input type="text"/>	<input type="text"/>	<input type="text"/>
Actual quantity (per year)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Production Quantity (select one)	<input type="text"/> Man-hours <input type="text"/> Production units <input type="text"/> Production lbs. <input type="text"/> Other – specify (e.g. Gallons, length, etc.)		
Normalization factor (2014 production ÷ 2013 production)			
Normalized quantity (Actual 2014 quantity ÷ Normalizing factor)			
Briefly describe how you achieved improvements for this environmental initiative or, if relevant, any circumstances that delayed progress. <input type="text"/>			
Please list any state, U.S. EPA, or other partnership programs to which you are reporting this data (e.g., Energy Star, Project XL). <input type="text"/>			



# Request for Feedback

- Which sections do you find most confusing or difficult to complete?
- What suggestions do you have to improve the Application Form? The APR?





# Questions?

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