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LEAD POISONING: WILL MISSOURI’S NEW LEGISLATION GET THE LEAD OUT?

by MARK A. MEYER

Lead poisoning is commonly referred to as our nation’s number one environmental health risk for children. The Federal Centers for Disease Control (“CDC”) estimate that over four million children in the United States suffer from lead poisoning. As of May 1993, “15% of all preschoolers, approximately 3,000,000 children, have elevated lead levels sufficient to impair their neurological development.” Additionally, roughly 400,000 infants are born each year with elevated blood lead levels acquired in their mother’s womb. To put these numbers in perspective, the estimates for the United States range from between one in nine children under six having blood lead levels which place them in the impairment zone, to as high as one in six children. Lead contaminants are found in every part of our environment. Air, surface and ground water, and soil all serve as mediums for human exposure. Although lead exposure concerns and affects society as a whole, minorities in inner cities and lower income children are subjected to a substantially higher risk of elevated blood lead levels. This is predominantly due to living in older housing containing lead paint and lead plumbing, and inadequate nutrition. These individuals also lack the financial resources to pursue litigation when harmed by lead’s effects, particularly given the reluctance of attorneys to take the cases due to their low potential earnings.

Damage caused by lead is permanent. Thus, preventing lead exposure is the sole cure for lead poisoning. Doctors knew about the devastating consequences of lead poisoning by the 1960s. The early symptoms of headaches, fatigue and poor appetites, however, are often mistaken for the common flu. Thus, many cases of lead poisoning go undetected. The blood lead levels once thought safe are now being discovered to cause irreversible harm to those affected.

According to Jeffrey Miller, spokesman for the Lead Industries Association, one must not overlook the important statistic that average blood lead levels dropped significantly between 1978 and 1991. He states that “[o]ne might get the sense it’s a billowing epidemic, when in fact the opposite is true.” Although the overall level of lead exposure is dropping, the statistics of the amount of children affected and its irreversible consequences cannot be ignored.

Various federal and state regulations exist which attempt to combat this “silent epidemic.” The majority of these regulations, however, deal with lead poisoning after it has been detected in an individual. Although prevention can only be attained by removing lead before the individual is exposed, the costs of lead abatement are phenomenal. Individuals with high lead content or lead poisoning have pursued various individuals and companies to recover these costs: paint manufacturers for lead paint, public water systems for drinking water,
landlords for renting houses containing lead paint, and even parents for lack of supervision of their children around lead-containing substances. The federal government has eliminated the use of lead in some products, and most remaining lead sources fall under state regulation.

Missouri recently passed legislation to combat the problem of lead poisoning. Until recently, no state-wide legislation dealing with lead poisoning previously existed in Missouri. Legislators hope to solve this epidemic through recently passed legislation to combat the problem of lead poisoning which many consider a strong effort towards the prevention of lead poisoning.

I. SOURCES AND EFFECTS OF LEAD POISONING

A. Sources of Dangerous Lead

The primary source of lead in older urban areas is ingestion of lead paint chips. Other main sources are gasoline, food, water, stationary sources, and dust and soil from lead chips or air fallout. The Environmental Protection Agency ("EPA") estimates that 30% to 50% of a child's exposure comes from dust and soil, 25% to 45% from food, 20% from drinking water, and 5% from direct air inhalation.

Lead-based paint was widely used until 1977, when it was banned for use in the United States. "Ingestion of lead paint chips causes the most severe type of lead poisoning because the chips contain an extremely high concentration of lead per unit of weight." Children are especially inclined to eat lead paint chips once they discover what some consider a lemon flavor. Despite the ban on lead paint, a 1990 U.S. Department of Housing and Urban Development report states that 75% of all homes built before 1980 have some lead paint. This amounts to three million tons of lead which cover the walls of 57 million homes. Forty-six percent of the nation's school buildings were constructed before 1959, when lead paint was still widely used. Problems worsen when paint deteriorates, increasing exposure as paint chips or particles fall onto windowills or the ground. Even when non-lead paint is used to cover lead paint, the "lead can bleed through to 'chewable surfaces' — those a child's mouth can reach..."

Besides the ingestion of lead paint chips, ingestion of common household dust and exposed soil are also major sources of lead poisoning. "[C]hildren's normal hand-to-mouth behavior, such as handling toys and eating food, is sufficient to expose them to hazardous lead levels" from dust and soil containing lead. The lead content of household dust and soil is generated by various sources. Lead paint is a major factor, and does not have to be deteriorated to generate dangerous levels of dust. The clothes of industrial workers in construction, smelting, automobile repair, welding, and salvage work, as well as home renovation and air deposits from lead in gasoline are all sources of lead dust.

Lead in drinking water is a widespread source, causing a decrease in the I.Q.'s of an estimated twenty-three million children. As other sources of lead poisoning are controlled, the EPA estimates that "in the 1990s lead-contaminated drinking water will account for about 50 percent of average national lead exposures and blood lead levels."

Lead enters drinking water from two main sources: source water, such as the surface and ground water entering water systems, and the water distribution system itself. The former source results in relatively little exposure, with fewer than one percent of all water systems having water which contains significant concentrations of lead entering their system. The latter

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24 See Freniere, supra note 14.
25 Id.
26 For example, lead is being curtailed in gasoline and will be eliminated by 1996. See Infra notes 87 through 90 and accompanying text. Also, lead solder has been eliminated on canned foods. See Infra note 95 and accompanying text.
27 See e.g., notes 109 and 127 and accompanying text.
29 See Infra note 135 and accompanying text.
30 See Infra note 134 and accompanying text.
31 Freniere, supra note 14, at 383.
32 Id. at 383, n21.
33 Both dust and soil contain lead from paint and emissions to air, including deposits from past use of lead in gasoline. Reiss, supra note 2, at *2.
34 Id.
35 Id. at *3.
36 Freniere, supra note 14, at 383-4.
37 Id. at 384, n23.
38 Waldman, supra note 5.
39 Id.
40 Reiss, supra note 2, at *3.
41 Mahoney, supra note 10, at *4.
42 Id. at *2.
43 Id.
44 Id.
46 Bellis, supra note 1, at 403.
47 Id.
48 Reiss, supra note 2, at *4.
49 Id.
source contains lead which leaches into a water supply through the supplier's pipes, pipes or fixtures inside the house, lead solder used to connect the pipes, or faucets made of lead-containing alloys such as bronze. The EPA estimates that there are ten million lead service lines or connections nationally and that twenty percent of water systems have some lead service lines or lead connections within their distribution networks.50

Other lead sources include batteries, gasoline and food.51 In the 1970's, gasoline accounted for over 50% of lead exposure.52 Lead particles in gasoline emissions contaminate the air and soil.53 Federal regulations, which will eliminate leaded gasoline by 1996, have already greatly reduced lead in gasoline.54 Exposure from food has also been curtailed.55 Exposure from food has also been curtailed.56 Exposure from food has also been curtailed.56 Exposure from food has also been curtailed.56 Exposure from food has also been curtailed.56

Batteries, both household and commercial, are another lead source.57 Rechargeable batteries contain roughly 65% lead by weight.58 These lead batteries are used in various machines, as well as for military uses.59 Recycling accounts for approximately 95% of used car batteries today, thus this source of lead exposure has been curtailed.60 Based on the sources explained above, the serious, wide-spread problem of significant exposure to lead becomes apparent.

B. Lead Poisoning and Its Effects On People

The side effects of lead exposure are plentiful. Once lead is ingested, it enters the bloodstream, where the body mistakes it for calcium.61 Once the human body excretes as much lead as possible, it stores the remaining lead in tissue and bones.62 Lead, an element, cannot be decomposed into a more tolerable substance and it attaches to enzymes essential to the brain's functioning.63 Since the brain and central nervous system are the main targets of lead, children are especially susceptible because their bodies are developing.64 Adults can tolerate lead in larger doses,65 whereas children's bodies accumulate more lead and are more vulnerable to its toxic effects.66

Lead poisoning is particularly problematic because the symptoms are often initially mistaken for other common illnesses, like the flu.67 The symptoms of lead poisoning in its early stages include fatigue, irritability, constipation, poor appetite, sleep disorders, and headaches.68 Thus, misdiagnosis can easily occur. During later stages of lead poisoning, the symptoms include stomachaches and cramps, frequent vomiting, weakness, clumsiness, and loss of recently acquired skills.69 The actual effects on the body vary and include mental retardation, impaired reproductive functions, convulsive seizures, blindness, reduced I.Q., kidney dysfunction, elevated blood pressure, epilepsy, anemia, and even death.70

The effects of lead on the body are mostly irreversible.71 Some of lead's effects may be removed through chelation treatment, a painful procedure where lead is extracted from the bloodstream.72 Despite treatment, "most of the lead that is absorbed into a child's brain sit there, literally, forever."73 Thus, once a child suffers lead poisoning, it becomes critically important to...
Missouri's Lead Poisoning Legislation

remove them from continued exposure to avoid further damage.74

Developing fetuses are highly vulnerable to lead exposure.75 Fetuses are exposed when their carrying mothers eat, drink, or breath lead during pregnancy.76 One theory holds that lead stored in women's bones over long periods of time attaches to calcium and is transferred to the fetus during pregnancy.77

Lead content in the body is measured in micrograms of lead per deciliter of blood, or ug/dL.78 In the 1960's, levels above 60 ug/dL were recognized as harmful enough to warrant medical treatment.79 This recommended level for treatment intervention was reduced in 1975, 1985, and again in 1991 by CDC.80 Today, CDC's recommended level of intervention begins at 10 ug/dL.81

The decrease in CDC's blood lead level suggesting medical intervention has resulted from various studies that low level exposure over time may cause serious lead poisoning.82 Severe lead poisoning, or 60 to 80 ig/dL, can result from ingesting one milligram of lead-paint dust, or approximately three granules of sugar, every day.83 Eating the equivalent of one granule of sugar each day can result in blood lead levels of 35 ug/dL.84

Thus, it becomes apparent how easily a child who merely touches a window sill and then sucks their thumb on a regular basis can become lead poisoned.85

II. EXISTING FEDERAL REGULATIONS

With an understanding of lead poisoning's harmful, permanent effects and its widespread exposure, one cannot help but inquire into what laws exist to control lead's future uses and to abate of past uses. As the effects of lead exposure are uncovered by technological advances, curbing the problems can only be seen as imperative.

Until recently, civil-rights advocates, environmental lobbyists, and even children's welfare advocates have not pursued legislation to prevent lead hazards due to the contradictory beliefs that the problem has already been solved and that the problem is unsolvable based on its massive exposure.86 This is not to assert that efforts to prevent lead exposure have been minimal, but rather that the lead reduction legislation is fairly recent and is being revised on a continual basis.

Fairly recently, Congress enacted several regulations to limit the future use of lead in products. Leaded gasoline is one major lead source subject to such regulations, and will be banned entirely by 1996.87 In 1982, leaded gasoline accounted "for an estimated eighty-six percent of the lead in the atmosphere."88 The EPA subsequently reduced the allowable amount of lead from 1.25 grams/gallon to its present level of 0.1 gram/gallon, a reduction of over ninety percent.89 This regulation reduced lead exposure from gasoline to less than one half a percent of what it was at its maximum.90

Lead used in producing batteries accounts for 80% of lead currently used in new products.91 The EPA currently regulates recycled battery lead as a hazardous waste.92 In September 1993, the EPA announced that a petition to create a rule establishing a deposit system for commercial batteries containing lead was denied.93 Thus, batteries not recycled will be disposed of in municipal landfills.94

Using lead solder in the canning food process has also been eliminated.95 Eliminating both lead in gasoline and lead solder for canning purposes diminishes future exposure to lead, because these products will now be mostly lead free.

74 Mahoney, supra note 10, at *3.
75 Waldman, supra note 5.
76 Id.
77 Id.
78 Mahoney, supra note 10, at *3.
79 Id.
80 Id.; Waldman, supra note 5.
81 Telephone Interview with the Centers for Disease Control and Prevention (Nov. 5, 1993).
82 Mahoney, supra note 10, at *3. These levels include studies from Greece, Scotland and Denmark, as well as CDC studies. Id. at n.43.
83 Waldman, supra note 5.
84 Id.
85 Id.
86 Id.
88 Reiss, supra note 2, at *3.
89 Id.
90 Schwartz and Levin, supra note 6.
93 Petition Denied On Battery Deposits; Comments Solicited on Recycling Labels, Environment Reporter, Vol. 24, No. 19; at 853, September 10, 1993. This citizen's petition, under § 21 of the Toxic Substances Control Act, claimed that a national deposit system would aid in battery recycling, and is necessary due to the health risk posed from batteries containing, among other items, lead. Batteries; Response to Citizens' Petition, 58 Fed. Reg. 46,921 (1993). The petition was denied based on the EPA's assessment that a Federally-mandated deposit system is not presently necessary. The EPA considered (1) the effects of other EPA regulations, (2) lack of a recycling system infrastructure, (3) state laws furthering recycling, and (4) reduction of lead entering the waste stream. Id.
94 Misperceptions About Lead, Far From The Growing Epidemic Some Claim, Blood-Lead Levels Are The Lowest They've Been In Decades, Bus. Week, July 19, 1993, stating that over 95% of lead remains in landfills, even after many years.
95 Schwartz and Levin, supra note 6.
96 See Infra notes 101 through 112 and accompanying text on drinking water regulations, and notes 113 through 132 and accompanying text on lead-based paint regulations.
Two other major areas of lead exposure, drinking water and lead-based paint, have benefitted from regulations limiting future use of lead in products. These sources remain major problem areas, however, as legislative attempts have been fairly unsuccessful in handling the 10 million miles of lead pipes supplying water to homes. In addition, the homes themselves contain lead pipes, as well as 3 million tons of lead in the paint on 57 million homes. Thus, it is important to analyze what regulations exist with respect to lead in drinking water and lead-based paint.

Lead was a common ingredient in plumbing materials, such as pipes, faucets, and solder which sealed the joints, until fairly recently. In 1986, Congress enacted legislation to severely limit future use of lead in pipes, solder, and flux associated with drinking water. That legislation limited use of lead in solder or flux to 0.2% lead, and lead in pipes and faucets to 8.0% lead, which represent the current figures as well. Although this helps limit lead exposure in subsequently constructed buildings and houses, it does little to affect pipes already installed.

In 1988, the Lead Contamination Control Act (“LCCA”) was enacted to address lead in drinking water coolers, which are particularly used in schools and day care centers. The LCCA “recalled water coolers with lead-lined water reservoir tanks and called for testing for lead contamination in school water sources.” Despite the achievements of the LCCA, it has not met its objectives because although it requires that states “establish a program . . . to assist local educational agencies in testing for . . . lead contamination,” it fails to require them to test.

In 1986, Congress amended the Safe Drinking Water Act (“SDWA”) to delegate enforcement of the SDWA to the states. Other issues Congress addressed in that amendment include corrosion control, lead service line replacement, source water treatment, notification to water consumers and state monitoring power. In 1991, the EPA promulgated the Lead and Copper Rule under the SDWA, which aims at further assessing and reducing lead exposure from drinking water. Although these drinking water regulations serve to reduce future use of lead and elimination of lead from school water coolers, the above legislation has hardly affected lead in existing plumbing.

Lead-based paint is another major problem area of lead exposure, especially in homes built before lead-based paint was thoroughly regulated in 1978. Originally, two areas of legislation governed the majority of lead prevention with respect to lead-based paint. This legislation includes the Lead-Based Paint Poisoning Prevention Act (“LPPPA”), and the Consumer Product Safety Commission’s ("CPSC") regulations. The former act prohibits residential use of paint with lead content in excess of 0.06% and requires that housing associated with the Department of Housing and Urban Development ("HUD"), constructed prior to 1978, be notified of possible lead hazards. That act also delegates to the states the authority to handle lead abatement and prevention. The latter regulations ban selling, through interstate commerce, paint for residential use with lead content over 0.06%.

Although lead-based paints were banned for residential use in 1978, lead exposure remains a problem for decaying and deteriorating paint used before 1978. Although the LPPPA has had positive effects toward eliminating existing lead paint in government
housing, it has by no means solved the problem. Implementation problems exist and lead abatement is extremely expensive.

As a result of these problems, Congress attempted to solve the lead-based paint issue by enacting the Housing and Community Development Act of 1992, which includes the Residential Lead-Based Paint Hazard Reduction Act of 1992, commonly referred to as Title X. Title X is considered a transitional bill that requires states to establish lead prevention programs beginning in 1993. HUD's approval of state programs are a condition of receiving most federal housing program funds. Title X is the first explicit attempt to increase lead safety in homes where young children live before poisoning occurs, rather than after the child has been diagnosed. The requirements of Title X include consulting with health and child welfare agencies, examining existing data related to lead-based paint hazards, analyzing low-income units with lead-based paint hazards, developing long-term strategies proposed to reduce hazards over five years, and delineating specific actions being taken to reduce hazards for the next one year period.

A continuing problem with lead-based paint hazard reduction is the excessive cost of lead abatement. Title X also authorizes the HUD competitive grants program, which awards grants to state and local governments based on their program's quality, in the amount of $47.7 million in 1992, $100 million in 1993, and $250 million in 1994. Therefore, both the focus on preventing lead exposure before it occurs, as well as approving significant funds to state programs, convey that Title X is moving towards combating the lead problem.

III. WHAT MISSOURI HAS DONE

Pursuant to the requirements of Title X, Missouri enacted Senate Bill 232 on June 8, 1993. Although Missouri just recently enacted this legislation, plans are in their beginning phases and officials who testified at the Senate and House committee meetings on the bill appeared optimistic about the possibilities the law holds.

Until the enactment of S.B. 232 in 1993, Missouri was without a state-wide program for dealing with exposure to lead. Only three local governments had lead ordinances in effect prior to 1993: the City of St. Louis, St. Louis County, and Springfield.

Both the City of St. Louis and St. Louis County have had ordinances dealing with lead poisoning prevention for several years. These two programs have been recognized among the oldest lead programs in the United States, as they have continued in existence despite lack of federal funding in past years. The City of St. Louis Ordinance, passed in January 1972, was established as a mixture of similar ordinances at the time from Philadelphia, Chicago, and New York. The

122 See William E. Schmidt, Lead Paint Poisons Children Despite 1971 Law on Removal, N.Y. Times, Aug. 26, 1990, § 1, at 1, “Robert E. McKay, executive director of the Council of Large Public Housing Authorities, wrote to Federal housing officials in July [1990], complaining that field staff members were threatening some local public housing agencies with loss of Federal funds for modernizing housing, because the agencies wanted to delay some current construction work so as to comply with the new lead-paint standards.”
123 Freniere, supra note 14, at 387.
125 Alliance To End Childhood Lead Poisoning, Understanding Title X: A Practical Guide To The Residential Lead-Based Paint Hazard Reduction Act of 1992 [hereinafter Understanding Title X]. See also The National Center for Lead-Safe Housing, Technical Assistance Bulletin I: Lead-Based Paint Hazards and the Comprehensive Housing Affordability Strategy (“CHAS”): How To Respond To Title X [hereinafter Technical Assistance Bulletin]. Copies of Understanding Title X and the Technical Assistance Bulletin may be obtained by calling the Environmental Health Center in Washington D.C. at 1-800-424-LEAD.
126 Understanding Title X, supra note 125, at 2.
128 Id.
129 Understanding Title X, supra note 125, at 2.
130 Technical Assistance Bulletin, supra note 125, at viii.
131 See supra note 21 and accompanying text.
132 Understanding Title X, supra note 125, at 11. “These grant funds are for reducing [lead-based paint] hazards in low-income, privately owned housing, [and may be used for activities including] temporary relocation of families during abatement, blood-lead monitoring of workers, post abatement clearance tests, and public education.” Id.
134 Telephone Interview with Peter De Simone, Executive Director for Missouri Association For Social Welfare and the Children’s Health Coalition (Nov. 5, 1993); Telephone Interview with Laurence Hillman, Environmental Inspector and President of Space Raters Environmental Audits, Inc (Nov. 5, 1993); Telephone Interview with William Schmidt, Missouri Department of Health (Oct. 14, 1993). Both Mr. De Simone and Mr. Hillman testified at the Senate Public Health and Welfare Committee in favor of S.B. 232, held on Feb. 15, 1993. Mr. De Simone has also been appointed the Committee on Lead Poisoning under S.B. 232. Mr. Schmidt spoke in favor of the bill at the House Public Health and Safety Committee meeting on April 27, 1993.
135 Telephone Interview with William Schmidt, supra note 134.
136 Id. City of St. Louis, Mo, ORDINANCE 56091 (Jan. 27, 1972), and amendment City of St. Louis, Mo, ORDINANCE 57791 (Mar. 20, 1979); St. Louis County, Mo, ORDINANCE 628 (Mar. 1993); Springfield, Mo, CITY CODE, art. III, §§ 18-50 - 18-74, (1983).
137 City of St. Louis, Mo, ORDINANCE 56091 (Jan. 27, 1972), and amendment City of St. Louis, Mo, ORDINANCE 57791 (Mar. 20, 1979); St. Louis County, Mo, ORDINANCE 628 (Mar. 1993); Springfield, Mo, CITY CODE, art. III, §§ 18-50 - 18-74, (1983).
138 Id.; Telephone Interview with David Forney, Centers of Disease Control and Prevention (Nov. 5, 1993).
139 Telephone Interview with Charles G. Copley, Deputy Health Commissioner of the City of St. Louis, Mo. (Oct. 15, 1993).
constitutionality of the ordinance has been challenged, and in 1975 the Supreme Court of Missouri upheld its constitutionality. Ordinance 57791 amended the previous ordinance in 1979.

The ordinance provides approximately $1 million per year towards screening kids. Routine testing is provided in day care centers and schools. The screening is provided by two sources: a private, not-for-profit agency and the Health Department. In 1992, the City of St. Louis screened 18,165 people, 47.4% having a blood level in excess of 10 μg/dL.

One problem is the majority of labs are not equipped to test for lead. The testing requires a $100,000 machine operated by trained technicians who must stay proficient in testing to remain accurate. Therefore, the city does the majority of testing performed.

St. Louis County has had a similar ordinance for lead prevention. The ordinance, first passed in 1978, provides testing programs for children and structures. The original ordinance provided that real estate cannot be sold when lead has been applied to it, that lead-paint over 0.7 mg/cm² by weight is hazardous, and that new paint must not contain over 0.06% lead.

In 1991, St. Louis County amended the ordinance. Obviously, the provision prohibiting the sale of real estate to which lead has been applied was unworkable and unused. The amended ordinance requires that the seller of real estate built before 1978 (when lead-based paint was used) disclose possible lead paint problems to the purchaser.

The amendment also altered the contents of lead allowable to be consistent with HUD standards: 1.0 mg/cm² by weight, and 5% in dry paint. The 0.06% limit in new paint remained unchanged. St. Louis County amended the ordinance again as of 1993 to allow liquid encapsulant paint to be used for abatement purposes. The City of St. Louis does not allow use of this product for lead abatement.

The Springfield lead program has existed for approximately ten years. Their fairly extensive provisions include maintenance of lead hazard property, prohibitions on use and/or manufacture of certain lead-bearing substances, revocations of business licenses and permits for lead violations, and emergency procedures for conditions posing immediate health threats. The program also provides financial assistance to low income property owners with children having elevated lead levels.

Missouri's new state-wide lead program, under Senate Bill Number 232, provides implementation procedures to eradicate childhood lead poisoning over a 10 year period, and offers health programs and incentives for removing lead sources from dwellings. One main purpose and accomplishment of this act is that federal funding will now be provided on a state-wide basis under Title X, as well as under the CDC grant program.

Senate Bill Number 232 requires the establishment of the "Commission on Lead Poisoning Control" by December 31, 1993. The committee will be responsible for developing a comprehensive plan for lead poisoning prevention and control. The committee will also be responsible for the development of a state-wide lead program and the coordination of activities with federal, state, and local agencies.

The Springfield program has been implemented in 1993 and has been successful in reducing lead levels in the community. The Springfield program has been very effective in reducing lead levels in the community and has been successful in reducing lead levels in young children.

In conclusion, the Springfield lead program has been successful in reducing lead levels in the community. The program has been effective in reducing lead levels in young children and has been successful in reducing lead levels in the community.

140 City of St. Louis v. Brune, 520 S.W.2d 12 (Mo. 1975).
141 City of St. Louis, Mo, ORDINANCE 57791 (Mar. 20, 1979).
142 Telephone Interview with William Schmidt, supra note 134.
143 Telephone Interview with Charles G. Copley, supra note 139; CITY OF ST. LOUIS, MO, ORDINANCE 56091 (Jan. 27, 1972), and amendment CITY OF ST. LOUIS, MO, ORDINANCE 57791 (Mar. 20, 1979).
144 Id.
145 Memorandum from Charles G. Copley, Deputy Health Commissioner of the City of St. Louis, Mo (Oct. 15, 1993) (on file with the Health Division - City of St. Louis). The 18,165 people tested by the City of St. Louis during 1992 were tested by the following sources: 11% by a mobile door-to-door screening van, 13% by St. Louis Health Division Lead Clinic, 26% by St. Louis Regional, 10% by Public Health Labs, and 40% by other health care providers. Id.
146 Telephone Interview with Charles G. Copley, supra note 139.
147 Id.
148 Id.
149 Telephone Interview with Chris Byrne, Environmental Program Manager of the St. Louis County Health Department (Oct. 19, 1993); ST. LOUIS COUNTY, MO, ORDINANCE 628 (Mar. 1993).
150 Id.
151 This measurement relates to testing paint on surfaces for lead content using an X-Ray Fluorescence analyzer. Id. This hand-held, box-shaped instrument determines the amount of lead electrons by weight in surface paint, in milligrams per square centimeter (mg/cm²). Technical Assistance Bulletin, supra note 125, at 57, n5. The HUD standard that came out in 1990 for lead-based paint is 1.0 mg/cm². Id. ST. LOUIS COUNTY, MO, ORDINANCE 628 (1978).
152 Telephone Interview with Chris Byrne, supra note 149; ST. LOUIS COUNTY, MO, ORDINANCE 628 (1978).
153 Telephone Interview with Chris Byrne, supra note 149; ST. LOUIS COUNTY, MO, ORDINANCE 628 (Mar. 1993).
154 Telephone Interview with Chris Byrne, supra note 149.
155 Telephone Interview with Chris Byrne, supra note 149; ST. LOUIS COUNTY, MO, ORDINANCE 628 (1978).
156 Telephone Interview with Chris Byrne, supra note 149; ST. LOUIS COUNTY, MO, ORDINANCE 628 (1978).
157 Telephone Interview with Chris Byrne, supra note 149; ST. LOUIS COUNTY, MO, ORDINANCE 628 (1978).
158 Telephone Interview with Chris Byrne, supra note 149.
159 Liquid encapsulant paint is specifically designed to cover good condition wood and paint containing lead. This paint contains a hardening agent which acts as a sealer, is lead-free, and is twice as thick as normal paint. It also contains a bittering agent that creates an unpleasant taste to deter children from eating paint chips. Id.
161 Id.
162 Id.
164 See, e.g., note 132 and accompanying text.
Poisoning" ("Commission"), which consists of 21 appointed persons, who meet specific criteria, including a member from the Department of Health and members representing the local housing authority, property owners, the lead industry, and a parent of a child who has been lead poisoned. Representative Patrick Dougherty, 67th District, presently chairs the Commission.

The bill requires the Commission to submit a report to the General Assembly and the Governor by January 1, 1994. This report shall contain recommendations towards developing lead-based plans, including eradicating childhood lead poisoning by 2012, screening all children, treating indigent lead poisoned children, identifying resources to implement the programs, and providing education to the general public. The Commission, with its broad representation, will act as a think tank and provide recommendations to the Governor. The Department of Health will be responsible for writing future regulations, based primarily on the Commission's report and other considerations.

As of February 1994, the Commission has met on three occasions. The first meeting, held in November 1993, provided an educational update on lead for the Commission members. The Commission's second meeting, in December 1993 at Kansas City, addressed local Kansas City issues and began creating an overall Commission mission statement, with the help of a Virginian futurist. This mission statement was completed in January 1994, at the third meeting. Additionally, the Commission was split into four subgroups: education, medical management, environmental and hazardous waste, and housing. Three additional meetings are scheduled for February 25, 1994, March 15, 1994, and April 18, 1994, which area all open to the public.

Senate Bill Number 232 also gives state and local health departments authority to "inspect a dwelling for the purpose of ascertaining the existence of a lead hazard," as well as the authority to remove samples for use in laboratory analyses on lead content. Upon determining that a lead hazard exists, the owner and an adult occupant of the dwelling must receive written notification of the lead problem, and the owner must comply with lead abatement. The law also provides that the owner will violate S.B. 232 if they fail to take action to reduce the lead hazard.

Two additional procedures are required under S.B. 232. First, the act requires that the health department develop a program to train and license lead inspectors, lead abatement contractors, supervisors and workers. The director of the Department of Health will issue licenses with licensing fees assessed to provide funding for the Missouri public health services fund. Failure of owners to not reduce lead upon notification, eviction of tenants based on elevated blood lead levels or lead poisoning, and conducting lead inspections or abatement without being licensed all result in a class A misdemeanor.

Second, the law requires the Department of Health to develop and maintain a reporting system for training and license compliance, as well as for recording lead poisoning cases in Missouri, which foster
planning, evaluative and public educational purposes. Senate Bill Number 232 appears to be a step in the right direction for solving Missouri’s lead problems.

IV. WILL MISSOURI’S NEW LEGISLATION WORK?

Missouri’s enactment of S.B. 232 is consistent with a national drive to limit lead poisoning in our children. Missouri appears to be actively confronting the problems of lead exposure, and S.B. 232 recognizes that Missouri considers lead exposure a serious problem. Although S.B. 232 opens the door to state-wide lead legislation, the bill’s actual impacts on exonerating the lead problem remain unclear.

Enactment of S.B. 232 creates several positive impacts for Missouri. As stated above, S.B. 232 establishes uniform treatment for the entire state of Missouri, whereas previous lead programs were limited to three counties. The legislation is also designed to create a plan to eradicate childhood poisoning by the year 2012. Construction of the bill in this manner appears to emphasize that Missouri considers the lead problem as continuously changing, needing to be followed as technological advances are made and new effects and solutions regarding lead are discovered. Thus, Missouri appears to have recognized that a one-time legislative act will not solve the lead problem, and would quickly be superseded by technology.

Senate Bill Number 232 also provides some funding towards the excessive costs of lead testing and abatement. The bill allows Missouri to receive funding under Title X from the HUD competitive grants program, which is substantially increasing each year. Revenue will also be obtained from certification and licensing of lead inspectors and lead abatement contractors, as required under the bill. Although these funds are crucial in operating the lead programs, the licensing fees and Federal funding will almost certainly be insufficient to fund lead abatement of paint applied to walls before 1978, and for the lead pipes and plumbing supplying our water. Thus, the entire effort may be a success in planning, but implementation may be sharply limited due to lack of funding.

Requiring certification and licensing of all lead inspectors and lead abatement contractors, supervisors and workers, as well as authorizing the Department of Health the power to revoke,suspend or deny any licenses, benefits Missouri in several ways. The certification and licensing appears to adequately protect against untrained and unprofessional inspectors and lead abatement contractors by authorizing a class A misdemeanor for any violations. Individuals desiring testing and/or abatement procedures will most likely receive consistent, proper lead testing and lead abatement procedures from trained individuals, which will also reduce problems such as that which happened to Marc and Cathryn Perrone of Milwaukee.

Although Marc and Cathryn Perrone consulted an engineer to find a safe procedure for removing paint, their daughter was later found to have a 33 ug/dl blood lead level. If Wisconsin had a program similar to S.B. 232, the Perrone family may have obtained a lead abator trained to prevent such problems.

Another benefit of requiring certification and licensing is that individuals will be able to locate lead inspectors and lead abatement contractors. This will eliminate problems as that which happened to the Rosenbaum’s in Los Angeles. Mark Rosenbaum’s daughter was found to have a blood lead level of 12 ug/dl. After moving out of their renovated 85-year-old home, the family "couldn’t find a contractor in all Los Angeles who knew how to remove the lead-based paint." A licensed professional from Massachusetts had to be flown in at a cost of $70,000.

Senate Bill Number 232 also requires that the Department of Health establish and maintain a reporting system to monitor the lead problems and reported cases in Missouri. The reporting system is an important requirement as well, because it will further support the Commission’s report to the Governor, and also serve as an educational system for the public. Informing the public of lead exposure problems, effects and temporary solutions is an important part of any lead program.

Another benefit of S.B. 232 is that the Commission established pursuant to Section 2 represents a wide spectrum of concerned parties. As the Governor will consider the Commission’s report in developing future
lead legislation in Missouri, that legislation should fairly represent all interested parties.

Although S.B. 232 appears to be an extremely positive step for Missouri toward handling the lead problem, several concerns continue to exist in addition to the funding concerns mentioned above. With the Commission recommending plans for future lead legislation, uncertainty exists as to what area of lead exposure that legislation will focus on. S.B. 232 requires certain steps towards abating lead-based paint, but it is unclear whether other lead sources will be addressed, such as lead in water supply pipes or plumbing. Also, the bill is unclear whether laws in the future will address merely remedies for discovered lead hazards, or whether an emphasis will exist on alleviating the problem before lead exposure occurs.

Yet another concern relates to deadlines in the bill. By January 1, 1994, the Commission is required to submit their report to the Governor. Due to the flood activity over the summer of 1993, the Commission was not appointed until November 1993, and is not expected to complete its six scheduled meetings until April 1994. The January 1, 1994, deadline has come and gone, leaving the bill already behind schedule in its first year of existence.

If Missouri's new legislation lack the funding to meet its objectives, or take a sufficient amount of time to implement, there are several non-profit and corporate-sponsored agencies that provide helpful information on all facets of lead poisoning, as well as inexpensive measures one can take to limit lead exposure. These measures include covering lead-based paint that is in decent condition with liquid encapsulant paint, purchasing water filters for drinking faucets, limiting leaching into lead water pipes by not using the hot water tap for drinking and running cold water for 30 to 60 seconds before drinking it, and feeding children iron and calcium.

Despite the concerns, S.B. 232 appears to be an extremely positive step for Missouri in combatting the lead problem. The recommendations which the Commission will provide pursuant to S.B. 232 will help determine Missouri's future for lead eradication. Although the outcome of future legislation is uncertain, Missouri is headed down the road towards limiting lead exposure and for confronting the national problem affecting many of its citizens.