Department of Toxic Substances Control

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Community Protection and Hazardous Waste Reduction Initiative
Pilot Project Proposal Form

Instructions

This form contains fillable fields. Mouseover each field for additional instructions. Not all fields need to be completed for submission, and general responses are acceptable if more specific responses have not been developed.

1.0 Pilot Project Summary

Identify the primary components of this pilot project.

Waste Stream:	Asbestos - Friable, new waste generation and legacy waste
Industry:	Construction, building renovation, asbestos contractors, building management
Geography:	Statewide (Azusa Land Reclamation), US, International
Stakeholders:	Asbestos Product Manufacturers; Waste Management (WMSolutions); City of Azusa: EJ c
Government:	CalEPA; DTSC; EPA; Air Boards; Water Boards; CalRecycle

2.0 Pilot Project Details

Describe this pilot project and how it fits with the overall goals and objectives of the CPHWR Initiative. Characterize the waste(s) to be reduced and the implications.

PILOT PROJECT FOR THERMOCHEMICAL CONVERSION OF ASBESTOS AT AZUSA LAND RECLAMATION SITE; AND THE LISTING OF ALL CURRENT ASBESTOS PRODUCTS AS PRIORITY PRODUCTS UNDER THE CALIFORNIA SAFER CONSUMER PRODUCTS LAW.

In 2014, 89.8 tons of asbestos containing waste, the fifth largest category of hazardous wastes, was generated in California; asbestos is also the fourth largest category of hazardous wastes disposed in California (62.6 tons); the seventh largest category of hazardous waste disposed out-of-state (27.8 tons); and the least recycled category of hazardous waste (1 ton) (2). Among the top 23 categories of hazardous waste streams monitored by the California Department of Toxic Substances Control, asbestos containing waste is the most specific in terms of material composition and association with a very specific preventable disease, namely, mesothelioma. In its 2013 consumer's guide to asbestos, the California Department of Consumer Affairs acknowledged that every building contains some form of asbestos (3).

The U.S. is one of few developed countries where asbestos is not completely banned, due to failed federal regulation. Asbestos-containing products no longer subject to the 1989 Toxic Substances Control Act ban include: asbestos-cement sheets, shingles, and pipes, asbestos clothing, roofing felt, vinyl-asbestos floor tile, millboard, automatic transmission components, clutch facings, disc brake pads, drum brake linings, brake blocks, gaskets, non-roofing coatings, and roof coatings (4). Discovery of safer alternative materials for these products and working with policy makers and industries to ensure the adoption of the alternatives is needed to

3.0 Pilot Project Characteristics

Identify any applicable characteristics of this pilot project.

[✔] Source reduction or elimination
[✔] Provides a permanent solution

[✔] Long term reductions
[✔] Replicable

[✔] Decreases high volume waste
[✔] Decreases toxicity of waste

[✔] Economically beneficial
[ ] Stakeholders willing to participate

[✔] Minimizes or avoids disposal
[✔] Avoids media shifting

[ ] Short term reductions
[✔] Scalable

[✔] Decreases high toxicity waste
[✔] Reduces waste treatment impacts

[ ] Represents a viable alternative
[✔] Benefits EJ community

[ ] Other:

Describe how this pilot project addresses the characteristics identified above.

There are two aspects of the pilot project on asbestos:

1. Working with the Safer Consumer Products Law to eliminate all forms of asbestos in products manufactured and/or sold in California. This will serve as source reduction and elimination, and provides a permanent solution to the asbestos crisis. It avoids disposal, and potentially economically beneficial by stimulating inventors and industry to find safer alternatives. It will also benefit workers who are now the most likely to develop mesothelioma due to exposure to asbestos-containing products.

2. Installing a pilot thermochemical conversion equipment to destroy friable asbestos at the Azusa land reclamation facility, which is surrounded by predominantly Latino population. Asbestos can be recycled by transforming it into harmless silicate glass. A process of thermal decomposition at 1000–1250 °C produces a mixture of non-hazardous silicate phases, and at temperatures above 1250 °C it produces silicate glass. This will reduce the long-term risks associated with land-filling asbestos in a location with less than 30 years life expectancy. The pilot project will reduce the waste treatment impacts, decreases toxicity of waste, benefits the environmental justice community, avoids media shifting, and potentially economically beneficial.

3. This pilot will help determine scalability for other legacy disposal sites in CA and the viability of this treatment method (energy costs likely to be high, thus heat recovery should be maximized, renewable energy should be considered). For the new generation of asbestos waste, consideration should given to develop a transportable unit that could go to sites to treat the waste vs shipping off to landfills elsewhere in the state only to affect other communities. Could a product me manufactured from this glass to help the economic impact?

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4.0 Pilot Project Considerations

Identify resources, tools and/or experts which can be used to gather information in support of this pilot project.

1. DTSC Staff implementing the Safer Consumer Products Law.
2. Waste Management (WMSolutions) - Azusa: https://www.wmsolutions.com/locations/details/id/181. 1211 W. Gladstone, Azusa, CA 91702

Identify other agencies that may have jurisdiction where this pilot project will be implemented.

The City of Azusa - http://www.ci.azusa.ca.us
Other agencies- CA Air Board, DTSC, EPA, Calrecycle, Azusa FD

Identify areas of potential competing considerations and objectives (including technical, legal, environmental, social, and economic factors).

Asbestos Lobbying Groups:
1. International Chrysotile Association - http://www.chrysotileassociation.com/en/
2. Asbestos Cement Products Manufacturers Association (ACPMA) - http://acpma.in/acp/

Discuss other possible benefits in addition to decreasing the volume and toxicity of hazardous waste.

California will set the global pace for eradication of mesothelioma through the complete elimination of asbestos exposure in its population. The invention of safer alternatives will create an economic opportunity in California.

What are other key items to consider in completing this pilot project?

California currently ships asbestos waste to other states for disposal. This implies that we have exceeded the capacity of the state to accommodate the waste generated here, and we are paying to contaminate "other people's" environments with little or no control over hazardous exposures. We recycle only 1% of asbestos waste. The pilot project will demonstrate that we can increase this level of recycling while removing exposure

Identify the various approaches to implementing this pilot project.

Including all products containing asbestos as Priority under the Safer Consumer Products Law is an established, but potentially lengthy process. The pilot phase will include soliciting information on alternative materials and conducting a preliminary life cycle assessment.

The companies that hold the patent on asbestos thermochemical treatment are primarily in Europe. There may be logistic issues involved, but it will be important to secure the cooperation of Waste Management "WMSolutions" that operates the Azusa site, and potentially, co-investment of funding with the State of California.

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