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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.¹ The Federal Centers for Disease Control ("CDC") estimate that over four million children in the United States suffer from lead poisoning.² As of May 1993, "15% of all preschoolers, approximately 3,000,000 children, have elevated lead levels sufficient to impair their neurological development."³ Additionally, roughly 400,000 infants are born each year with elevated blood lead levels acquired in their mother's womb.⁴ 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.⁵

Lead contaminants are found in every part of our environment.⁶ Air, surface and

ground water, and soil all serve as mediums for human exposure.⁷ 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.⁸ This is predominantly due to living in older housing containing lead paint and lead plumbing, and inadequate nutrition.⁹ 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.¹⁰

Damage caused by lead is permanent.¹¹ Thus, preventing lead exposure is the sole cure for lead poisoning.¹² Doctors knew about the devastating consequences of lead poisoning by the 1960s.¹³ The early symptoms of headaches, fatigue and poor appe-

tites, however, are often mistaken for the common flu.¹⁴ 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.¹⁵

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 1991.¹⁶ He states that "[o]ne might get the sense it's a billowing epidemic, when in fact the opposite is true."¹⁷ 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 exist¹⁸ which attempt to combat this "silent epidemic."¹⁹ The majority of these regulations, however, deal with lead poisoning after it has been detected in an individual.²⁰ Although prevention can only be attained by removing lead before the individual is exposed, the costs of lead abatement are phenomenal.²¹ Individuals with high lead content or lead poisoning have pursued various individuals and companies to recover these costs: paint manufacturers for lead paint,²² public water systems for drinking water,²³

1 See, e.g., Anthony J. Bellia, Jr., Note, *Lead Poisoning in Children: A Proposed Legislative Solution to Municipal Liability for Furnishing Lead-Contaminated Water*, 68 NOTRE DAME L. REV. 399, 401 (1992), and Kenneth M. Reiss, *Federal Regulation of Lead in Drinking Water*, 11 VA. ENVTL. L.J. 285, 285 (1991/1992). See also Steven Waldman, *Lead And Your Kids*, NEWSWEEK, July 15, 1991, at 42.

2 Kenneth M. Reiss, Note, *Federal Regulation of Lead in Drinking Water*, 11 VA. ENVTL. L.J. 285, 285 (1991/1992).

3 Deb Martin, *Lead Cleanup in the Midwest*, EPA J., Mar. - Apr. 1992, at 56.

4 Reiss, *supra* note 2, at *2.

5 Steven Waldman, *Lead And Your Kids*, NEWSWEEK, July 15, 1991, at 42.

6 Joel Schwartz and Ronnie Levin, *Lead: Example of the Job Ahead; Inner City Children Suffer Most*, EPA J., Mar. - Apr. 1992, at 42.

7 *Id.*

8 Martin, *supra* note 3. Lead exposure problems in St. Louis, Missouri, however, are not predominately inner city, low-income children. Although those children are exposed to more deteriorating, older paint which may be harmful, a substantial problem exists in St. Louis County, where many expensive, older homes initially used the higher quality paint with higher concentrations of lead. Telephone Interview with Laurence Hillman, Environmental Inspector and President of Space Raters Environmental Audits, Inc. (Nov. 5, 1993).

9 *Id.*

10 Martha Mahoney, *Four Million Children At Risk: Lead Paint Poisoning Victims and the Law*, 9 STAN. ENVTL. L.J. 46, *1 (1990).

11 *City of Philadelphia v. Lead Indus. Ass'n, Inc.*, 1993 WL 147787, at *1 (3rd Cir. May 11, 1993).

12 *Id.*

13 Mahoney, *supra* note 10, at *2.

14 Diane Cabo Freniere, Comment, *Private Causes of Action Against Manufacturers of Lead-Based Paint: A Response to the Lead Paint Manufacturers' Attempt to Limit Their Liability by Seeding Abrogation of Parental Immunity*, 18 B.C. ENVTL. AFF. L. REV. 381, 384-5 (1991).

15 See *infra* notes 78 through 81 and accompanying text.

16 Waldman, *supra* note 5. Mr. Miller stated that blood lead levels dropped from 17 ug/dL in 1978 to 6 ug/dL in 1991. *Id.* See *infra* notes 78 through 81 and accompanying text regarding measurements of blood lead levels.

17 *Id.* See also *Misperceptions About Lead; Far From The Growing Epidemic Some Claim, Blood-Lead Levels Are The Lowest They've Been In Decades*, BUS. WIRE, July 19, 1993.

18 See *infra* notes 87 through 132 and accompanying text.

19 Mahoney, *supra* note 10, at *1.

20 See, e.g., notes 114 and 115 and applicable statutes.

21 Mahoney, *supra* note 10, at *5. The costs of testing and abatement are subject to debate, but in 1990, they range from \$300 to \$500 per dwelling unit for the former, and \$8,000 to \$15,000 for the latter. *Id.*

22 See Freniere, *supra* note 14.

23 See Bellia, *supra* note 1.

landlords for renting houses containing lead paint,²⁴ and even parents for lack of supervision of their children around lead-containing substances.²⁵ The federal government has eliminated the use of lead in some products,²⁶ and most remaining lead sources fall under state regulation.²⁷

Missouri recently passed legislation to combat the problem of lead poisoning.²⁸ Until recently, no state-wide legislation dealing with lead poisoning previously existed in Missouri.²⁹ 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.³⁰

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.³¹ Other main sources are gasoline, food, water, stationary sources, and dust and soil from lead chips or air fallout.³² The Environmental Protection Agency ("EPA") estimates that 30% to 50% of a child's exposure comes from dust and soil,³³ 25% to 45% from food, 20% from drinking water, and 5% from direct air inhalation.³⁴

Lead-based paint was widely used until 1977, when it was banned for use in the United States.³⁵ "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."³⁶ Children are especially inclined to eat lead paint chips once they discover what some consider a lemon flavor.³⁷ 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.³⁸ This amounts to three million tons of lead which cover the walls of 57 million homes.³⁹ Forty-six percent of the nation's school buildings were constructed before 1959, when lead paint was still widely used.⁴⁰ Problems worsen when paint deteriorates, increasing exposure as paint chips or particles fall onto windowsills 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. . . ."⁴¹

Besides the ingestion of lead paint chips, ingestion of common household dust and exposed soil are also major sources of lead poisoning.⁴² "[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.⁴³ 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.⁴⁴ 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.⁴⁵

Lead in drinking water is a widespread source, causing a decrease in the I.Q.'s of an estimated twenty-three million children.⁴⁶ 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."⁴⁷

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.⁴⁸ 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.⁴⁹ The latter

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.

28 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv. Senate Bill Number 232 was passed in June, 1993. That act relates to the prevention of lead poisoning, with penalty provisions for non-compliance. See *infra* notes 163 through 185 and accompanying text regarding the specifics of S.B. 232.

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.*

45 *Id.*; Joel Schwartz and Ronnie Levin, *Lead: Example of the Job Ahead; Inner City Children Suffer Most*, EPA J., Mar. - Apr. 1992, at 42.

46 Bellia, *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,⁵¹ gasoline and food.⁵² In the 1970's, gasoline accounted for over 50% of lead exposure.⁵³ Lead particles in gasoline emissions contaminate the air and soil.⁵⁴ Federal regulations, which will eliminate leaded gasoline by 1996, have already greatly reduced lead in gasoline.⁵⁵ Exposure from food has also been curbed by federal regulation through reducing the use of solder in canned foods.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 blood stream, 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 accumu-

late 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 stomach aches 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 sits there, literally, forever."⁷³ Thus, once a child suffers lead poisoning, it becomes critically important to

50 *Id.*

51 *Petition Denied on Battery Deposits; Comments Solicited on Recycling Labels*, ENV'T REP. (BNA), Vol. 24, No. 19, at 853 (Sept. 10, 1993).

52 Schwartz and Levin, *supra* note 6.

53 *Id.*

54 *Id.*

55 *Id.* See Regulation of Fuels and Fuel Additives, 40 C.F.R. § 80 (1992); National Primary and Secondary Ambient Air Quality Standards For Lead, 40 C.F.R. § 50.12 (1992).

56 Schwartz and Levin, *supra* note 6.

57 *Petition Denied on Battery Deposits; Comments Solicited on Recycling Labels*, ENV'T REP., Vol. 24, No. 19, at 844, Sept. 10, 1993. See 58 Fed. Reg. 46,921 (1993) for petition.

58 Batteries, Response to Citizens' Petition, 58 Fed. Reg. 46,921, 46,922 (1993).

59 *Id.* The various machines using these lead batteries includes camcorders, computers, portable radios, cellular phones, emergency lighting, portable communication devices, medical equipment, and automobiles. *Id.*

60 *Misperceptions About Lead; Far From The Growing Epidemic Some Claim, Blood-Lead Levels Are The Lowest They've Been In Decades*, BUS. WIRE, July 19, 1993.

61 Waldman, *supra* note 5.

62 Freniere, *supra* note 14, at 384.

63 Waldman, *supra* note 5.

64 Freniere, *supra* note 14, at 384.

65 Waldman, *supra* note 5.

66 Bellia, *supra* note 1, at 401.

67 Freniere, *supra* note 14, at 384-5.

68 *Id.*

69 *Id.* at 385.

70 *Id.* at 381; Reiss, *supra* note 1, at *2.

71 Waldman, *supra* note 5.

72 *Id.* It becomes critical for children who receive chelation treatment, which removes lead from the brain and soft tissues, to be hospitalized or removed to a lead-safe environment because the treatment causes the child to absorb lead more rapidly. Further exposure to children receiving treatment will cause severe poisoning. Technical Assistance Bulletin 1: Lead-Based Paint Hazards and the Comprehensive Housing Affordability Strategy ("CHAS"): How To Respond To Title X, The National Center for Lead-Safe Housing, 1993; see *infra* note 125.

73 *Id.*

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 breathe 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 windowsill 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 n43.

83 Waldman, *supra* note 5.

84 *Id.*

85 *Id.*

86 *Id.*

87 Schwartz and Levin, *supra* note 6. Regulation of Fuels and Fuel Additives, 40 C.F.R. § 80 (1992); National Primary and Secondary Ambient Air Quality Standards For Lead, 40 C.F.R. § 50.12 (1992).

88 Reiss, *supra* note 2, at *3.

89 *Id.*

90 Schwartz and Levin, *supra* note 6.

91 Reid Calls For Stronger Evidence To Support Lead Limits, PESTICIDE & TOXIC CHEMICAL NEWS, No. 35, Vol. 21, ISSN: 0416-0501, June 30, 1993.

92 40 C.F.R. § 261.1(c)(4) includes discarded lead batteries as "discarded material," subjecting them to regulation. See also Lead Recovered From Spent Batteries Is Hazardous Waste, Appeals Court Rules, ENV'T REP., Vol. 24, No. 15, at 623, Aug. 13, 1993.

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. WIRE, 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.⁹⁶ 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.⁹⁷ In addition, the homes themselves contain lead pipes, as well as 3 million tons of lead in the paint on 57 million homes.⁹⁸ Thus, it is important to analyze what regulations exist with respect to lead in drinking water⁹⁹ and lead-based paint.¹⁰⁰

Lead was a common ingredient in plumbing materials, such as pipes, faucets, and solder which sealed the joints, until fairly recently.¹⁰¹ In 1986, Congress enacted legislation to severely limit future use of lead in pipes, solder, and flux associated with drinking water.¹⁰² That legislation limited use of lead in solder or flux to 0.2% lead, and lead in pipes and faucets to 8.0% lead,¹⁰³ which represent the current figures as well.¹⁰⁴ Although this helps limit lead exposure in subsequently constructed buildings and houses, it does little to affect pipes already installed.¹⁰⁵

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.¹⁰⁶ The LCCA "recalled water coolers with lead-lined water reservoir tanks and called for testing for lead contamination in school water sources."¹⁰⁷ 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.¹⁰⁸

In 1986, Congress amended the Safe Drinking Water Act ("SDWA") to delegate enforcement of the SDWA to the states.¹⁰⁹ 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.¹¹⁰ 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.¹¹¹ 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.¹¹²

Lead-based paint is another major problem area of lead exposure, especially in homes built before lead-based paint was thoroughly regulated in 1978.¹¹³ 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"),¹¹⁴ and the Consumer Product Safety Commission's ("CPSC") regulations.¹¹⁵ The former act prohibits residential use of paint with lead content in excess of 0.06%¹¹⁶ and requires that housing associated with the Department of Housing and Urban Development ("HUD"), constructed prior to 1978, be notified of possible lead hazards.¹¹⁷ That act also delegates to the states the authority to handle lead abatement and prevention.¹¹⁸ The latter regulations ban selling, through interstate commerce,¹¹⁹ or in stores,¹²⁰ 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 1978.¹²¹ Although the LPPPA has had positive effects toward eliminating existing lead paint in government

97 Waldman, *supra* note 5.

98 *Id.*

99 See also, Reiss, *supra* note 2, and Bellia, *supra* note 1.

100 See also, Freniere, *supra* note 14.

101 Bellia, *supra* note 1, at 404.

102 *Id.*, 42 U.S.C. § 300(g)(6) (1993).

103 *Id.* at (d).

104 42 U.S.C. § 300 (g)(6)(d) (1993).

105 *Id.*

106 42 U.S.C. §§ 300(j)(21) - (25).

107 Reiss, *supra* note 2, at *1.

108 42 U.S.C. § 300(j)(24)(d)(1) (1993). See also Reiss, *supra* note 2, at *5.

109 *Id.*; Reiss at *1.

110 *Id.*

111 Bellia, *supra* note 1, at 404; 40 C.F.R. §§ 141.80 - .91.

112 Reiss, *supra* note 2, at *1.

113 See *infra* notes 114 through 118 and accompanying text regarding regulations.

114 42 U.S.C. §§ 4821 - 4848 (1993).

115 16 C.F.R. § 1303 (1992); 16 C.F.R. § 1500.17 (a)(6)(i)(A).

116 "In 1955, paint manufacturers agreed to limit voluntarily the lead content in paint to 1.0%." Mahoney, *supra* note 10, at n51. The LPPPA initially defined lead paint in 1971 as containing more than 1% lead by weight of dry solids. In 1978, the LPPPA was amended to reduce the allowable lead content to 0.06%. *Id.*

117 42 U.S.C. §§ 4821 - 4848 (1993).

118 *Id.*

119 16 C.F.R. § 1303 (1992).

120 16 C.F.R. § 1500.17 (a)(6)(i)(A) (1992).

121 Lead Program Targets 'Most Preventable' Childhood Environmental Threat, PR NEWswire, Washington Dateline Section, May 4, 1993.

housing, it has by no means solved the problem. Implementation problems exist¹²² and lead abatement is extremely expensive.¹²³

As a result of these problems, Congress attempted to solve the lead-based paint issue by enacting the Housing and Community Development Act of 1992,¹²⁴ which includes the Residential Lead-Based Paint Hazard Reduction Act of 1992, commonly referred to as Title X.¹²⁵ Title X is considered a transitional bill¹²⁶ that requires states to establish lead prevention programs beginning in 1993.¹²⁷ HUD's approval of state programs are a condition of receiving most federal housing program funds.¹²⁸ 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.¹²⁹ The requirements of Title X include consulting with health and child welfare agencies, examining existing data related to lead-based paint haz-

ards, 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.¹³⁰

A continuing problem with lead-based paint hazard reduction is the excessive cost of lead abatement.¹³¹ 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 1994.¹³² 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,

1993.¹³³ 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.¹³⁴

Until the enactment of S.B. 232 in 1993, Missouri was without a state-wide program for dealing with exposure to lead.¹³⁵ Only three local governments had lead ordinances in effect prior to 1993: the City of St. Louis, St. Louis County, and Springfield.¹³⁶

Both the City of St. Louis and St. Louis County have had ordinances dealing with lead poisoning prevention for several years.¹³⁷ 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.¹³⁸ 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.¹³⁹ The

122 See William E. Schmidt, *Lead Paint Poisons Children Despite 1971 Law on Removal*, N.Y. TIMES, August 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.

124 P.L. 102-550.

125 Alliance To End Childhood Lead Poisoning, *Understanding Title X: A Practical Guide To The Residential Lead-Based Paint Hazard Reduction Act of 1992* (1993) [hereinafter *Understanding Title X*]. See also The National Center for Lead-Safe Housing, *Technical Assistance Bulletin 1: Lead-Based Paint Hazards and the Comprehensive Housing Affordability Strategy ("CHAS"): How To Respond To Title X* (1993) [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.

127 *Technical Assistance Bulletin*, *supra* note 125, at vii.

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.*

133 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv. See also *Lead Poisoning Commission, 1993: Senate File on S.B. 232 Before the Public Health and Welfare Committee*, 87th GEN. ASSEMBLY, 1st Sess. (1993) (This legislation was sponsored by Senator J.B. (Jet) Banks of the 5th Senatorial District. S.B. No. 232 was approved by the Senate Public Health and Welfare Committee, chaired by Senator Banks, in February 15, 1993, and by the House Public Health and Safety Committee, chaired by Representative Mary Bland of the 43rd District, on April 27, 1993. The bill consisted of a combination of a model law for states (*State Model Law: Comment Draft, Alliance To End Childhood Lead Poisoning*, October 1991), and several other states lead poisoning prevention laws, including Massachusetts and Illinois).

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.¹⁴⁰ Ordinance 57791 amended the previous ordinance in 1979.¹⁴¹

The ordinance provides approximately \$1 million per year towards screening kids.¹⁴² Routine testing is provided in day care centers and schools.¹⁴³ The screening is provided by two sources: a private, not-for-profit agency and the Health Department.¹⁴⁴ In 1992, the City of St. Louis screened 18,165 people, 47.4% having a blood level in excess of 10 ug/dL.¹⁴⁵

One problem is the majority of labs are not equipped to test for lead.¹⁴⁶ The testing requires a \$100,000 machine operated by trained technicians who must stay proficient in testing to remain accurate.¹⁴⁷ Therefore, the city does the majority of testing performed.¹⁴⁸

St. Louis County has had a similar ordinance for lead prevention.¹⁴⁹ The ordinance, first passed in 1978, provides testing

programs for children and structures.¹⁵⁰ 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,¹⁵¹ and that new paint must not contain over 0.06% lead.¹⁵²

In 1991, St. Louis County amended the ordinance.¹⁵³ Obviously, the provision prohibiting the sale of real estate to which lead has been applied was unworkable and unused.¹⁵⁴ 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.¹⁵⁵ 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.¹⁵⁶ The 0.06% limit in new paint remained unchanged.¹⁵⁷ St. Louis County amended the ordinance again as of 1993 to allow liquid encapsulant paint to be used for abatement purposes.¹⁵⁸ The City of St. Louis does not allow use of this product for lead abatement.¹⁵⁹

The Springfield lead program has existed for approximately ten years.¹⁶⁰ 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.¹⁶¹ The program also provides financial assistance to low income property owners with children having elevated lead levels.¹⁶²

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.¹⁶³ 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.¹⁶⁴

Senate Bill Number 232 requires the establishment of the "Commission on Lead

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. 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.*

159 *Id.*

160 *SPRINGFIELD, MO, CITY CODE*, art. III, §§ 18-50 - 18-74, (1983).

161 *Id.*

162 *Id.*

163 *Lead Poisoning Commission, 1993: Senate File on S.B. 232 Before the Public Health and Welfare Committee*, 87th GEN. ASSEMBLY, 1st Sess. (1993)[hereinafter *Senate File on S.B. 232*].

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.¹⁶⁵ Representative Patrick Dougherty, 67th District, presently chairs the Commission.¹⁶⁶

The bill requires the Commission to submit a report to the General Assembly and the Governor by January 1, 1994.¹⁶⁷ 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.¹⁶⁸ The Commission, with its broad representation, will act as a think tank and provide recommendations to the Governor.¹⁶⁹ The Department of Health will be responsible for writing future regulations, based primarily on the Commission's report and other considerations.¹⁷⁰

As of February 1994, the Commission has met on three occasions.¹⁷¹ The first meeting, held in November 1993, provided an educational update on lead for the Commission members.¹⁷² 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.¹⁷³ This mission statement was completed in January 1994, at the third meeting.¹⁷⁴ Additionally, the Commission was split into four subgroups: education, medical management, environmental and hazardous waste, and housing.¹⁷⁵ Three additional meetings are scheduled for February 25, 1994, March 15, 1994, and April 18, 1994, which area all open to the public.¹⁷⁶

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.¹⁷⁷ Upon determining that a lead hazard exists,

the owner and an adult occupant of the dwelling must receive written notification of the lead problem,¹⁷⁸ and the owner must comply with lead abatement.¹⁷⁹ The law also provides that the owner will violate S.B. 232 if they fail to take action to reduce the lead hazard.¹⁸⁰

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.¹⁸¹ The director of the Department of Health will issue licenses with licensing fees assessed to provide funding for the Missouri public health services fund.¹⁸² 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.¹⁸³

Second, the law requires the Department of Health to develop and maintain a reporting system for training and license compliance,¹⁸⁴ as well as for recording lead poisoning cases in Missouri,¹⁸⁵ which foster

165 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv., § 2.1.

166 Telephone Interview with Michael Carter, Lead Program Coordinator for Missouri Department of Health (Feb. 15, 1994).

167 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv., Section 2.2. Due to problems with the disastrous flooding in Missouri during the summer of 1993, the Commission was not appointed until November 1993. Telephone Interview with Michael Carter, *supra* note 166. Thus, the January 1, 1994 deadline for a report of the Commission's implementation plans was not met. An interim report is planned to be submitted in June or July 1994. *Id.*

168 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv., § 2.3.

169 Telephone Interview with Laurence Hillman, *supra* note 134.

170 *Id.* Other consideration will include reports from task forces which have been created under Healthy 2000, a national organization aimed at solving national lead problems by the year 2000. These task forces, containing individuals involved in the actual work (for example, lead abators), address questions such as, "What is the definition of an abator?" or "Would a company that removes windows be considered an abator?" *Id.*

171 Telephone Interview with Michael Carter, *supra* note 166.

172 *Id.* This meeting was held in Jefferson City, Mo.

173 *Id.*

174 *Id.* This meeting was held in Jefferson City, Mo. The meeting also entailed two presentations, one on hazardous waste and lead, and the other on lead testing and technology.

175 *Id.*

176 *Id.*

177 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv., § 2.3.

178 *Id.* at § 4.

179 *Id.* at § 5. The term "abatement" is defined in Section 1(1) of S.B. 232 as measures designed to permanently eliminate lead hazards, including removal or permanent containment of the lead-based substance, as well as all preparation, cleanup, or post-abatement testing activities associated with such measures.

180 *Id.* Failure to take action results in a class A misdemeanor. *Id.* at § 11.

181 *Id.* at §§ 7 and 8.

182 *Id.* at § 9.

183 *Id.* at § 11. There is a provision in § 6 that an owner of a dwelling who is not licensed may perform lead hazard abatement within certain guidelines. *Id.* at § 6.

184 *Id.* at § 9.

185 *Id.* at § 14.

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.¹⁸⁶ The legislation is also designed to create a plan to eradicate childhood poisoning by the year 2012.¹⁸⁷ 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.¹⁸⁸ The bill allows

Missouri to receive funding under Title X from the HUD competitive grants program, which is substantially increasing each year.¹⁸⁹ Revenue will also be obtained from certification and licensing of lead inspectors and lead abatement contractors, as required under the bill.¹⁹⁰ 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.¹⁹¹ 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.¹⁹²

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.¹⁹³ 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.¹⁹⁴ 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."¹⁹⁵ A licensed professional from Massachusetts had to be flown in at a cost of \$70,000.¹⁹⁶

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.¹⁹⁷ 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.¹⁹⁸ As the Governor will consider the Commission's report in developing future

186 See *supra* notes 136 through 162 and accompanying text.

187 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv., § 2.2.

188 See, e.g., note 21 and accompanying text.

189 See *supra* notes 131 and 132, and accompanying text.

190 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv., § 9.5.

191 *Id.* at § 10.

192 An engineer, whom they consulted with to secure a safe procedure for removing lead paint, recommended a heat gun. After nearly completing the removal of the paint, they discovered that heat guns were very dangerous. They then tested their children for lead poisoning and their 21 month old daughter tested at 33 mug/dl. Waldman, *supra* note 5.

193 *Id.*

194 Waldman, *supra* note 5.

195 *Id.*

196 *Id.*

197 S.B. 232, 87th Leg., 1st Sess., 1993 Mo. Legis. Serv., § 14.

198 *Id.* at § 2.

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.¹⁹⁹ 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 1994.²⁰⁰ 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.²⁰¹ These measures in-

clude covering lead-based paint that is in decent condition with liquid encapsulant paint,²⁰² purchasing water filters for drinking faucets,²⁰³ 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,²⁰⁴ and feeding children iron and calcium.²⁰⁵

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.

199 *Id.* at § 2.

200 Telephone Interview with Michael Carter, *supra* note 166.

201 The following are lead information numbers providing answers to all areas of lead concerns:

National numbers:

- National Lead Information Center Hotline 1-800-LEAD-FYI
- National Lead Information Center Hotline for more detailed information to public and professionals in health, construction, real estate and other fields. 1-800-424-LEAD
- EPA's Safe Drinking Water Hotline 1-800-426-4791
- Alliance To End Childhood Lead Poisoning 1-202-543-1147

Missouri numbers:

- Department of Health 1-800-392-7245
- Department of Natural Resources 1-314-751-7834

202 See *supra* note 158 and accompanying text.

203 Filters may be purchased for \$20 to \$40. See Bellia, *supra* note 1, at 424.

204 *Lead Poisoning And Your Children*, United States Environmental Protection Agency pamphlet number 800-B-92-0002 (September 1992) (obtained from the National Lead Information Center). See *supra* note 201, regarding agency phone numbers.

205 *Id.*