

Worksheet 1 - Facility Information

Facility Name: _____

Facility Mailing Address: _____

Contact Person: _____

Phone: _____ E-mail: _____

Planning Status (check all that apply)*

Large User

EPA ID: _____

Class A Generator

Class B Generator

*Note: It is possible for a facility to be *both* a Large User of toxic substances *and either* a Class A or Class B generator of hazardous waste.

Facility Description

Industry type: _____ Primary NAICS Code: _____

Number of Full-Time Equivalent Employees: _____

Identify any "Interrelated facilities" or other buildings covered by the Plan:

Describe products you make or services you provide:

Unit of Product and Previous Year's Production Levels:

Worksheet 2 - Policy and Employee Training

Management Policy Statement

Employee Training and Awareness Program(s)

How are the above policies shared with employees?

Management Signature:

Title: _____ Date: _____

Worksheet 3 - Ongoing TУHWR Activities

List or describe any source reduction, waste reduction, and/or recycling activities **already in place** at your facility. If possible, show estimated waste or chemical use reductions in pounds, the year of implementation, and any cost savings that have been achieved.

Although the TУHWR statute is specific to the use of toxic chemicals and the generation of hazardous waste, entities that implement TУHWR measures may also see a decrease in the quantity or toxicity of wastewater discharges, air emissions, and/or other environmental releases. Any examples of these measures should be described on this Worksheet, as they may represent significant environmental accomplishments.

Worksheet 4A - Toxic Substance Use – Product Approach

Previous Year: _____

(Calendar year immediately preceding the year in which this Worksheet is completed.)

PRODUCT APPROACH

1. List each PRODUCT which contains 50 percent or more toxic substances if more than 2,000 pounds of the product were used. *See example in shaded rows below:*

Product	Amount of Product Used (lbs.)	Toxic Substance(s) Found in Products	Total Concentration of Toxics (%)
<i>Example - A+ Lacquer Thinner</i>	<i>2,300 lbs.</i>	<i>Toluene (75%), methanol (5%)</i>	<i>80%</i>

2. List each PRODUCT which contains between 25 and 49 percent toxic substances, if more than 4,000 pounds of the product were used.

Product	Amount of Product Used (lbs.)	Toxic Substance(s) Found in Products	Total Concentration of Toxics (%)
<i>Example – Hydrofluoric acid</i>	<i>10,000 lbs.</i>	<i>Hydrofluoric acid</i>	<i>45%</i>

3. List each PRODUCT which contains between 10 and 24 percent toxic substances, if more than 10,000 pounds of product were used.

Product	Amount of Product Used (lbs.)	Toxic Substance(s) Found in Products	Total Concentration of Toxics (%)
<i>Example – Bob’s Lactol Spirits</i>	<i>12,000 lbs.</i>	<i>Toluene</i>	<i>20%</i>

4. List the sources of information that were used to determine the above quantities and concentrations. This could include Safety Data Sheets (SDS), vendor or manufacturer information, annual inventory reports, etc.

Worksheet 4B – Toxic Substance Use – Chemical Approach

Previous Year: _____

(Calendar year immediately preceding the year in which this Worksheet is completed.)

CHEMICAL APPROACH

List each Toxic Substance if (a) more than 10,000 pounds are used during the year OR if (b) more than 1,000 pounds of the toxic substance is used and that amount exceeds 10% of all toxic substances used at the facility for the year. *See Examples for (a) and (b) in the shaded rows below:*

Toxic Substance Name	Product(s) Found In	Concentration of Toxic in Product(s) (%)	Amount of Product Used in the Previous Year (lbs.)	Amount of Toxic Substance Used in the Previous Year (lbs.) (column 3 x 4)	Total Chemical Used – Sum for Each Toxic (lbs.)
<i>EXAMPLE (a) Toluene</i>	<i>Lactol Spirits</i>	<i>22%</i>	<i>50,000 lbs.</i>	<i>11,000 lbs.</i>	<i>11,000 lbs.</i>
<i>EXAMPLE (b) Methanol</i>	<i>Paint</i>	<i>12%</i>	<i>20,000 lbs.</i>	<i>2,400 lbs.</i>	<i>2,400 lbs.</i>

List the sources of information that were used to determine the above quantities and concentrations. This could include Safety Data Sheets (SDS), vendor or manufacturer information, annual inventory reports, etc.

Worksheet 5 – Hazardous Waste Generation

Previous Year: _____

(Calendar year immediately preceding the year in which this Worksheet is completed.)

Total of Routinely Generated Hazardous Waste: _____ lbs. = 100%

(NOTE: Use this total to calculate percentage below.)

List each hazardous waste stream greater than 5% of total annual generation. *See example in shaded row below:*

Waste Code(s) (e.g., D001,VT02)	Hazardous Waste Name	Amount Generated in Previous Year (lbs.)	Percent of Total Hazardous Waste Generated in the Previous Year (%)	Process(es) Generating the Hazardous Waste
EXAMPLE D002	Alkaline etch solution	60,000 lbs.	75%	Copper etching

Worksheet 6 - Process Description

Use a separate sheet for each process if you would like. Please attach any process maps.

Process Name: _____

Process Description:

Worksheet 7- Opportunities, by Priority

Identify TUHWR opportunities to be evaluated and the associated process for each. For the opportunities that will be evaluated, determine whether they are source reduction or recycling and initiatives and summarize them below.

Source Reduction Initiatives:

Recycling Initiatives:

Worksheet 8 - Technical Feasibility Analysis

Opportunity:

Please include comments in the space provided below each set of questions.

	Yes	No	Not Sure	Does Not Apply
Environmental Considerations				
Will this option create less waste, decrease the use of toxic substances, or promote recycling?				
Will this option shift pollutants from one environmental media to another?				
Will this option require any new permits?				
Comments:				
Product and Production Considerations				
Are other entities using this option?				
Will this option adversely affect productivity?				
Will this option adversely affect product/service quality?				
Is your plant layout and design capable of incorporating this option?				
Comments:				
Employee Considerations				
Will this option require additional staff?				
Will this option improve or maintain worker health and safety?				
Will special employee training be required?				
Will worker acceptance be an issue?				
Comments:				
Equipment Considerations				
Will the vendor guarantee this option?				
Are materials and parts readily available?				
Can this option easily be serviced?				
Is there vendor support available for start-up, testing, training & repair?				
Are adequate utilities available to accommodate this option?				
Comments:				
Result of Technical Feasibility Analysis - Check one:				
Opportunity is technically feasible.	<input type="checkbox"/>	(Go to Worksheet 9)		
Opportunity is technically feasible and economically feasible and will be implemented.	<input type="checkbox"/>	(Go to Worksheet 10)		
Opportunity requires further study before selecting or rejecting.	<input type="checkbox"/>	(Go to Worksheet 10)		
Opportunity is not technically feasible.	<input type="checkbox"/>	Describe impediments below:		

Worksheet 9 - Financial Analysis

- 1) Identify any operating costs likely to be affected with implementation of the TUHWR project.
- 2) Calculate cost differential. The sum of cost differentials represents annual cash flow.
- 3) If capital costs are incurred, determine simple payback period.

Opportunity:			
	Current Cost	New Process Cost	Differential (Cost) or Savings
OPERATING COSTS			
Direct Labor			
Raw Materials (include chemicals & catalysts)			
Waste Management (include disposal, taxes, treatment, storage, on-site handling)			
Regulatory Compliance (include manifesting, reporting, monitoring, Plan fees, training, permitting, personal protective equipment)			
Utilities (electricity, steam, water, sewerage, etc.)			
Depreciation (on capital equipment purchase)			
Other (lab fees, supplies, insurance etc.)			
Net Operating Cash Flow in Year 1 (sum of all operating cost differentials)	N/A	N/A	
CAPITAL COSTS (one-time expenditures)			
Equipment purchase	N/A		
Installation & start-up	N/A		
Materials	N/A		
Other (utility connections, site preparation, engineering, permitting, operator training and contingency)	N/A		
Total Capital Costs	N/A		
Payback Period = Total Capital Costs ÷ Net Operating Cash Flow =		_____ Years	
Check One:			
<input type="checkbox"/>	Opportunity is economically feasible and will be implemented		(Go to Worksheet 10)
<input type="checkbox"/>	Opportunity requires further evaluation before selecting or rejecting		(Go to Worksheet 10)
<input type="checkbox"/>	Opportunity not economically feasible		

Worksheet 10 - Performance Goals

Selected Opportunities

Opportunity Name	Process Affected	Name of Hazardous Waste Stream(s) or Toxic Substance(s)	Anticipated Reduction (lbs.)		Goal Date
			Source Reduction	Recycling	

Opportunities Requiring Further Investigation

Opportunity Name	Process Affected	Anticipated Date of Decision