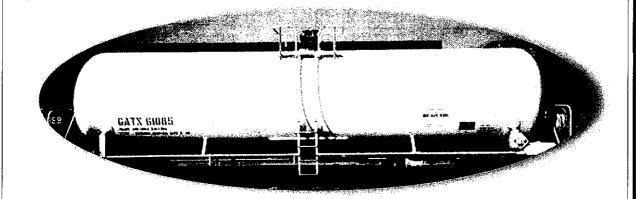
ILLINDIS COMMERCE COMMISSION



2001 ANNUAL REPORT ON ACCIDENTS/INCIDENTS

Involving Hazardous Materials on Railroads in Illinois

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STATE OF ILLINOIS



ILLINOIS COMMERCE COMMISSION

June 28, 2002

The Honorable George H. Ryan Governor, State of Illinois

The Honorable James "Pate" Philip President of the Senate

The Honorable Emil Jones, Jr. Minority Leader of the Senate

The Honorable Michael J. Madigan Speaker of the House

The Honorable Lee A. Daniels Minority Leader of the House

Re: 2001 ICC Hazardous Materials Report

Dear Governor Ryan and Members of the Legislative Leadership:

The attached report by the staff of the Illinois Commerce Commission is hereby submitted to the General Assembly in response to 625 Illinois Compiled Statutes, 18c-1204. Section 18c-1204 directs the Commission to "prepare and distribute to the General Assembly... a report on railway accidents in Illinois which involve hazardous materials."

As required by Illinois law, this report includes the location, substance involved, amounts involved, and the suspected reason for each accident, which occurred in Illinois during calendar year 2001. The report also provides the rail line and point of origin of the hazardous material involved in each accident.

Additionally, the report contains the following related information:

 Details regarding events where hazardous material was involved but no release occurred:

- An overview of ICC activities relative to the transportation of hazardous materials by rail within the State; and,
- A history of the railroad hazardous materials program.

Should you have questions or need clarification about any of the information presented, please contact Margaret Barnabee, Director of Governmental Affairs, at 217/785-2449.

Sincerely,

Subsal of Mathies

Richard L. Mathias

Chairman

ILLINOIS COMMERCE COMMISSION'S 2001 ANNUAL REPORT ON ACCIDENTS/INCIDENTS INVOLVING HAZARDOUS MATERIALS ON RAILROADS IN ILLINOIS

Prepared by: Transportation Division Railroad Safety Section

Illinois Commerce Commission 527 East Capitol Avenue Springfield, Illinois 62701

FORWARD

The following report by the staff of the Illinois Commerce Commission was prepared in accordance with the provisions of 625 ILCS 5/18c-1204, which directs the Commission to "prepare and distribute to the General Assembly... a report on railway accidents in Illinois which involve hazardous materials." The law also provides that the report shall include the location, substance involved, amounts involved, and the suspected reason for each accident, as well as the rail line and point or origin of the hazardous material involved in each accident."

Additionally, the report contains the following related information:

- Details regarding events where hazardous material was involved but no release occurred; and
- An overview of ICC activities relative to the transportation of hazardous materials by rail within the State; and,

Inspections	1
Railroad Equipment	
Roll-By	2
Documentation	2
Shipping Facilities	2
TECHNICAL ASSISTANCE	2
ESCORT OF NUCLEAR MATERIAL	
EDUCATION	
COMMISSION INSPECTION PROGRAM AND PERSONNEL	3
DATA REGARDING ACCIDENTS DURING 2001 REQUIRED BY LAW	4
ΓABLE A	6
TABLE B	7
TABLE C	9
I ABLE C	

BACKGROUND

Illinois is a key hub in the nation's transportation system. With nearly 8,000 miles of railroad track, Illinois' rail system is the country's second largest, with the Chicago and East St. Louis terminals being two of the country's busiest. Approximately three million tons of hazardous materials move by rail through Illinois each year, or about 10 percent of the total Illinois freight traffic.

There are approximately 3,500 materials classified as hazardous by the U. S. Department of Transportation ranging from mild irritants to poisonous and radioactive materials. The Association of American Railroads' Bureau of Explosives has identified approximately 125 hazardous materials which comprise 88 percent of railroad hazardous materials shipments (see Attachment 6 for a listing of hazardous materials commonly transported by rail in the United States and the hazard class of that commodity). Shipments range from packages as small as pint containers within trailers on flat cars to tank cars holding as much as 42,000 gallons.

In 2001, 16,523 hazardous materials rail cars were inspected in Illinois, up from 15,102 in 1999. Violations of hazardous materials regulations found by Commission inspectors decreased from 12 percent in 1981 to 5.1 percent in 2001. This reduction is due in large part to Commission initiated conferences with rail carriers and shippers to apprise them of the complex and evolving regulations and ICC follow-up inspections to assure compliance.

HAZARDOUS MATERIALS INSPECTION ACTIVITIES

The Commission's hazardous materials inspection program has four main components: (1) inspection, (2) technical assistance, (3) escort of nuclear materials, and (4) education.

Inspections

The four categories of inspections are as follows:

Railroad Equipment

Hazardous materials equipment inspections are performed on a stationary hazardous material rail car, normally in a railroad yard or on a shipping facility's loading and unloading tracks. This inspection ensures the cars are affixed with the proper placards identifying the hazardous material on board (see Attachment 1 for examples of

placards and information they provide, particularly to emergency response personnel). Inspectors also check the car's marking, stenciling, tank and valve test dates, and mechanical safety features.

Roll-By

A roll-by inspection involves monitoring an entire train while in motion. The location of loaded hazardous materials cars, as well as those which have been unloaded but still contain a residue of a hazardous material, is observed in relation to engines, occupied cabooses, other hazardous materials cars, and certain other types of cargo cars. If cars are improperly placed in the train, Commission inspectors stop the train and order proper placement.

Documentation

Documentation inspections involve checking for the proper preparation of shipping documents, including waybills and bills of lading, and are conducted at rail freight offices and private shipping facilities. A bill of lading is a document listing goods for shipment (see Attachment 5 for a typical bill of lading). A twenty-four hour emergency response telephone number must be on the bill of lading following the description of the hazardous material or on the waybill in a clearly visible location. Inspectors check for the proper shipping name, hazard class, 4-digit identification number, and weight. Hazardous materials regulations require all of the above. This is critical in the event of a mishap involving hazardous materials cars. Emergency response personnel can then get necessary and accurate information from the waybill to prepare an appropriate response to the incident.

Shipping Facilities

Shipping facilities inspections are conducted at privately owned facilities. The purpose of these inspections is to ensure that loading and unloading operations are being safely performed, and that all hazardous materials regulations have been met prior to such cars being released to rail carriers for shipment.

Inspectors also meet with shippers to discuss the regulations and check bills of lading. Inspectors met with 14 major shippers in 2001.

Technical Assistance

Commission inspectors respond to rail related collisions/incidents involving

hazardous materials. The Commission's role is to provide technical assistance to the emergency response personnel. Inspectors provide assistance by determining whether the product information provided by the rail carrier or shipper to the emergency response personnel is proper and adequate, by advising as to spill mitigation and clean-up techniques, by assisting in the identification of the cause of the event, and by checking for violations of hazardous materials regulations. Commission inspectors are available to respond to railroad hazardous materials incidents at any time of the day or night.

Escort Of Nuclear Material

The movement of nuclear material, in or through the state of Illinois by rail, occurs with minimal frequency. However, as spent nuclear fuel begins to move to a national repository, more of this type of rail movement is anticipated. The protocol for such movements requires that the train be stopped and inspected before it enters Illinois and that it be escorted it as it moves through the state. Inspection of the track ahead of the train is also required.

Radioactive material is probably the most controversial and misunderstood class of hazardous materials being transported by railroad. Although there has never been a transportation accident during which radioactive material was released, widespread concern remains regarding its safe transportation and thus careful planning and inspection are essential to building and maintaining public confidence.

Education

As provided by statute, Commission inspectors offer training for local enforcement and emergency response agencies. This training is designed to acquaint participants with rail car marking and placarding requirements and emergency response guide books. Another program is presented to fire departments concerning tank car structure and damage assessment. Commission inspectors also make presentations on the interpretation and application of the federal and state hazardous materials regulations to railroad company personnel. Since 1990, seventy presentations on hazardous materials have been made to approximately 1,570 persons affiliated with a variety of emergency planning and response teams.

Commission Inspection Program and Personnel

Under federal law (49 CFR, Part 212) individual states are authorized to participate in the Railroad Hazardous Materials Inspection Program. This program is under the

supervision of the FRA and grants state inspectors the same authority as federal inspectors in safety inspections and investigations, with respect to the transportation of hazardous materials.

The Commission employs two full time personnel trained in hazardous materials inspections. Both inspectors are certified by the Federal Railroad Administration. These employees spend the majority of their work time in the field conducting inspections at various railroad sites and industrial locations. They are also responsible for maintaining inspection data, responding to complaints, and providing information pertaining to hazardous materials movements to various state and federal agencies.

DATA REGARDING ACCIDENTS DURING 2001 REQUIRED BY LAW

Specific information required by 625 Illinois Compiled Statutes 18c-1204 is shown in tabular form on the following pages. The applicable Section states: "The staff shall prepare and distribute to the General Assembly, in April of each year, a report on railway accidents in Illinois which involve hazardous materials. The report shall include the location, substance involved, amounts involved, and the suspected reason for each accident. The report shall also reveal the rail line and point of origin of the hazardous material involved in each accident."

The report is divided into three categories.

Table A shows railroad derailments where hazardous materials were being transported in the derailed railroad equipment and a hazardous material release occurred.

Table B shows railroad derailments where hazardous materials were being transported in the train and railroad equipment derailed, but no hazardous material was released.

Table C shows hazardous material releases from railroad equipment where no derailment occurred.

The location column in Tables A, B, and C indicates the county where the accident/incident occurred and the nearest identifiable location. Information for all three tables was obtained from reports to the Commission from Illinois railroads and from the United States Department of Transportation, Research and Special Programs Administration.

Three categories of information not specifically requested by the General Assembly have been added to make the report more useful. The first category is

"Amount Released". This is important since the category "Amount Involved", cited in the required by statute, could easily be confused with the category of "Amount Released". Amount Involved is the amount of hazardous materials being transported at the time of the incident. Amount Released is the amount which was actually released to the environment. The second added category is the type of railroad equipment involved, and the third category, added to help identify the specific incident, is the date of the incident.

In the tables, railroad companies are designated by their initials. A listing of the complete names of each company follows Table C.

TABLE A

Hazardous Materials Physically Involved In Derailment And Hazardous Materials Release Occurred

	Railroad	Substance	Point of	Suspected Reason	Amounts	Amounts	Type of	
Location	Involved	Involved	Origin	for Incident	Involved	Released	Equip.	Date
Woodland								
Iroquois	NP.	Diesel Fuel	Dolton, IL	Bad ordered cross over switch	8,000 gals.	4,000 gals.	ш	4/12/01
Decatur								
	SN	Denatured Alcohol	Decatur, IL	Gauge spread due to weak	30,143 gals.	< 1 gal.	-	5/27/01
Macon				timbers				
Lorenzo								
	BNSF	Diesel Fuel	Unknown	Human error	3,150 gals.	500 gals.	ш	6/28/01
Will								
East St. Louis								
	GWWR	Hydrochloric Acid	Flemington, NJ	Broken rail	22,916 gals.	300-400 gals.	-	8/6/01
St. Clair								

T = Tank E = Engine CF

CH = Covered Hopper R = Refrigerated Car

I Car COFC = Container on Flat Car

TABLE B

Hazardous Materials Physically Involved In Derailment Where No Hazardous Materials Release Occurred

Location Railroad Involved									
Ine UP Dieset Fuel Dolton, IL Run through switch Unknown None Ine UP Ethyl Benzene Samia, Ont. Bad road crossing Residue None I City TPW Ammonium Nitrate Catoosa, OK Broken track Load None I Louis GWWR Denatured Alcohol Kansas City, KS wide gauge Residue None Incommonium Nitrate Louis Cawyer Kansas City, KS wide gauge Residue None Incomplement GwwwR Liquefled Petroleum Gas Lemont, IL Human error Residue None River GwwwR Liquefled Petroleum Gas Mt. Belview, TX Human error Residue None River GwwwR Liquefled Petroleum Gas Mt. Belview, TX Human error Residue None	Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
e UP Etnyl Benzene Samia, Ont. Bad road crossing Residue None City TPW Ammonium Nitrate Catoosa, OK Broken track Load None City TPW Ammonium Nitrate Lawrence, KS Broken track Load None Louis GWWR Denatured Alcohol Kansas City, KS Wide gauge Residue None Louis GWWR Liquefied Petroleum Gas Lemont, IL Human error Residue None Iver GWWR Liquefied Petroleum Gas Mt. Belview, TX Human error Residue None Iver GWWR Liquefied Petroleum Gas Hutchison, KS Residue None	Dolton Cook	٩n	Diesel Fuel	Dolton, IL	Run through switch	Unknown	None	Е	2/23/01
City TPW Ammonium Nifrate Catoosa, OK Broken track Load None City TPW Ammonium Nitrate Lawrence, KS Broken track Load None Louis GWWR Denatured Alcohol Kansas City, KS Wide gauge Residue None Louis GWWR Liquefied Petroleum Gas Lemont, IL Human error Residue None Ner GWWR Liquefied Petroleum Gas Mt. Belview, TX Human error Residue None Ner GWWR Liquefied Petroleum Gas Hutchison, KS Residue None	Goodwine	a O	Ethyl Benzene	Sarnia, Ont.	Bad road crossing	Residue	None	Τ (2)	2/28/01
City TPW Animonium Nitrate Lawrence, KS Broken track Load None Louis GWWR Denatured Alcohol Kansas City, KS Wide gauge Residue None Louis GWWR Denatured Alcohol Kansas City, KS Wide gauge 192,834 lbs. None Iver GWWR Liquefied Petroleum Gas Lemont, IL Human error Residue None Iver GWWR Liquefied Petroleum Gas Mt. Belview, TX Human error Residue None Iver GWWR Liquefied Petroleum Gas Hutchison, KS Residue None	Cresent City Iroquois	TPW	Ammonium Nitrate	Catoosa, OK	Broken track	Load	None	СН	3/6/01
Louis GWWWR Denatured Alcohol Kansas City, KS Wide gauge Residue Louis GWWR Denatured Alcohol Kansas City, KS Wide gauge 192,834 lbs. Iver GWWWR Liquefied Petroleum Gas Lemont, IL Human error Residue Iver GWWWR Liquefied Petroleum Gas Mt. Belview, TX Human error Residue Iver GWWWR Liquefied Petroleum Gas Hutchison, KS Residue	Cresent City	TPW	Ammonium Nitrate	Lawrence, KS	Broken track	Load	None	CH (2)	3/6/01
Louis GWWR Denatured Alcohol Kansas City, KS Wide gauge 192,834 lbs. ver GWWR Liquefied Petroleum Gas Lemont, IL Human error Residue ver GWWR Liquefied Petroleum Gas Mt. Belview, TX Human error Residue ver GWWR Liquefied Petroleum Gas Hutchison, KS Residue	East St. Louis St. Clair	GWWR	Denatured Alcohol	Kansas City, KS	Wide gauge	Residue	None	F	6/2/01
GWWR Liquefied Petroleum Gas Lemont, IL Human error Residue GWWR Liquefied Petroleum Gas Mt. Belview, TX Human error Residue GWWR Liquefied Petroleum Gas Hutchison, KS Residue	East St. Louis St. Clair	GWWR	Denatured Alcohol	Kansas City, KS	Wide gauge	192,834 lbs.	None	Ŧ	6/2/01
GWWR Liquefied Petroleum Gas Mt. Belview, TX Human error Residue GWWR Liquefied Petroleum Gas Hutchison, KS Residue	Wood River Madison	GWWR	Liquefied Petroleum Gas	Lemont, IL	Human error	Residue	None	Τ	6/27/01
GWWR Liquefied Petroleum Gas Hutchison, KS Residue	Wood River	GWWR	Liquefied Petroleum Gas	Mt. Belview, TX	Human error	Residue	None	L	6/27/01
	Wood River	GWWR	Liquefied Petroleum Gas	Hutchison, KS		Residue	None	F	6/27/01

Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts involved	Amounts Released	Type of Equip.	Date
Madison				Human error				
Cicero	BNSF	Liquefied Petroleum Gas	Samia. Ont		162,000 lbs.	None	F	7/19/01
Cook				illiproper train makeup			•	
Cicero								
	BNSF	Benzene	Corunna, Ont	Improper train makeup	190,400 lbs.	None	H	7/19/01
Cook								
Findlay								
	В	Ethyl Acrylate	Lisle, IL	Spread Rail	Residue	None	-	9/23/01
Shelby								
East St. Louis								
	Ъ	Aliyi Alcohol	Channelview, TX	Inert retarders failed to	167,000 lbs.	None	-	12/16/01
St. Clair				hold the car				

T = Tank TOFC = Trailer on Flat Car

TABLE C

Hazardous Materials Released From Rail Cars Where No Derailment Occurred

Location	Railroad	Substance involved	Point of Origin	Suspected Reason for incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Chicago	UP	Tetrahydrofuran	Channelview, TX	Bad bottom outlet cap gasket	23,640 gals.	1 gal.	H	1/14/01
Cook								
Urbana								
o di come di c	CNIC	Potassium Hydroxide, Solution	Evans City, AL	Two manway bolts not in	16,341 gals.	5 gals.	⊢	1/17/01
Citallipaigil				and a second				
Chicago								
	BNSF	Magnesium Granules, Coated	Los Angeles, CA	Package ripped by improper	1,300 lbs.	20 lbs.	TOFC	1/18/01
Cook				blocking and bracing				
Decatur								
	SN	Denatured Alcohol	Decatur, IL	Manway cover bolts loose and	30,143 gals.	< 1 gal.	F	1/22/01
Macon	,			gasket missing				
Dolton								
	<u>B</u>	Freight All Kinds (FAK)	Chicago, IL	Improper blocking and bracing	Unknown	5 gals.	TOFC	1/22/01
Cook								
Chicago								
	SN	Ethylene, Refrigerated Liquid	Morris, IL	Vapor phase line broke	33,000 gals.	< 10 gals.) —	1/25/01
Cook								
Bement								
	SN	Diesel Fuel	Decatur, IL	Blown fuel injector	4,600 gals.	50 gals.	Ш	1/29/01
Piatt								

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank CH = Covered Hopper

Location	Railroad	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts	Amounts Released	Type of Equip.	Date
East St. Louis St. Clair	UP	Styrene Monomer, Inhibited	Lisle, IL	Bottom outlet flange bolts loose	25,487 gals.	< 1 gal.	Ţ	2/10/01
Urbana	CNIC	Hydrochloric Acid	Geismar, LA	Two of four eye bolts loose	29,709 gals.	Vapor	T	2/14/01
Chicago Cook	dΩ	Diesel Fuel	Chicago, IL	Fuel tank overfilled	Unknown	50 gals.	ш	2/17/01
Galesburg Knox	BNSF	Environmentally Hazardous Substances, Liquid, N.O.S.	Cicero, IL	Safety relief valve component missing	20,381 gals.	3 lbs.	۲	2/19/01
Riverdale Cook	csx	Flammable Liquids, N.O.S.	Dryden, Ont	Four of six manway botts loose	20,747 gals.	1 gal.	⊬	2/28/01
Gumee Lake	UP	Diesel Fuel	Gurnee, IL	Overflowed retension tank	3,000 gals.	20 gals.	Ш	3/10/01
Galesburg Knox	BNSF	Hazardous Waste, Liquid, N.O.S.	Carneys Point, NJ	Bottom outlet cap loose	23,595 gals.	< 4 gals.	-	3/11/01
Chicago Cook	BNSF	Diesel Fuel	Chicago, IL	Vandalism	Unknown	125 gals.	ш	3/12/01
East St. Louis St. Clair	GWWR	Hydrochloric Acid	Unknown	Faulty Valve	Residue	Minimal	μ-	3/21/01

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Location	Railroad	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Chicago								
Cook	SN	Corrosive Liquid, Acidic, Inorganic, N.O.S.	Louisville, KY	Loose bung on top of drum	55 gals.	< 1 gal.	COFC	4/13/01
Chicago								
Cook	SN	Environmentally Hazardous Substances, Solid, N.O.S.	Columbus, OH	Bottom hopper door not closed properly	227,000 lbs.	100 lbs.	퓽	4/13/01
Franklin Park								
	<u>გ</u>	Diesel Fuel	Franklin Park, IL	Improper filling of locomotive	2,500 gals.	100 gals.	ш	4/14/01
Cook								
Нотемоод								
	CNIC	Sulfuric Acid, Spent	Montreal East, QBC	Manway gasket misaligned	175,900 lbs.	1 gal.	-	4/14/01
Cook				and two bolts loose on cover				
Chicago								
Cook	SN	Environmentally Hazardous Substances, Solid, N.O.S.	Hammond, IN	Bottom hopper door not closed properly	200,000 lbs.	500 lbs.	동	4/18/01
Milmine								
	SN	Diesel Fuel	Decatur, IL	Fuel cap came off	4,000 gals.	100 gals.	ш	4/20/01
Piatt								
Chicago								
Cook	NS	Environmentally Hazardous Substances, Solid, N.O.S.	Lemont, IL	Bottom hopper door not closed properly	200,000 lbs.	40 lbs.	წ	4/22/01
North Lake								
	<u>В</u>	1-Chloro-3-Bromopropane	Long Beach, CA	Tank failure	32,000 lbs.	Pint	PT	4/27/01
Cook								
Chicago								
Cook	BNSF	Resin Solution	Chicago, IL	Improper blocking and bracing	55 gals.	5 gals.	COFC	5/7/01

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Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Summit/Argo Cook	CNIC	Butyl Acetates	Kingsport, TN	Loose manway cover bolts	164,386 lbs.	5 gals.	 	5/8/01
Riverdale Cook	CSX	Butanols	Taff, LA	Liquid trapped between valve and cap	30,148 gals.	½ gal.	 - -	5/13/01
Chicago Cook	SN	Tars, Liquid	Chicago, IL	Manway cover gasket missing	42,000 gals.	< 1 gal.	ГР	5/21/01
Beardstown Cass	BNSF	Diesel Fuel	Galesburg, IL	Leaked from top pipe above fuel cutoff	5,000 gals.	< 5 gals.	Ш	6/4/01
Urbana Champaign	CNIC	Hydrochloric Acid	Calvert City, KY	Manway gasket misaligned	20,867 gals.	Vapor	F	6/30/01
Homewood	CNIC	Hydrochloric Acid	Lemont, IL	Sump weld failure	20,521 gals.	< 1 gal.	· -	7/7/01
Joliet	EJE	Corrosive Liquid, Acidic, Organic, N.O.S.	Santa Fe Springs, CA	Rubber lining failure	153,100 lbs.	800 gals.	⊢	7/8/01
Chicago Cook	an An	Resin Solution	Los Angeles, CA	Two drums rubbed hole in one	55 gals.	3 gals.	COFC	7/10/01
Carbondale Jackson	CNIC	Coal Tar Distillates, Flammable	Granite City, IL	Manway boits loose	20,596 gals.	1 gal.	⊢	7/15/01

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Location	Railroad	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts	Amounts Released	Type of Equip.	Date
East St. Louis	B	Flammable Liquid, N.O.S.	Comwall, ONT	Rottom outlet valve defective	147,000 lbs.	Minimal	}- -	7/16/01
St. Clair								
East St. Louis								
	д	Propylene	Saint John, NE	Overloaded	33,998 gals.	Vapor	⊢	7/19/01
St. Clair								
Chicago								
	BNSF	Diesel Fuel	Unknown	Human Failure - Locomotives	2,600 gals.	500 gals.	ш	7/23/01
Cook				side swiped each other				
Cicero								
	CNIC	Isopropanol	Corunna, ONT	Manway bolts loose	24,170 gals.	2 gals.	-	7/25/01
Cook								
Urbana								
	CNIC	Hydrochloric Acid	Geismar, LA	Safety vent disc rupture	190,100 lbs.	1 cup	⊢	7/30/01
Champaign	í							
Decatur								
	CNIC	Anhydrous Ammonía	Decatur, IL	Gauging device leaking	33,913 gals.	Vapor	F	8/11/01
Macon								
Melrose Park								
	UP	Denatured Alcohol	Sutherland, NE	Bottom outlet valve loose	29,947 gals.	40 gals.	-	8/12/01
Cook								
Argo								
	CNIC	Xylenes	Sarnia, ONT	Manway bolts loose	190,570 lbs.	1 gal.	-	8/21/01
Cook								
East St. Louis								
	CSX	Petroleum Distillates, N.O.S.	Roxana, IL	Manway bolts loose	25,785 gals.	1 gal.	F	8/23/01
St. Clair								

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Location	Railroad Involved	Substance Involved	Point of Origin	Suspected Reason for Incident	Amounts	Amounts Released	Type of Equip.	Date
Centralia					•			
Marion	CNIC	Methyl Methacrylate Monomer, Uninhibited	Newark, NJ	Bottom outlet valve not secured	23,341 gals.	< 1 gal.	⊢	8/28/01
Dolton .								
	₽	Fluorosilicic Acid	Green Bay, FL	Safety vent disc rupture	20,689 gals.	Vapor	H	8/29/01
Cook	12					=		
East St. Louis						-		
	В	Cresylic Acid	Houston, TX	Bottom outlet cap loose	23,563 gals.	< 1 gal.	F	9/07/01
St. Clair								
Rockdale								
	csx	Gasoline	Borger, TX	Top operated bottom outlet	30,058 gals.	1 gal.	-	9/10/01
Will				valve not secured				
East St. Louis			"					
-	g D	Butyraldehyde	South Bay City, TX	Liquid valve bolts loose	30,672 gals.	3 gals.	⊢	9/15/01
St. Clair								
Edwardsville								
	SN	Diesel Fuel	Unknown	Bad gasket in crankcase	5,000 gals.	2-3 gals.	ш	9/15/01
Madison	÷			inspection plate				
Proviso								
	<u>B</u>	Oxidizing Solid, N.O.S.	Long Beach, CA	Tote had tear in left side of	2,000 lbs.	5 lbs.	COFC	9/26/01
Cook				bag				
East St. Louis								
	GWWR	Methyl Isobutyl Carbinol	Sauget, IL	Bottom outlet valve bad	23,696 gals.	Approx. 1 gal.	—	9/28/01
St. Clair								
Galesburg								
	BNSF	Alcohols, N.O.S.	Clinton, IA	Bottom outlet cap loose	30,000 gals.	2 gals.	-	9/28/01
NIOX								

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Location	Railroad Involved	Substance involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Decatur Macon	SN	Hydrochloric Acid	Wichita, KS	Fill hole locking bar loose	20,612 gals.	< 1 gal.	 	10/4/01
Urbana	CNIC	Methanol	Montreal, QB	Bottom outlet flange gasket leak	29,865 gals.	1 gal.	 	10/7/01
Stickney	CNIC	Diesel Fuel	Unknown	Overfilled during refueling	4,500 gals.	Est. 50 gals.	ш	10/7/01
Chicago	BNSF	Azodicarbonamide	Los Angeles, CA	Boxes were punctured when dropped	2 – 50 lbs.	6 lbs.	Вох	10/11/01
Chicago	csx	Isopropanol	Gloucester, NJ	Improper loading caused nail holes in four drums	4 – 55 gal. Drums	1 gal.	COFC	10/11/01
Nachusa Lee	dΩ	Diesel Fuel	Unknown	Leaking fuel line	Unknown	126 gals.	ш	10/16/01
Chicago Cook	dΩ	Paint, Flammable, N.O.S.	Sparks, NV	Improper blocking and bracing	20,311 lbs.	% cup	TOFC	10/21/01
Galesburg Knox	BNSF	Corrosive Solid, Flammable, N.O.S.	Quebec, Canada	Improper blocking and bracing	155,800 lbs.	1 lb.	Вох	10/29/01
Riverdale Cook	csx	Hydrogen Peroxide	Theodore, AL	Safety vent disc rupture	19,598 gals.	< 1 gal.	F	11/1/01

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank CH = Covered Hopper

Location	Railroad Involved	Substance involved	Point of Origin	Suspected Reason for Incident	Amounts Involved	Amounts Released	Type of Equip.	Date
Decatur	SN	Propylene	Deer Park, TX	Packing nut loose on gauging device	33,427 gals.	Vapor	1-	11/2/01
Chicago	CNIC	Denatured Alcohol	Argo, 1L	Manway bolts loose	190,375 lbs.	1 gal.	⊢	11/11/01
East St. Louis St. Clair	ď	Toluene	Texas City, TX	Top operated bottom outlet valve and cap loose	29,301 gals.	2 gals.	F	11/21/01
Riverdale Cook	CSX	Anhydrous Ammonia	Metcalf, IL	Angle valve and plugs loose	33,609 gals.	1 lb.	⊢	12/1/01

N.O.S. = Not Otherwise Specified T = Tank E = Engine TOFC = Trailer on Flat Car COFC = Container on Flat Car PT = Portable Tank CH = Covered Hopper

RAILROAD COMPANIES CITED IN THE PRECEDING TABLES

The Burlington Northern and Santa Fe Railway Company **BNSF**

Canadian National/Illinois Central Railroad Company CNIC

Canadian Pacific CP

CR Consolidated Rail Corporation

CSX Transportation, Inc. CSX

Elgin, Joliet & Eastern Railway Co. EJE Gateway Western Railway Company **GWWR**

IAIS Iowa Interstate Railroad, Ltd. Indiana Harbor Belt Railroad Co. IHB

Kankakee, Beaverville and Southern Railroad Company **KBSR**

Norfolk Southern Railway Company NS

Terminal Railroad Association of St. Louis TRRA

Union Pacific Railroad Company UP WC

Wisconsin Central Railroad

LIST OF ATTACHMENTS

Attachment 1: Recognizing and Identifying Hazardous Materials

Attachment 2: Sample Waybill

Attachment 3: Sample Consist

Attachment 4: Emergency Response Information

Attachment 5: Sample Bill of Lading

Attachment 6: Top 125 Hazardous Commodity Movements by Tank Car Origination

PLACARD AND LABEL NOTES

Placards are diamond shaped — 10¾ inches square. The placard provides recognition information in a number of ways:

- the colored background;
- 2. the symbol at the top;
- 3. The United Nations hazard class number at the bottom; and
- 4. the hazard class wording or the identification number in the center.
 - a. Color:
 - orange indicates explosive;
 - red indicates flammable;
 - green indicates nonflammable;
 - yellow indicates oxidizing material;
 - white indicates poisonous material;
 - white with vertical red stripes indicates flammable solid;
 - yellow over white indicates radioactive material; and
 - white over black indicates corrosive material.
 - b. Symbols:
 - the bursting ball symbol indicates explosive;
 - the flame symbol indicates flammable;
 - the slash W (₩) indicates dangerous when wet:
 - the skull and crossbones indicates poisonous material;
 - the circle with the flame indicates oxidizing material;
 - the cylinder indicates nonflammable gas;
 - the propeller indicates radioactive;
 - the test tube/hand/metal symbol indicates corrosive; and
 - the word Empty indicates that the product has been removed, but a harmful residue may still be present.
 - c. United Nations Hazard Class Numbers:
 - 1 Explosives
 - 2 Gases
 - 3 Flammable Liquids
 - 4 Flammable Solids
 - 5 Oxidizing Substances
 - 6 Poisonous and Infectious Substances
 - 7 Radioactive Substances
 - 8 Corrosive Substances
 - 9 Miscellaneous Dangerous Substances
 - d. Hazard Class or Identification Number

Below are some examples of placards.













SAMPLE WAYBILL

Attachment 2 Page 1 of 2

RTMX 21065

T/C

#123456

03 06 01

St. Louis

MO.

1212 St. Louis, MO.

12 S. Street John Doe Inc.

John Doe Inc. Chicago, IL.

1/TC

Residue: Last Contained

Acetone, 3, UN 1090, II, RQ (Acetone)

STCC 4908105

CHEMTREC EMERGENCY CONTACT 1-800-424-9300

SAMPLE WAYBILL

Attachment 2 Page 2 of 2

GAPX 6075

T/C

#123457

03 06 01

St. Louis

MO.

1212 St. Louis, MO.

12 S. Street John Doe Inc.

John Doe Inc. Chicago, IL.

1/TC

Phenol, Molten, 6.1, UN 2312, II,RQ (Phenol)

20,000 GAL.

STCC 4921220

CHEMTREC EMERGENCY CONTACT 1-800-424-9300

TRAIN/JC	В	CONDUCTO	ıR						
NAME		CATAGO	RY—SECON	NDARY MA	ANIFEST T	YPE—THRU			
ENGINE - IDENT		HORSEPO	WER	LENGTH	WEIGHT	STATUS			
	6142	3000		69	200E				
	1001	3000		74	200E				
ENG	1005	3000		74	200E				
TOTAL		9000 HP		2	17 FEET	600 TONS			
TRAIN/JO		KND GWT	COMDTY	DESTN	ZTS/CARR	NXBLK CITY/STATE CONSIGNEE			
BLOCK									
1 BJOX	278	LC4T 131	CORN	7MT018		214H MEMPHIS TN			
		NOTIFY SHIP	PER IF DEL	_AYED		IF BAD ORDERED NOTIFY SHIPPER			
2 BJO	< 109	LC4T 131	CORN	7MT018		214H MEMPHIS TN			
		NOTIFY SHIP	PER IF DEL			IF BAD ORDERED NOTIFY SHIPPER			
3 BJO	< 110	LC4T 131	CORN	7MT018		214H MEMPHIS TN			
		NOTIFY SHIP				IF BAD ORDERED NOTIFY SHIPPER			
4 CRD	X 7227		CORN	7MT018		214H MEMPHIS TN			
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*		*			ACETONE	AST CONTAINED			
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1-800-4		TIAOT.			II				
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					HAZMAT ST	CC = 4908105			
6 GAF	X 6075	LT19 36	POIS B	12ZA003	3 00 BRC	CHICAGO IL			
		R50 SPEED	RESTRICT	ED CAR					
			•		1/TC				
*****	******	******			PHENOL, M	MOLTEN			
*		*			6.1				
*****	*******	****			UN 2312				
EMERGE	NCY CO	NTACT:		II					
1-800-4	24-9300			RQ (PHENOL)					
					HAZMAT STCC = 4921220				

EMERGENCY RESPONSE INFORMATION

POTENTIAL HAZARDS

FIRE OR EXPLOSION

- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.
- · Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- · Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- · Runoff to sewer may create fire or explosion hazard.
- · Containers may explode when heated.
- · Many liquids are lighter than water.

HEALTH

- · Inhalation or contact with material may irritate or burn skin and eyes.
- · Fire may produce irritating, corrosive and/or toxic gases.
- · Vapors may cause dizziness or suffocation.
- · Runoff from fire control may cause pollution.

PUBLIC SAFETY

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- · Keep unauthorized personnel away.
- · Stay upwind.
- · Keep out of low areas.
- · Ventilate closed spaces before entering.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

EVACUATION

Large Spill

Consider initial downwind evacuation for at least 300 meters (1000 feet).

Fire

• If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

FIRE

CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

Small Fires

• Dry chemical, CO₂, water spray or alcohol-resistant foam.

Large Fires

- · Water spray, fog or alcohol-resistant foam.
- · Use water spray or fog; do not use straight streams.
- · Move containers from fire area if you can do it without risk.

Fire involving Tanks or Car/Trailer Loads

- · Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- · Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- · ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- · Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- · Use clean non-sparking tools to collect absorbed material.

Large Spills

- · Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

FIRST AID

- Move victim to fresh air.
 Call 911 or emergency medical service.
- · Apply artificial respiration if victim is not breathing.
- · Administer oxygen if breathing is difficult.
- · Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- · Wash skin with soap and water.
- · Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

POTENTIAL HAZARDS

HEALTH

- TOXIC; inhalation, ingestion, or skin contact with material may cause severe injury or death.
- · Contact with molten substance may cause severe burns to skin and eyes.
- · Avoid any skin contact.
- · Effects of contact or inhalation may be delayed.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

FIRE OR EXPLOSION

- Combustible material: may burn but does not ignite readily.
- When heated, vapors may form explosive mixtures with air: indoors, outdoors, and sewers explosion hazards.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Contact with metals may evolve flammable hydrogen gas.
- · Containers may explode when heated.
- · Runoff may pollute waterways.
- · Substance may be transported in a molten form.

PUBLIC SAFETY

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- · Keep unauthorized personnel away.
- · Stay upwind.
- · Keep out of low areas.
- Ventilate enclosed areas.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY;
 it is not effective in spill situations.

EVACUATION

Spill

See the Table of Initial Isolation and Protective Action Distances for highlighted substances.
 For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

Fire

• If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

FIRE

Small Fires

Dry chemical, CO, or water spray.

Large Fires

- Dry chemical, CO₂, alcohol-resistant foam or water spray.
- · Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.

Fire involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- · Do not get water inside containers.
- · Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- · ALWAYS stay away from tanks engulfed in fire.

SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- · Stop leak if you can do it without risk.
- · Prevent entry into waterways, sewers, basements or confined areas.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- · DO NOT GET WATER INSIDE CONTAINERS.

FIRST AID

- Move victim to fresh air.
 Call 911 or emergency medical service.
- · Apply artificial respiration if victim is not breathing.
- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- · Administer oxygen if breathing is difficult.
- · Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- · Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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PLANT COPY

# TOP 125 HAZARDOUS COMMODITY MOVEMENTS BY TANK CAR ORIGINATION

RANK	COMMODITY NAME	**HAZ CLASS
1	Freight All Kinds - Hazardous Materials	
2	Freight All Kinds - Hazardous Materials	
3	Sodium Hydroxide Solution	c
4	Petroleum Gases, Liquefied	CG
5	Sulfuric Acid	c
6	Elevated Temperature Liquid, N.O.S.	ORM
7	Ammonia, Anhydrous, Liquefied	CG
8	Chlorine	CG
9	Sulfur, Molten	ORM
10	Sulfur, Molten	FS
11	Vinyl Chloride, Inhibited	cg
12	Propane	CG
13	Fuel Oil	FL
14	Denatured Alcohol	FL
15	Methanol	FL
16	Gasoline	FL
17	Phosphoric Acid	c
18	Hydrochloric Acid	С
19	Styrene Monomer, Inhibited	FL
20	Carbon Dioxide, Refrigerated Liquid	CG
21	Ammonium Nitrate	
22	Gasoline	FL
23	Sodium Chlorate	0
24	Diesel Fuel	CL
25	Butane	CG
26	Petroleum Crude Oil	FL
27	Phenol, Molten	Р
28	Fuel Oil	FL
29	Butadienes, Inhibited	CG
30	Fuel Oil	CL
31	Ethylene Oxide	CG
32	Methyl Tert Butyl Ether	FL
33	Fuel, Aviation, Turbine Engine	FL

RANK	COMMODITY NAME	**HAZ CLASS
34	Isobutane	CG
35	Environ. Hazardous Substances, Liquid	ORM
36	Environ. Hazardous Substances, Liquid	ORM.
37	Environ. Hazardous Substances, Liquid	ORM
38	Propylene	CG
39	Propylene Oxide	FL
40	Vinyl Acetate, Inhibited	FL ·
41	Environ. Hazardous Substances, Solid, N.O.S.	ORM
42	Environ. Hazardous Substances, Solid, N.O.S.	ORM
43	Petroleum Crude Oil	CL
44	Xylenes	FL
45	Other Regulated Substances, Liquid	ORM
46	Cyclohexane	FL
47	Hydrogen Peroxide, Stabilized	0
48	Hexamethylenediamine, Solid	С
49	Acrylic Acid, Inhibited	С
50	Sulfuric Acid, Spent	С
51	Methyl Methacrylate Monomer, Inhibited	FL
52	Environ. Hazardous Substances, Solid, N.O.S.	ORM
53	Potassium Hydroxide, Solution	С
54	Toluene Diisocyanate	P
55	Phosphoric Acid	С
56	Acetic Acid, Glacial	C
57	Formaldehyde Solutions	С
58	Butyl Acrylates, Inhibited	FL
59	Environ. Hazardous Substances, Liquid, N.O.S.	ORM
60	Petroleum Distillates, N.O.S.	CL
61	Acetone	FL
62	Compounds, Cleaning Liquid	FL
63	Toluene	FL
64	Environ. Hazardous Substances, Solid, N.O.S.	ORM
65	Ammonium Nitrate Fertilizers	0
66	Ethanol	FL
67	White Asbestos	ORM
68	Elevated Temperature Liquid, N.O.S.	ORM

RANK	COMMODITY NAME	**HAZ CLASS
69	Liquefied Petroleum Gas	CG
70	Acrylonitrile, Inhibited	FL
71	Liquefied Petroleum Gas	CG
72	Petroleum Distillates, N.O.S.	FL
73	Environ. Hazardous Substances, Liquid	ORM
74	Hazardous Waste, Solid, N.O.S.	ORM
75	Benzene	FL
76	Fuel Oil	FL
77	Ethylene Dichloride	FL
78	Hydrogen Flouride, Anhydrous	С
79	Liquefied Petroleum Gas	CG
80	Sulfer Dioxide	CG
81	Elevated Temperature Liquid, N.O.S.	ORM
82	Elevated Temperature Liquid, Flammable, N.O.S.	FL
83	Elevated Temperature Liquid, N.O.S.	ORM
84	Diesel Fuel	CL
85	Waste Flammable Liquids	FL
<b>8</b> 6	Other Regulated Substances, Liquid, N.O.S.	ORM
87	Isobutane	CG
88	Isopropanol	FL
89	Sodium Chlorate, Aqueous Solution	0
90	Other Regulated Substances, N.O.S.	ORM
91	Phosphorus, White, Dry	FS
92	Ferrous Chloride, Solution	С
93	Elevated Temperature Liquid, N.O.S.	ORM
94	Methanol	FL
95	Petroleum Distillates, N.O.S.	FL
96	Elevated Temperature Liquid, N.O.S.	ORM
97	Propylene	CG
98	Flammable Liquids, N.O.S.	FL
99	Environ. Hazardous Substances, Solid, N.O.S.	ORM
100	Butanois	FL
101	Nitric Acid	c
102	Polymeric Beads, Expandable	ORM
103	Combustible Liquids, N.O.S.	CL

RANK	COMMODITY NAME	**HAZ CLASS
104	Acetic Anhydride	С
105	Fuel Oil	CL
106	Liquefied Petroleum Gas	cG
107	Fuel Oil	,CL
108	Butylene	cg
109	Ferric Chloride, Solution	С
110	Freight All Kinds - Hazardous Materials	•
111	Acetaldehyde	FL
112	Other Regulated Substances, Liquid	ORM
113	Batteries, Wet, Filled with Acid	С
114	Maleic Anhydride	С
115	Hydrocarbons, Liquid, N.O.S.	FL
116	Sulfuric Acid, Fuming	С
117	Ammonium Nitrate, Liquid	0
118	Methyl Chloride	CG
119	Alcoholic Beverages	FL
120	Elevated Temperature Liquid, N.O.S.	ORM
121	Combustible Liquid, N.O.S.	CL
122	Ethyl Acetate	FL
123	Ethyl Acrylate, Inhibited	· FL
124	Kerosene	FL
125	Other Regulated Substances, Liquid, N.O.S.	ORM.

**CG - Compressed Gas
FL - Flammable Liquid
FS - Flammable Solid
CL - Combustible Liquid
O - Oxidizer
P - Poison
C - Corrosive
ORM - Other Regulated Material

