Louisiana

DEPARTMENT OF HEALTH AND HUMAN RESOURCES
OFFICE OF HEALTH SERVICES AND ENVIRONMENTAL QUALITY
BOX 60630 NEW ORLEANS, LOUISIANA 70160

MONTHLY MORBIDITY REPORT

REPORTED MORBIDITY
JANUARY, 1983

PUBLIC HEALTH STATISTICS and
DIVISION OF DISEASE CONTROL

REVIEW OF LIVINGSTON TRAIN DERAILMENT TO DATE

On September 28, 1982 an Illinois Central Gulf train pulling 43 tank cars derailed in Livingston. Immediately following the train derailment, local, state and federal officials took the necessary action to alleviate further hazards and to initiate the monitoring, sampling and cleanup operation at the site. Among the federal and state officials involved with the health and safety aspects were the United States Environmental Protection Agency's Emergency Response Team from Dallas, the United States Coast Guard's Gulf Strike Team, the Office of Health Services and Environmental Quality's Toxic Disease Control Section, the Livingston Parish Health Unit, the Department of Natural Resources, the Department of Agriculture and the Louisiana Veterinary Diagnostic Lab.

The immediate concern following the derailment was the possibility of an explosion and the exposure to harmful liquids or vapors. In order to eliminate further health hazards, the

(continued on page 2)

BULLETIN

GOODBYE TO ROUTINE CHEST X-RAYS?

The American College of Radiology (ACR) has recommended that chest roentgenograms of asymptomatic persons be discontinued as a part of routine prenatal examinations, hospital admissions, tuberculosis screening, and pre-employment examinations.

The recommendation is based on studies (*N Engl J Med* 1974;291:1001-1004 and *South Med J* 1977; 70:579-580) indicating that such examinations do not detect a high enough incidence of occult disease to justify the inconvenience, cost, and radiation exposure to the patient.

However, the ACR says that chest roentgenograms should still be taken if indicated by the patient's history, results of physical examination or diagnostic tests, or his inclusion in a high risk population. To this end, it recommends that roentgenograms of persons with occupational exposure to substances implicated in pulmonary diseases be taken at intervals appropriate to the latency of the disease.

SOURCE: JAMA, Jan 28, 1983 - Vol 249, No. 4, p 447

Review of Livingston Train Derailment to Date
(continued from page 1)

Louisiana State Police evacuated the entire area and established restricted zones around the site.

Only certain cars were of concern with respect to possible environmental and human health effects. A car of tetraethyllead had burned and later exploded. Several cars containing toluene diisocyanate (TDI) and vinyl chloride burned spontaneously or were destroyed by controlled burning and explosions.

In addition, there were several train cars which ruptured resulting in chemical spill: tetrachlorethylene, styrene and hydrofluosilicic acid. The spilled materials were contained locally or spilled over in a cement lined ditch. Dams were installed to alleviate the problems of flow of the spilled chemicals.

Before allowing the residents to return, it was necessary to ascertain that they would not be exposed to any chemicals that could be harmful to their health. Most of the tetraethyllead was decomposed during the fire and explosion of the car. All of it was converted to inorganic lead, mostly lead oxide.

If children consumed toxic levels of lead, they might show learning disabilities and neuropsychologic deficits. If very high levels were consumed, anemia, encephalopathy and gastrointestinal syndrome might be presented. TDI is a very reactive chemical that combines with proteins to form antigens. This could result in asthma due to sensitization reaction. Acute exposure to vinyl chloride is known to cause central nervous system depression and liver, lung and kidney injuries. Long term exposure has been associated with angiosarcoma of the liver, pulmonary fibrosis and possible lung cancer. Additional concern was the possibility of other chemicals with deleterious health effects being formed during combustion and explosion. In order to determine if such chemicals were present in the town of Livingston a continuous monitoring and sampling effort was undertaken from the very first day of the accident. A mobile van from the Air Quality Division of DNR equipped with a gas chromatograph was on site, doing monitoring rounds every 3 hours. In addition, testing instruments such as hand held organic vapor analyzer, photoimization detectors and draeger tubes were used. Air samples were also taken to laboratories in Baton Rouge and New Orleans for analysis. All results indicated that in the town itself, there were no toxic chemicals present in the air at any time.

Numerous soil samples were analyzed for organic contaminants and lead. Lead is normally found in all soil samples. In Livingston it was found at concentrations lower than those observed in large towns, and far below levels necessary to cause toxic effects.

The acid present in the surface water of the drainage ditch was progressively neutralized; then the water was pumped out and disposed of in an environmentally safe manner. Other chemical spills were contained on the site itself. The integrity of the drinking water supply had been maintained throughout the spill and none of the numerous water samples collected showed any trace of contamination.

Because the environmental moni-

toring started early (a few hours after the accident) and was so thorough (numerous samples scattered throughout the evacuated areas, covering air, soil, surface and drinking water), it was possible to have a complete picture of the environmental condition. These results were reviewed by experts in numerous disciplines from all state and federal agencies on the site. Toxicologists, industrial hygienists, epidemiologists, chemical engineers, explosive specialists, and geologists were involved in the evaluation of the data obtained and in the decision making process.

The Office of Health Services and Environmental Quality made the decision that the environment was safe and would pose no health hazard. The population was allowed to return.

The final phase consists of the cleanup of the spill site itself. The main problem is to ascertain that no chemicals are left in the soil in concentration sufficient to cause a health problem. This phase is still in progress.

SELECTED REPORTABLE DISEASES
(By Place of Residence)

STATE AND PARISH TOTALS *REPORTED MORBIDITY JANUARY, 1983*	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED **	HEPATITIS B	LEGIONNAIRES DISEASE	MALARIA ***	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1983)
	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS														
TOTAL TO DATE 1982	0	0	0	0	0	2	29	12	0	0	3	3	25	0	3	0	1626	125	0
TOTAL TO DATE 1983	0	0	0	0	1	0	21	21	0	0	5	0	34	0	7	0	1469	138	1
TOTAL THIS MONTH	0	0	0	0	1	0	21	21	0	0	5	0	34	0	7	0	1469	138	1
ACADIA													2				13	2	
ALLEN																	2		
ASCENSION											1						7		
ASSUMPTION																	2		
AVOYELLES																	9	1	
BEAUREGARD													1				4		
BIENVILLE																	2		
BOSSIER															1		28	1	
CADDO							4				1		4				122	16	
CALCASIEU													4				117	3	
CALDWELL																	11		
CAMERON																	4		
CATAHOULA																	5		
CLAIBORNE																			
CONCORDIA																	4		
DESOTO													2						
EAST BATON ROUGE																	61	11	
EAST CARROLL																	2		
EAST FELICIANA													2				4		
EVANGELINE													1		1		1		
FRANKLIN																	4		
GRANT																	2		
IBERIA																	32	2	
IBERVILLE																	6	1	
JACKSON																			
JEFFERSON							1	1									66	8	
JEFFERSON DAVIS																	3		
LAFAYETTE							6	2					1				32	5	
LAFOURCHE																	12	1	
LASALLE											1						1		
LINCOLN													1				6		
LIVINGSTON													1				5		
MADISON																	15	2	
MOREHOUSE																	12		
NATCHITOCHES							2										2	2	
ORLEANS					1			13					6		3		557	60	
OUACHITA							2				1		1				51	1	
PLAQUEMINES																			
POINTE COUPEE																	1		
RAPIDES								1					2				64	5	
RED RIVER																	1		
RICHLAND							2										4		
SABINE													1				3		
ST. BERNARD															1				
ST. CHARLES																	3	1	
ST. HELENA																	2		
ST. JAMES																	4		
ST. JOHN								1									2		
ST. LANDRY							1						2				23	5	
ST. MARTIN							1										7	1	
ST. MARY											1						35	1	
ST. TAMMANY							1	1									6	2	
TANGIPAHOA																	29	3	
TENSAS																			
TERREBONNE															1		40		
UNION																	4		
VERMILION							1	1									14		
VERNON																	6	3	
WASHINGTON																	7		
WEBSTER													1					1	1
WEST BATON ROUGE																	4		
WEST CARROLL																			
WEST FELICIANA																	1		
WINN													2						
OUT OF STATE								1									5		

*Includes Rubella, Congenital Syndrome.

**Includes Hepatitis, Non A and Non B.

***Acquired outside United States unless otherwise stated.

SELECTED REPORTABLE DISEASES
(By Place of Residence)

STATE AND PARISH TOTALS *REPORTED MORBIDITY - DEC. SUPPLEMENT, 1982*	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED**	HEPATITIS B	LEGIONNAIRES DISEASE	MALARIA***	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1982)
	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS														
TOTAL TO DATE 1981	4	9	6	8	3	109	1188	367	4	14	140	158	423	3	237	2	23590	1645	34
TOTAL TO DATE 1982	16	1	6	24	7	143	1096	349	0	9	67	114	398	4	226	6	24497	1845	32
# IN SUPPLEMENT	2	0	0	2	0	5	88	34	0	4	4	4	0	2	19	0	579	1	0
ACADIA						1	4	3									1		
ALLEN																			
ASCENSION																			
ASSUMPTION																	2		
AVOYELLES																			
BEAUREGARD												1					2		
BIENVILLE																			1
BOSSIER							9								1		30		1
CADDO						1	5	1			1						101		1
CALCASIEU								3									14		
CALDWELL																			
CAMERON																			
CATAHOULA																			
CLAIBORNE																	2		1
CONCORDIA																	4		
DESOTO						1											1		
EAST BATON ROUGE							4	2		1		1					35		1
EAST CARROLL																			
EAST FELICIANA																			
EVANGELINE																			
FRANKLIN																			
GRANT																	3		
IBERIA							2										1		
IBERVILLE																			
JACKSON																			1
JEFFERSON				1		1	9	5									16	1	
JEFFERSON DAVIS																			
LAFAYETTE							16	3							1		12		
LAFOURCHE							4	4									8		
LASALLE																	1		
LINCOLN																			5
LIVINGSTON															1				
MADISON																			
MOREHOUSE	1																3		
NATCHITOCHES								1									1		7
ORLEANS				1			1	7		2		1			1		230		
OUACHITA	1						14				2			1			32		2
PLAQUEMINES							1								1				
POINTE COUPEE																	1		
RAPIDES							3							1	3		16		5
RED RIVER																	1		
RICHLAND																	1		1
SABINE																			
ST. BERNARD							1										1		
ST. CHARLES																	4		
ST. HELENA																			
ST. JAMES																	1		
ST. JOHN								1		1	1						4		
ST. LANDRY							3	3							1		5		
ST. MARTIN							3										2		
ST. MARY							1								2		12		
ST. TAMMANY							1	1							1		3		
TANGIPAHOA															3				
TENSAS															1				
TERREBONNE						1	3										10		
UNION							1												5
VERMILION																	2		
VERNON												1					1		1
WASHINGTON																	1		
WEBSTER							1										10		
WEST BATON ROUGE																	1		
WEST CARROLL							1								2				
WEST FELICIANA																			
WINN							1										1		
OUT OF STATE															1		3		

*Includes Rubella, Congenital Syndrome.

**Includes 27 cases of Hepatitis, Non A and Non B reported Jan. 1 - Dec. 31, 1982.

***Acquired outside United States unless otherwise stated.

From January 1, 1982 - December 31, 1982, the following cases were also reported: 4 - Amebiasis, 13 - Brucellosis, 2 - Food Poisoning, 5 - Leptospirosis, 1 - Psittacosis, 2 - Rocky Mountain Spotted Fever, 1 - Trichinosis, 1 - Tularemia.

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