

TUR PLANS

Requirements and Observations

MassDEP

April 10, 2013

Basic Principles & Requirements

REQUIREMENTS

- “Demonstrate a good faith and reasonable effort”
- Use “standard engineering practices”
- Use “standard accounting practices”
- Use “current business decision making practices”

UNDERLYING PRINCIPLES

- Make this a useful and meaningful exercise: “the Pause that Refreshes”
- For subsequent plans: check to see if prior year assumptions, information, and data are still valid
- Minimize unnecessary paperwork and analysis
- Use “Off Ramps” appropriately

MANAGEMENT POLICY

The Management Policy Must Include:

- How facility encourages TUR
- Policies that encourage or discourage TUR
- Other optional information e.g. role of TUR in
 - hiring, salaries promotion
 - R & D
 - capital investment decisions

Observations

- Policies that encourage or discourage TUR often missing
- Optional information rarely present

Scope

(Really a Plan Summary to be done last)

The Scope Must Include:

- Production unit descriptions
 - process, product, unit of product, chemicals
- Options identification
Process
- Options identified
- Options disposition & implementation plan
- Projected changes in use & byproduct by production unit and chemical

Observations

- Elements usually present, not always in one section
- Missing projected use & byproduct change

Employee Notification

The Notice Must:

- Happen by January 1 of Planning Year
- Identify Production Units
- Describe Planning Criteria (Requirements)
- Solicit TUR suggestions
- Be Described in Plan

Observations

- Not always timely
- Missing planning criteria
- Facilities usually just post a notice

Process Characterization

The Process Characterization Must Include For EACH Production Unit:

- Production Unit Number & Unit of Product
- Process Flow Diagram with:
 - EACH STEP including treatment and recycling
 - MOVEMENT OF EACH REPORTABLE CHEMICAL through process including all points of entry and exit as product, byproduct or emission
- For EACH reportable chemical used:
 - PURPOSE
 - TOTAL AMOUNTS & AMOUNTS PER UNIT OF PRODUCT used, generated as byproduct and released
 - BYPRODUCT FATE: the amounts released on-site, treated on-site and off-site, recycled on-site and off-site, and disposed of on-site and off-site
 - EMISSIONS TO EACH MEDIA: the amounts released on-site, disposed on-site, transferred off-site, and treated, recycled and disposed of off-site to air, surface water, ground water, and land
- COST OF TOXICS (Qualitative or Quantitative)
 - QUANTITATIVE if technically feasible options identified
 - QUALITATIVE if no technically feasible options identified

Observations

- Process flow diagrams missing chemical points of exit
- Chemical use / byproduct / emissions per unit of product missing
- Byproduct fate details missing
- Emissions to media details missing
- Cost of Toxics missing

Options Identification

For EACH Production Unit the Options Identification Must:

- Consider all 6 TUR Methods
- Describe options identification procedures
- List personnel involved
- Describe information sources consulted
- Describe information gathering techniques
- List all options identified as “*potentially* achieving” TUR

Observations

- All 6 methods not always considered
- Descriptions of personnel, information sources, or information gathering techniques overly general or lacking
- List of identified options missing or not updated from prior years

Technical Evaluation

The Technical Evaluation Must Include:

- For each potential TUR option identified
 - A description
 - A determination (with appropriate documentation) of whether the potential option is
 - Technically feasible
 - TUR
 - Legal
- For those potential options determined to be TUR, technically feasible, and legal
 - Expected reduction in the amount and amount per unit of product of use and byproduct
 - Anticipated costs and savings
 - If NOT being implemented: the reason
 - If being implemented: the schedule
 - If the evaluation is still underway: why & schedule for completion
- OFF RAMP: Technical analysis can be stopped when the “technique is clearly technically infeasible” or “clearly economically infeasible as determined pursuant to 310 CMR 50.46A” [the economic evaluation of potential TUR techniques]

Observations

- Off ramp over used
- All Potential TUR Options not included
- Technical analysis and missing for many options
- Prior years’ plan technical analyses neither referenced nor updated
- Costs and savings missing
- Further study reason and schedule missing
- Future use and byproduct reductions missing
- Documentation lacking

Economic Evaluation

The Economic Evaluation Must:

- Be included for every legal, technically feasible TUR technique identified
- Include the cost of using the toxic chemical in the current processes
- Consider all of the listed cost elements, include only those that change as a result of implementing the TUR technique, explain exclusions
- OFF RAMP: Can be very simple: stop as soon as you can make a good business decision

Observations

- Off Ramp over used
- Mostly missing
- Prior years' costs of toxics and economic evaluation of technically feasible but not economically infeasible techniques not updated