Southeast Industrial Byproducts Beneficial Use Summit

November 2003

The Midwest Industrial Byproducts Beneficial Use Summit was held in Chicago in 2002. Participants at the Midwest Summit identified a detailed list of challenges to the increased beneficial use of non-hazardous industrial byproducts. The following categories of challenges were the focus of the Southeast Industrial Byproducts Beneficial Use Summit held in Atlanta in 2003:

Information - Outreach, education, promotion and networking among partners (states, industry, academia, markets, end-users)

Agency Commitment – Coordination among and within agencies, resources and priority for reviews, approvals and projects

Industry Commitment – Priority, resources, liability, need for incentives and economic considerations

Regulatory Uniformity – Common definitions, standards, protocols and guidance

Markets – Acceptance in end use applications (standards, technical and economic considerations)

On the 2nd day of the Southeast Summit, industry representatives and regulatory officials discussed these challenges separately in breakout groups. The groups shared perspectives and brainstormed ideas to address the challenges, and eventually reconvened at the conclusion of the event to share the outcome of their respective discussions. The following is a combined listing of project ideas and recommendations developed by the participants. Note that the group did not discuss the merits of each idea. The objective was to generate numerous ideas that can be elaborated upon, evaluated and prioritized at a later date.

1. INFORMATION

Industry Ideas:

- Establish a database of environmental impacts (include damage cases), risk assessments conducted, and benefits of various byproducts
- Develop web-based compendium of uses/applications. Include

available & accepted test methods, case studies, success stories, links to relevant sites/organizations, state contacts/rules/processes, etc.
- Develop list of generators and end users by geographic region to aid exchanges (interface w/ GIS)
- Generate technical/promotional information comparing benefits of byproducts to virgin materials
- Develop protocol for evaluating benefits of byproduct vs. virgin material use (life cycle analysis)
- Identify need and establish demonstration projects in cooperation with states where information lacking - use existing non-regulatory assistance organizations that regulators trust

Agency Ideas:
- Establish web-based forum to share information on development (rules/guidance promulgation) and implementation of programs among states - include contacts in each state (waste, risk, water, air)
- Conduct risk assessments on various byproducts in different scenarios with federal agencies, universities (e.g., USDA's ARS, EPA's SBIR) - define risk in comparative terms to commonly used materials or practices
- Identify ongoing research projects, share protocols and seek wide input when developing to answer as many questions/concerns in as many possible states
- Establish workgroups or partnerships at regional level to support coordination among states and industry on specific commodities
- Acknowledge that allowances for beneficial use does not necessarily mean there is no risk, and though it is an advantage to industry, agencies are responsible to public concerns about health & environment and why it is allowed instead of management at approved landfills
- Realize that the prejudice among public against 'industrial' byproducts is a real barrier
- Document case studies where projects took advantage of existing flexibilities in laws or regulations and did not need a beneficial use determination (BUD)
- Address citizen perceptions by comparing beneficial use practices to landfilling or incineration - articulate benefits for society and environmental protection
- Clarify that TCLP and SPLP are meant to replicate worst case scenarios in the landfill environment, and do not best classify material as appropriate for beneficial use
- Create addendum to EPA's Industrial Waste Guidance

specifically pertaining to beneficial use
- Quantify energy and resource savings with applications
- Utilize University of Florida report 'State of the Science on Land Applied Constituents in Soil' and 'Fate of Constituents in Soil and Water'
- Study impact of new pollution control technologies on byproduct quality (e.g., increases in contaminants such as residual carbon and ammonia)

2. AGENCY COMMITMENT

Industry Ideas:
- USEPA-specific recommended actions:
  - Set national goals for byproduct use with annual targets
  - Dedicate staff and extramural resources to reach established goals
  - Continue to develop information and stress resource conservation aspects of RCRA
  - Negotiate specific targets (amounts, dates) and develop accountability methods in state RCRA implementation plans to increase beneficial use
  - Use Performance Track to work with states to obtain true compliance assistance
  - Provide technical support to states to increase comfort level and adopt or develop programs encouraging beneficial use
  - Develop guideline documents to help states understand how to exempt material from regulation and allow reuse (i.e., material not regulated as solid waste when beneficially used)
  - Benchmark key activities necessary for approvals to standardize state approval processes
  - Complete favorable RCRA D determination for CCP use in mining applications
  - Enforce Comprehensive Procurement Guidelines (CPG) in Section 6002 of RCRA and add more industrial byproducts based products to the listing - address insurance, liability and legal issues in CPG determination
  - Devise a consistent communication strategy for all secondary materials across regulatory/non-regulatory programs
- Take informational site tours (consider providing indemnity from enforcement during tour) - develop agreements which allow frank discussions
- Acknowledge definition of useful product, regardless of

financial value, codify designation as product
- P2 personnel conduct interagency outreach & educate enforcement staff (state & EPA)
- Submit comments on amendments to RCRA solid waste definition, include useful product definition
- Provide information and consultation on how to navigate regulatory process
- Use precedent of state Brownfield liability memorandums of understanding (MOU) as a model to address beneficial use liability concerns
- Certify or register generators and users, include financial assurance (e.g., Georgia's P2AD partnership, includes incentives to participate)
- Establish rules or procedures for beneficial use determinations with clear requests for information and criteria for applications, sites, etc.
- Use uniform criteria for project decisions and consider allowing prior approvals as precedent
- Issue self-implementing resource recovery permits tied to actual supply/distribution contracts for material
- Adopt 'Statement of Principles' established by Beneficial Use Summit participants
- Encourage reciprocity between states on determinations, permits, etc.
- Accept/negotiate increase beneficial use in exchange for additional regulatory flexibility
- Provide recognition for parties involved in exemplary projects

Agency Ideas:
- Develop simplified matrix on the regulatory process to help make decisions and work with industry
- Clearly define what is needed from industry in order to make approvals for a particular byproduct in a given application (e.g., Indiana - foundry sand)
- Develop site specific guidance for byproduct application (e.g., GA - Wood ash policy, SC – structural fill)
- Provide training on use of EPA 'Industrial Waste Guidance' in land application mode
- Obtain industry input and meet during rule development to get consensus
- Take proactive steps to avoid approval delays by streamlining review process and coordinating various review stages, parties
- Involve biologist and ecologists to provide assistance in

BUD

- Provide assurance that data and process information is protected as confidential business information
- Current funding for state landfill permit program comes in $/ton disposed, need to change to $/ton beneficially used to support BUD program (generation, application or loading fee)
- Establish an assistance program for state environmental agencies to assist state procurement agencies (e.g., DOT) in addressing issues/concerns

3. INDUSTRY COMMITMENT

Industry Ideas:

- Adopt 'Statement of Principles' developed by Beneficial Use Summit participants
- Find ways to increase Agency comfort level
  - Establish financial certainty backing (bonding, insurance, other financial assurance) which outlives bankruptcy to cover future remediation
  - Conduct risk assessment for byproduct applications
- Develop internal or model business case guidelines/metrics
- Establish and comply with internal audit guidelines or Environmental Management System
- Keep company web site information current
- Trade associations provide trained advisors to membership on Environmental Management Systems and ISO 14000
- Participate in pollution prevention organizations/efforts and promote environmental stewardship
- Provide process information/education for agency staff (e.g., tours, seminars, etc.) and access to operation
- Host optional plant tour at next Summit
- Consider tying fees to agencies to expedite review/approval as incentive
- Support university research efforts relevant to reuse (e.g., internships, coop programs, etc.)
- Create forums to increase and support coordination among trade associations on common issues
- Develop business practices which change image from waste to product (i.e., branding)
- Consult social scientists (i.e., psychologist, marketing firms) on best outreach to stakeholders and marketing
- Consider use of mediation to resolve impasse and develop consensus
- Industry as group to collectively challenge unfair

regulatory decisions
- Industry with no interest in that state assist as an objective third party to mediate during regulation development processes
- Develop model legislation and lobby at state and federal level to provide transportation tax credit to offset transportation related taxes
- Form technical advisory group available to both industry and agencies
- Reduce risk issues via adequacy assessment and potential use of liability insurance

Agency Ideas:
- Follow through on providing quality information to agencies - consolidate and simplify information provided
- Clearly define chemical and physical properties (e.g., binder properties) of byproducts as well as actual/proposed volumes
- Develop and provide quality data using defined QA/QC procedures, documenting methods and validating data
- Need credible markets (or marketing plan) for byproducts and proof of marketability - if market fails to develop or falls through, dispose of stockpile
- Involve agencies in research prior to using results
- Recognize that regulators are not always sure what information is needed for review and approval and may request new/additional information
- Understand that different offices in agency may give differing opinions
- Support agencies by promoting legislation and supporting the promulgation of rules and guidance on beneficial use
- Participate in agency workgroups established to develop rules, regulations and implementation guidance - provide information, data and comments
- Agree to transparency for information justifying flexibility
- Enroll in voluntary partnership programs to prove environmental results and provide transparency

4. REGULATORY UNIFORMITY

Industry Ideas:
- Provide comments on EPA 'definition of solid waste' rule
- Use appropriate/consistent terms (beneficial use vs. reuse, recycle)

  - Subtitle C vs. D definition of solid waste
  - Define land application, and avoid 'use constituting disposal'
- Industry and agencies establish consensus protocols and standards
  - Identify and utilize ASTM standards for reference in regulations
  - Develop new ASTM standards (i.e., structural fill, manufactured soils, compost)
  - Consider utilizing Institute for Scrap Recycling Industries (ISRI has 350-400 existing specs)
  - Develop a guide for appropriate leach test(s)
  - Provide input to existing EPA leaching workgroup
- Develop reciprocity programs between states on BUDs (i.e., Technology Acceptance Reciprocity Partnership (TARP) program in northeast)
- Establish workgroup (i.e., through ASTSWMO or ECOS) on promoting uniformity among states
- Establish general permits for pre-approved beneficial use
- Look at other regulations that allow uses of other products, seek equivalency for byproducts
- Adopt a national 'Soils Act' for land application
- Establish sampling criteria, test methods and detection limits
- Define currently available risk assessment tools and test methods
  - Fill in gaps by developing affordable and practical risk assessment methodology
  - Establish risk-based criteria for accepting uses
  - Develop categories (matrix) of applications since risk assessment and data needs vary by application/exposure
- Standardized interpretation of rules among EPA Regions

Agency Ideas:

- Provide clear criteria for defining materials, end uses (e.g., structural fill) and uniformity - realize that 'regulatory uniformity' is only possible when dealing with 'byproduct uniformity,' which is difficult at many facilities
- Document and seek state Attorney General opinions on definitions as well as determinations relating to processing
- Seek and support legislation to address definition issue
- Take advantage of existing regulatory flexibility instead of creating new program

- Develop national guidance (i.e., green book on coal combustion byproducts)
- Evaluate and consider using comparable strategies from national hazardous waste or biosolids (503) program
- Consider US Composting Council manual for testing composts, uses and markets for land applied organic byproducts
- Define residential vs. industrial screening limits which incorporate health, biota, groundwater, loading and background data

5. MARKETS

Industry Ideas:

- Provide end users with viable financial guarantees for performance, potential impacts, business interruption, etc.
- Financial inducements to contractors, end users (tax incentives)
- Assistance for expansion into new markets, cost sharing for items of mutual interest
- Government subsidies/incentives for transportation
- Promote reuse at end user associations and forums
- Apply surcharge at landfill on reusable byproduct
- Establish a marketing strategy to promote reuse
- Mandate use of byproducts (require use of existing procurement guidelines)
  - Apply penalties for failure to adhere to guidelines
- Preference for companies with EMS and track record of successful use of byproduct
- Life-cycle costs of landfill/disposal vs. reuse
- Develop marketing strategy (marketing 101 courses)
- Invite end users to future byproduct Summits

Agency Ideas:

- Provide data to evaluate risk associated to end use
  - Use comparative risk to naturally occurring materials or other method of disposal/use option
- Apply regulatory flexibility to demonstrations on a pilot basis and evaluate implementation case by case
- Document cases where perceived liabilities among generators or end users impeded use to gain a better understanding of issues
- Increase procurement within government construction
- Incorporate use of industrial byproducts into LEED

certification system
- Look at soil manufacturing process and market for blending organic and inorganic byproducts
- Realize that many states are not concerned with marketing issue as this is not part of mission = waste management

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