

# TDH Human Health Risk Assessment

## Health Consultation

AMBIENT AIR INVESTIGATION  
 EGYPTIAN LACQUER MANUFACTURING COMPANY, INC.  
 FRANKLIN, WILLIAMSON COUNTY, TENNESSEE  
 EPA FACILITY ID: TND093148682

Prepared by the  
 Tennessee Department of Health

JULY 23, 2008

Prepared under a Cooperative Agreement with the  
 U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
 Agency for Toxic Substances and Disease Registry  
 Division of Health Assessment and Consultation  
 Atlanta, Georgia 30333

Table 4: Ambient air monitoring results for toluene, July 16, 2007 – December 29, 2008. Monitoring conducted by EnSafe Inc. for Egyptian Lacquer Manufacturing Corporation, Franklin, Williamson County, TN. All units in parts per million (ppm) (EnSafe 2007 and 2009). ATSDR acute EMEG for toluene = 1 ppm. ATSDR chronic EMEG for toluene = 0.08 ppm.

Dates / Sampling Station Identification	TI-1	TI-2	TI-2A	TI-3	TI-4	TI-5
7/16 - 7/17/2007	0.087	0.042	NS	0.074	0.038	NS
8/1 - 8/2/2007	0.14	0.23	NS	1.8	0.53	NS
12/12 - 12/13/2007	<0.03	<0.03	NS	<0.03	<0.03	NS
4/21 - 4/28/2008	0.067	NS	0.11	0.010	0.005	0.004
4/28 - 5/5/2008	0.035	NS	0.068	0.013	0.006	<0.004
5/5 - 5/12/2008	0.034	NS	0.072	0.016	0.008	0.004
5/12 - 5/19/2008	0.036	NS	0.085	0.014	0.007	<0.004
6/23 - 6/30/2008	0.0086	NS	0.053	0.01	0.005	<0.004
6/30 - 7/7/2008	0.023	NS	0.096	0.016	0.007	0.006
7/7 - 7/14/2008	0.018	NS	0.065	0.013	0.008	0.006
7/14 - 7/28/2008	0.017	NS	0.088	0.062	0.004	0.0064
7/28 - 8/4/2008	0.009	NS	0.064	0.006	<0.004	<0.004
8/4 - 8/11/2008	0.006	NS	0.028	0.007	<0.004	<0.004
8/11 - 8/18/2008	0.008	NS	0.011	0.005	<0.004	<0.004
8/18 - 8/26/2008	0.017	NS	0.0085	0.0099	0.005	<0.004
8/26 - 9/2/2008	0.04	NS	0.067	0.0095	0.006	0.006
9/2 - 9/9/2008	0.021	NS	0.062	0.005	<0.004	<0.004
9/9 - 9/16/2008	0.011	NS	0.058	<0.004	<0.004	<0.004
9/16 - 9/23/2008	0.006	NS	0.018	<0.004	<0.004	<0.004
9/23 - 9/30/2008	0.011	NS	0.0085	0.004	<0.004	<0.004
9/30 - 10/7/2008	0.008	NS	0.006	<0.004	<0.004	<0.004
10/7 - 10/14/2008	0.092	NS	0.10	0.013	0.008	0.01
10/14 - 10/21/2008	0.017	NS	0.049	0.0095	0.005	<0.004
10/21 - 10/28/2008	0.049	NS	0.062	0.017	0.007	0.006
10/28 - 11/4/2008	0.046	NS	0.067	0.019	0.008	0.005
11/4 - 11/11/2008	0.014	NS	0.038	0.007	<0.004	0.005
11/11 - 11/19/2008	0.020	NS	0.056	0.014	0.005	0.007
11/19 - 11/25/2008	0.009	NS	0.026	0.007	<0.005	<0.005
11/25 - 12/2/2008	0.015	NS	0.041	0.007	0.005	0.005
12/2 - 12/9/2008	0.018	NS	0.034	0.017	0.005	<0.004
12/9 - 12/16/2008	0.007	NS	0.012	0.004	<0.004	<0.004
12/16 - 12/22/2008	0.008	NS	0.011	0.007	<0.005	<0.005
12/22 - 12/29/2008	0.006	NS	0.014	<0.004	<0.004	<0.004

**Bold** = value greater than the chronic ATSDR EMEG of 0.08 ppm (>365 days exposure)  
**Bold and Italics** = value greater than the acute ATSDR EMEG of 1 ppm (up to 14 days exposure)  
 NS = not sampled  
 <0.004 = less than the listed detection limit for the analysis.



**CONCLUSION** EEP reached one important conclusion in this health consultation:

EEP concludes that toluene in ambient air in the vicinity of Daniels Drive or at the BGA Lower School is not expected to harm the health of adults or children.

**Basis for Conclusion** Results of ambient air monitoring conducted by ELMCO in the vicinity of Liberty Creek in 2007 and 2008.

**Next Steps** No additional ambient air monitoring is planned for the vicinity of the ELMCO site. TDEC is requiring ELMCO to clean up the site and prevent further migration of chemicals to Liberty Creek. If conditions should change or if invasive remediation activities are conducted, TDEC should encourage additional air monitoring activities to be conducted by ELMCO.

Table 1: Analytical results of air sampling of Liberty Creek and Pinkerton Park (January 19, 2007) and Battle Ground Academy Lower School (February 8, 2007) near Egyptian Lacquer Manufacturing Company, Franklin, Williamson County, TN. Units in parts per million (ppm). (City of Franklin 2007)

Compound	Liberty Creek	Pinkerton Park	BGA School	ATSDR EMEG	
				Acute	Chronic
Acetone	NR	NR	0.0043 (NR)	26	13
Methylene chloride	0.0044	0.002	0.0063 (0.0064)	0.6	0.3
Toluene	<0.0004	<0.0004	0.052 (0.053)	1	0.08

NR = Not reported  
 ATSDR = Agency for Toxic Substance and Disease Registry  
 EMEG = environmental media evaluation guide comparison value for acute (0 to 14 days) and chronic (greater than 365 days) exposure  
 (0.053) = duplicate result

Table 2: Analytical results of air sampling at the surface of Liberty Creek (December 18, 2006) and in the 1st and 3rd grade classrooms at Battle Ground Academy Lower School (January 19, 2007), Franklin, Williamson County, TN. Units in parts per million (ppm). (EnSafe 2007).

Compound	Air at Liberty Creek surface	BGA 1st grade classroom	BGA 3rd grade classroom	ATSDR EMEG	
				Acute	Chronic
Acetone	0.372	0.018	0.016	26	13
Toluene	4.206	0.0056	0.0058	1	0.08

NR = Not reported  
 ATSDR = Agency for Toxic Substance and Disease Registry  
 EMEG = environmental media evaluation guide comparison value for acute (0 to 14 days) and chronic (greater than 365 days) exposure