27th LCA Discussion Forum November 17th. 2005 ETH Zürich

Practical Applications of the "Ecosolvent" Model

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Practical Applications of "Ecosolvent" Typical Solvent Balance

			168'000 t		
			Regenerated		
		•			
38'000 t	196'000 t	Production		17'000 t	
New solvent	Total input			Incinerated	
		21'000	t		
		Solvents s	sold		
		Sold with P	roduct		
		Waste Water			
		Offgas			8 . / .
				Ciba	
				Cipa	

Practical Applications of "Ecosolvent" Existing Routes for Solvent Management

- In-plant batch regeneration (not shown in balance)
- In-house continuous regeneration
- Regeneration by third party
- In-house use as substitute fuel
 - in normal steam boilers
 - as fuel for sludge incineration with heat recovery
- Incineration by third party
 - with partial heat recovery
 - as fuel in cement kilns
 - as hazardous waste with mulit-stage offgas cleaning
- As trace quantities to biological waste water treatment.



Practical Applications of "Ecosolvent" Decision Factors for Choice of Route

- Capacity in existing regeneration plant
- Logistics of solvent transportation
- Long-term contracts with third parties
- Economics/ costs
- Environmental audit of third party disposal facilities

Economic optimum not always apparent Answer: Cost transparency for all potential routes No systematic life cycle/ sustainablilty analysis Answer: Analysis of alternatives by "Ecosolvent"



Practical Applications of "Ecosolvent" Sustainability vs. Local Regulations

Classical Environmental Legislation:

- Focus on specific environmental effects (local emissions, noise, transportation etc.)
- Focus on strict definitions (flammable, hazardous waste)
- Implementation by local government
- No consideration of life cycle impacts

"Ecosolvent" has the potential to demonstrate life cycle optimum and facilitate appeal to higher authority.



Practical Applications of "Ecosolvent" IPPC: The EU Permit to Produce

- Integrated Pollution Prevention and Control; to be fully implemented in all EU states by 2007
- Sector/ site must employ Best Available Techniques (BAT)
- Defined in "BREFs" for each industrial sector
- Includes low-waste technology, less hazardous substances, emissions, raw materials consumption, waste regeneration, efficient use of energy
- Use of "emerging techniques" and "environmental management tools" to demonstrate BAT
- "Ecosolvent" can demonstrate best environmental alternative !



Practical Applications of "Ecosolvent" IPPC: The EU Permit to Manufacture

• Interest alteady demonstrated by UK "Envirowise" program



