



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
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Calexico Hazardous Material Commodity Flow Study Fact Sheet

Chemical Emergency Prevention and Preparedness Office
US EPA Region 9, San Francisco, California

In February 2001, the United States Environmental Protection Agency, Region 9, issued the final report on a hazardous material commodity flow study of the Calexico, California area. A commodity flow study is an analysis of the goods that are moving through a particular area. In March, the study was presented to the CA Border Emergency Planning and Response Task Force and at a special session of the Calexico City Council. The study describes the identity and quantity of hazardous materials traveling through Calexico, and provides recommendations for reducing risks that these materials pose to the community. The study identifies the nature, quantities and routes of hazardous substances transported in or near Calexico, including exports to and imports from Mexico.

Purpose of the study. USEPA conducted this study to create a useful reference document for hazardous material emergency planning, prevention and response efforts at the US/Mexico border. A better understanding of the chemical safety risks posed by transportation in Calexico will enable federal, state and local officials to make more informed decisions on the allocation of resources and the management of hazardous substances in the community.

The cities of Calexico, California, and Mexicali, Baja California, are one of the six Sister City pairs designated for contingency planning and emergency response assistance under USEPA Region 9's US/Mexico Program.

Data sources. Commodities are tracked as imports and exports through two federal agencies, U.S. Customs Service (imports) and U.S. Bureau of Census (exports). Import and export information is available by type of commodity, mode of transportation, port of entry/exit, volume, shipment weight, and value.

Traffic data included daily truck counts at key local intersections provided by the California Department of Transportation. The study also considered data from the U.S. Department of Transportation, Bureau of Transportation Statistics. Geographic and environmental data came from city publications, a visit to the city by study personnel, and interviews with local authorities.

Key results. Tables 1-4 below show the annual number of trucks and railcars carrying hazardous materials through Calexico, divided between imports and exports. Hazardous material exports through Calexico are significantly more numerous than hazardous material imports, measured by the number of trucks. This is because exports are often raw materials or partial products intended for the maquiladoras or production plants, in Mexicali. Finished goods returning to the US dominate imports. Finished goods are less likely to be hazardous than the raw materials used in production.

Exports may pose a greater risk to the Calexico area than imports for other reasons. Materials to be exported tend to remain in the region longer than imports. Imports cross the border and proceed immediately either north on State Route 111 (SR-111) or east/west on Interstate 8 (I-8) to their final destination, simply passing through Calexico and Imperial County. In contrast, exports often remain in Calexico warehouses or parking lots for consolidation or export clearance. This extended time in the region increases the risk of an incident occurring locally.

The traffic network in the region was analyzed in order to identify problem areas or hot spots. Three areas were identified as most critical: (1) the high levels of truck traffic on Cole Road and State Route 98 (SR-98) between the City of Calexico and the Calexico-East border crossing, (2) warehouses and truck transfer stations, and (3) the railcars waiting to cross the downtown border on the Union Pacific tracks between 4th and 7th Streets. The truck transfer stations are often unregulated surface lots in which trucks destined for the border wait to receive a customs clearance or a new cab and driver for the continued trip into Mexico. Many of these lots are located around Cole Road in the northern part of Calexico. Trucks from these lots travel through densely populated areas on their way to the border at Calexico-East. Idle railcars have been involved in hazardous incidents, such as tank cars loaded with liquid natural gas (LNG), which have vented gas because of the increase in temperature of the cargo while exposed to the desert heat.

Possible actions. Many communities have improved the safety of their residents by placing restrictions on truck traffic carrying hazardous materials, and by enacting zoning measures to prevent the storage and shipment of hazardous materials in sensitive or high risk areas. The City of Calexico has a number of options to affect the current movement of hazardous materials through residential areas in the city. Examples of such measures for possible consideration might include the following:

- *Restrict truck traffic* from using East Birch Street (SR-98) east of Imperial Avenue (SR-111) and west of the intersection with Cole Road (upon completion of construction on Cole Road). This will divert truck traffic away from a densely populated area and high school.
- *Encourage warehouses and truck transfer stations to move closer to the Calexico-East border crossing* to minimize truck traffic within the city.

- *Reassess the location of hazardous incident response resources within the county. A hazardous material incident that might occur at the border points of entry in Calexico poses a higher risk to the greatest number of people than anywhere else in the county.*
- *Complete SR-7 between SR-98 and I-8. Completion of this road would improve the feasibility of the other measures suggested for consideration.*

Table 1 - Truck Imports by Commodity Description in Calexico for 1998 and 1999		
Description	1998 Annual # of Trucks	1999 Annual # of Trucks
Scouring preparations	666	561
Miscellaneous chemicals	201	52
Albuminoidal substances	67	76
Organic chemicals	33	28
Mineral fuels and oils	9	31
Photographic goods	2	1
Fertilizer	2	9
Paints	1	2
Perfumery	1	1
Inorganic chemicals	0	1
TOTALS	981	763

Table 2 - Rail Imports by Commodity Description in Calexico for 1998 and 1999		
Description	1998 Annual # of Railcars	1999 Annual # of Railcars
Mineral fuels and oils	43	53
Miscellaneous chemicals	26	0
TOTALS	68	53

Table 3 - Truck Exports by Commodity Description in Calexico for 1998 and 1999		
Description	1998 Annual # of Trucks	1999 Annual # of Trucks
Gas, natural and manufactured	2,904	1,891
Petroleum and petroleum products	1,850	1,675
Plastics in primary forms	697	900
Inorganic chemicals	406	718
Fertilizers	568	575
Chemical materials and products	232	270
Dyeing, tanning and coloring materials	102	111
Polishing and cleansing preparations	39	13
Organic chemicals	27	16
Coal, coke and briquettes	4	2
TOTALS	6,831	6,170

Table 4 - Rail Exports by Commodity Description in Calexico for 1998 and 1999		
Description	1998 Annual # of Railcars	1999 Annual # of Railcars
Gas, natural and manufactured	773	480
TOTALS	773	480

For more information about chemical safety and US EPA's US/Mexico Border Program, please consult the following:

- <http://www.epa.gov/usmexicoborder/ef.htm>
- <http://www.epa.gov/swercepp/ip-bopr.htm#mexico>
- USEPA Region 9 San Diego Border Office: Tel 619.235.4765
- USEPA Region 9 Chemical Emergency Prevention & Preparedness Office:
Tel 415.744.2405