Uses of CDR Data

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Outline

- CDR database and benefits of CDR data
- Uses of CDR data
  - EPA/OPPT uses
  - Other EPA uses
- CDR data for inorganic byproducts

CDR Database

- Is the most comprehensive database of production volume of chemicals manufactured (including import), processed and used.
- Provides broad collection of exposure-related information on a fairly large number of chemicals.
- Provides current, more accurate and complete information on a chemical's conditions of use including manufacturing, processing, use, distribution in commerce and recycling.

Benefits of CDR Data

- Inform EPA, other agencies and the public on chemicals manufactured and used in the U.S.
- Enhance transparency and accuracy in EPA prioritization, assessments and regulatory development.
- Provide EPA information on industry trends for measuring success of a regulatory or voluntary program.

Uses of CDR Data

- OPPT
  - Chemical prioritization
  - Risk evaluation
  - OECD ESD / Generic Scenario Development
  - Insight on production volume trends of chemicals
- Other EPA Offices (e.g. ORD, OECA, and OW)
  - Life-cycle assessments
  - Standardized emission evaluations
  - Chemical and industry sector prioritization
  - Industry characterization

OPPT Uses of CDR Data – Prioritization of Chemicals

- OPPT prioritizes chemicals for risk evaluation
- Prioritization process shall consider "the hazard and exposure potential of a chemical substance or a category of chemical substances (including consideration of persistence and bioaccumulation, potentially exposed or susceptible subpopulation and storage near significant sources of drinking water), the conditions of use of the chemical substance, and the volume or significant changes in the volume of the chemical substance manufactured or processed."
- CDR data are used in the prioritization process to address the exposure potential, potentially exposed or susceptible subpopulation, the conditions of use and the volume or significant changes in the volume

OPPT Uses of CDR Data – Risk Evaluation

- OPPT conducts risk evaluation to determine whether a priority chemical presents an unreasonable risk of injury to health or the environment
- CDR data are used in risk evaluation (including scope development and exposure assessment) to:
  - aid in characterizing the life cycle and conceptual model of the chemical (from manufacture, processing, use, and recycling activities)
  - identify existing conditions of use based on industrial processing and use scenarios as well as commercial and consumer products
  - identify potentially exposed or susceptible subpopulations (e.g. number of workers, use in children's products)
  - develop release and exposure scenarios for each conditions of use
  - estimate releases and exposures associated with conditions of use

OPPT Uses of CDR Data – OECD Emission Scenario Document (ESD) / Generic Scenario Development

- OPPT develops OECD ESDs and industry-specific generic scenarios for use in developing occupational exposure and environmental release estimates of chemicals for specific use scenarios.

- CDR data are used in generic scenario / ESD development to:
  - identify types of chemicals commonly used and their functions in the industry of interest.
  - estimate number of potentially exposed workers per site.
  - develop estimates of exposure levels and releases

Other Agency Uses of CDR Data

- ORD uses CDR data in the development of life-cycle inventories (LCIs) to:
  - aid in characterizing the life cycle of the chemical.
  - develop standardized emission/release estimates (i.e., per 1 kg chemical) during chemical production.
- OW uses CDR data in the development of effluent guidelines to:
  - identify facilities in industry sectors of interest for development of new effluent guidelines.
  - identify chemicals of interest and their associated processing and use activities (part of Annual Effluent Guideline Review Reports).
- OECA uses CDR data to:
  - analyze chemical manufacturing production volume trends over time and correlate production with facility discharges to evaluate potential noncompliance and define compliance assistance efforts.

Inorganic Byproducts Reporting

- The amended TSCA requires EPA to "systematically prioritize and assess existing chemical substances"
- The statute defines "a chemical substance to mean any organic or inorganic of a molecular identity"
- CDR information for the recycling, reprocessing or reuse of these chemicals can help in evaluating the extent of chemical use on-site and off-site and aid in chemical prioritization and risk evaluation efforts

CDR Data Used to Assess Inorganic Byproducts that are Recycled, Reprocessed, or Reused

- Chemical Identity
- Manufacturing, Import, and Export Activities
- Recycling Activities
- Industrial processing and use activities
- Exposure-related information
- Use in Consumer and Commercial Products