DuPont & Substance Volume Tracking (SVT): Beyond REACH

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CSC

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DuPont
Agenda

- Changing regulatory landscape
- DuPont’s substance volume tracking journey
- Extending SAP SVT to other volume-oriented regulations
- Additional areas of functionality and application for SAP SVT
Learning Points, Key Concepts

- SAP EH&S Substance Volume Tracking (SVT) is a key foundational tool to achieve your compliance strategy.

- DuPont successfully implemented SVT for REACH and is leveraging the platform to other volume oriented regulations.

- SVT Notification Check functionality provides a flexible, integrated tool for “list” based chemical control laws (inventories).

- SVT provides versatile application which enables “non-standard” extensions of its core functionality.
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The Vision of DuPont

To be the world’s most dynamic science company, creating sustainable solutions essential to a better, safer, healthier life for people everywhere

We are a market-driven science company
DuPont in 1802

- 40 employees
- 1 site
- 1 country
- 1 product
- 12 customers
- $15,116 in sales (1804)

DuPont in 2011

- 60,000 employees
- > 210 sites
- > 90 countries
- Hundreds of thousands of DuPont products and customers
- $31.5B in sales (2010)
Changing Global Regulatory Landscape

Voluntary

Responsible Care®

Global Product Strategy (GPS)

EU Existing Substance Program

High Production Volume Challenge (HPV)

Mandatory

Registration, Evaluation, Authorisation Restriction of Chemicals (REACH)

Canadian Chemicals Management Plan (CMP)

Globally Harmonized System (GHS)

Toxic Substances Control Act (TSCA)

Paradigm Shifts Occurring
Paradigm Shifts in Regulations Affect Global Supply Chains

End Use          Labels          Hazard Properties          Reportable Quantities          Safe Use Conditions

U.S.          Canada          E.U.          Switzerland          China

Japan          Taiwan          Turkey
What is Substance Volume Tracking? Why Is It Needed?

SAP standard solution as part of core EH&S

A generic framework for tracking substance volumes that can be used for REACH and other regulations

- Threshold limits can be defined for each regulation and substance
- Online checks are integrated in business processes with predetermined actions when a limit is exceeded
- Track Substance volumes by monitoring relevant material movements
- Materials are decomposed to a tracked substance
DuPont Business Objectives

Establish processes and systems to enable DuPont compliance with REACH and other product regulatory laws globally, maintaining our permission to sell and securing our supply chains.

Achieve compliance
Sustain compliance
Balance IT integration

Business Landscape
• Large enterprise
• Global presence
• Complex legal entity structure
• Complex supply chains
DuPont SVT REACH Solution Challenges

Story so far …

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<tr>
<th></th>
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<tr>
<td>SIEF/Substances</td>
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<td>Legal entities</td>
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Regulatory

- REACH regulations not “dry”
- Continual reinterpretation of the regulations

Business Process

- DuPont implementing new business processes to meet fluid regulatory demands
- Complex business transactions
- Significant change management effort
- Data, data, data

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DuPont SVT REACH Solution Challenges

Technical

- DuPont implementing software developed to a changing specification
- Complicated IT Landscape – SAP and Non-SAP
- Complex integration of supply chain clusters with EH&S and BW

System Limitations

- Lack of validation processes / tools
- Missing functionality for regulatory requirements
DuPont SVT REACH Solution Time Line

- **Dec ’08** Blue Print
- **Jun ’09** Realization
- **Oct ’09** Final Prep
- **Jan ’10** Go Live
- **Mar ’10** Support
DuPont SVT Architecture Overview

- Master Data
- EH&S Master Data
- Jurisdictional Legal Compositions
- EH&S Data
- Tracking Data
- Non SAP Systems
  - Substance Volumes
  - Jurisdictional Legal Compositions
- Alerts Reports

Key components:
- Business Clusters
- Keystone
- Filling/Tracking E-mail Alerts
- Track volume from Business transactions
DuPont SVT REACH Solution Design

- Regulatory, process, technical, and system limitations forced:
  - Tracking via custom routines and tables
  - Filling through custom routines
  - Validation tool through custom routines and tables
  - Custom interfaces across SAP and non-SAP systems
DuPont SVT REACH Solution Design

- BW is the one-stop shop for all SVT reports
  - Regulatory reports
    - Individual country/region specific reporting
  - Internal decision support reports
    - Common set of reports across regulations
- Alerts
  - Early warning systems
  - Internal decision support alerts
SVT: A Global Framework for DuPont

- Extend value of SVT investment by leveraging platform
  - Developed robust template for future roll-outs

- Shifted from “regulation based tracking” to “track everything”

- Gained more reporting flexibility using BW
  - Volume reporting per regulation
  - Low volume exemptions
  - Volume reporting for exempted substances

Benefits: speed of implementation, flexibility
DuPont’s Lessons Learned from Implementing SVT

- The degree of standardization in your SAP supply chain transaction solution dictates the complexity of your SVT implementation

- Substance Volume Tracking spans across the entire organization, not just regulatory or EH&S

- A critical key to success is the quality of the detailed master data

- Discrepancies between material movements in SAP vs. physical product movements can lead to inaccurate reporting
DuPont & Substance Volume Tracking (SVT): Beyond REACH

Charles McCormick, PE
SAP EH&S Practice Director
CSC
SAP EH&S Substance Volume Tracking

**Integrated Model**

- **Production Order**
- **Process Order**
- **PP Order**
- **PI Order**
- **Sales Order**
- **Delivery**
- **Purchasing**
- **Purchase Requisition**
- **Purchase Order**
- **Stock Transport Orders**

**Integration Points**

- **MM/SVT**
- **EH&S Data Filling**
- **Archiving**
- **Tracking Table**
- **EH&S Data Table**

**Key Tables**

- **Produced**
- **Imported**
- **Quantities**
- **Composition**
- **Reg. Status Specific limits**
- **EH&S**

**Real Experience. Real Advantage.**
SVT: Broad Functionality

- Substance Volume Compliance
- Substance Inventory List Compliance
- US TSCA 12B Notification
- Real Time Logistics Execution Integration

<table>
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<th>ECC LOGISTICS</th>
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<tr>
<td><strong>SALES</strong></td>
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<tr>
<td>PLANNED</td>
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<tr>
<td>INFORMATION</td>
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SVT: Volume Tracking Applications

- Volume Controlled Inventories
  - REACH
  - Japan (Chemical Substance Control Law – CSCL)
  - Turkey (Inventory and Control of Chemicals – CICR)
- Binary Inventory – Pre-Listing Volume Requirements
  - R&D Exemptions
  - Low Volume Exemptions
  - Pre-Listing Tiers
- Future State – Anticipated “REACH” Influences
  - China
  - US TSCA Reform
  - Canada
SVT Property Tree – Registration Class (Volume Based)
### Volume Triggers

**Multi-Branched Logic**

**Substance - Chemical**

- **> 1,000 Kg/yr**  
  30d notice

- **> 10,000 Kg/yr**  
  60d notice

- **> 50,000 Kg/yr**  
  75d notice
SVT: Non-Volume Based Applications

- **List Based Global Chemical Control Inventories**
  - US – TSCA – Toxic Substances Control Act
  - CA – DSL/NDSL – Canadian Domestic & Non-Domestic Substances List
  - CN – IECSC - Inventory of Existing Chemical Substances in China
  - KO – KECI – Korean Existing Chemicals Inventory
  - AU – AICS – Australian Inventory of Chemical Substances
  - NZ – NZIoC – New Zealand Inventory of Chemicals
  - PH – PICCS – Philippines Inventory of Chemicals and Chemical Substances
  - CH – Giftliste 1 – Inventory of Notified New Substances

- **Leverage Third Party Data Providers**
  - Inventory Substance List Content
  - RegLists
  - Phrase Mapping
SVT: Property Tree Notification Status (List Based)
SVT: Non Standard Extensions

- Coatings Manufacturing
  - VOC Volume by Customer Sales
- Distributors
  - Substance Volume by Importer of record (Customer)

<table>
<thead>
<tr>
<th>Customer</th>
<th>Product</th>
<th>Purchase Volume (Gal)</th>
<th>VOC (Kg/Yr)</th>
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<tbody>
<tr>
<td>abc</td>
<td>ab12</td>
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<td>fg56</td>
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Key Learnings

- The functionality of SVT as the tool enabling application of logistics data at a substance component level
- SVT provides real time logistics intervention (planned & actual) and control (Information, Warn, & Block)
- SVT is a key component for maintaining and proving REACH compliance
- SVT volume tracking functionality provides a binary inventory exemption compliance (R&D, Low Volume, Pre-Listing)
- SVT Notification Check functionality provides a real time compliance assurance tool for list based chemical control laws
- Many opportunities to extend SVT functionality to address non-standard applications (e.g., Customers, VOC, etc)
Thank you for participating.

Please remember to complete and return your evaluation form following this session.

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