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Office of the Attorney General  
State of Connecticut

July 7, 2016

Dannel P. Malloy  
Governor  
State of Connecticut  
210 Capitol Avenue  
Hartford, Connecticut 06106

Jonathan A. Harris  
Commissioner  
Department of Consumer Protection  
165 Capitol Avenue  
Hartford, Connecticut 06106

**Re: Consumer Protection Investigation of Crumbling Concrete Home Foundations**

Dear Governor <sup>DCP</sup> Malloy and Commissioner Harris:

This letter is to provide a status report in response to your August 6, 2015, letter requesting that my office work in coordination with the Department of Consumer Protection ("DCP") to investigate crumbling concrete home foundations in northeastern Connecticut. Specifically, you asked my office to work with DCP to issue Civil Investigative Demands ("CIDs"), pursuant to Section 42-110d of the Connecticut Unfair Trade Practices Act ("CUTPA"), to determine "whether consumer protection rules were violated, whether faulty concrete was knowingly poured and supplied to contractors, and whether there was any breach of a duty and consequent failure to notify homeowners and the State."

My office has since worked closely with DCP to issue CIDs to numerous parties believed to have knowledge about the crumbling concrete foundations. We have also retained a concrete expert from UConn to investigate the underlying cause of the crumbling concrete, and we have deposed and interviewed dozens of people involved in the industry.

Based on our efforts to date, which are ongoing, we do not anticipate that our investigation is likely to provide a sufficient basis to support viable and worthwhile claims for violations of Connecticut consumer protection laws. Thus, we caution you that sovereign CUTPA claims – that is, claims brought under CUTPA by the State on behalf of the public – should not be relied upon as a source of significant financial relief for the homeowners afflicted by crumbling foundations or otherwise as a solution to this pressing public problem.

Our concrete expert has not yet issued his final report on the complete cause of crumbling foundations – it is expected in September. The numerous interviews, depositions and documents my staff reviewed to date, in addition to our expert's review of the scientific literature associated with this problem, point to two likely and important conclu-

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sions: (1) that the presence of pyrrhotite is a necessary causal factor in the concrete problems we have observed, but its use in concrete aggregate during the relevant time period does not provide a viable basis for a claim of unfair or deceptive business conduct and/or (2) even if one could advance a viable CUTPA claim in these circumstances, which is doubtful, we would not expect to recover financial relief in amounts adequate to provide meaningful relief relative to the scope of the harm.

I emphasize that we have not waived any claim against any potential defendant, and reserve full authority to assert such claims as are warranted by facts, law and circumstances. I am conveying this information and preliminary conclusions now for three reasons. First, while it is possible that further investigation will alter my office's current views, it is not likely to yield different conclusions. Second, I am mindful that recently-enacted legislation, Public Act No. 16-45, requires Commissioner Harris to report on the potential cause or causes of failing concrete foundations no later than January 1, 2017. In light of his mandate and the limited time frame to meet it, he should be informed of relevant findings and information as early as possible. Third, and related, the problems suffered by affected homeowners in northeastern Connecticut are acute and potentially devastating to families and communities. Government officials and others should not place unrealistic hopes that consumer protection law promises the likelihood of significant remedies, and they should instead focus their attention without delay on identifying and pursuing more effective potential avenues for broad-based assistance.

## I. Background

In this circumstance, the Attorney General's investigatory and enforcement authority is limited to that which is available under CUTPA. CUTPA authorizes the Commissioner of Consumer Protection to investigate possible unfair or deceptive business practices. *See* General Statutes § 42-110d. In addition to the authority to issue CIDs – essentially, administrative subpoenas – CUTPA authorizes the Commissioner and his representatives to conduct depositions of those believed to have information relevant to his investigations. *See* General Statutes §§ 42-110j, 110n.

Whenever the Commissioner has reason to believe that any person has violated CUTPA, he may request that the Attorney General bring a sovereign enforcement action in Superior Court seeking an injunction and an order directing restitution or other equitable relief. *See* General Statutes § 42-110m. In a CUTPA enforcement action, the Attorney General may pursue civil penalties of up to five thousand dollars per willfully committed act or practice prohibited under the statute.

It is within the context of CUTPA's statutory scheme that my office has been working with DCP to investigate the business practices relating to the crumbling concrete home foundations. (The statutory authority to undertake pre-suit CUTPA investigation is vested by statute with DCP. We undertake pre-suit CUTPA investigations in our role as legal counsel to DCP.) DCP has solicited consumer complaints and, to date, received 235 complaints from Connecticut homeowners whose foundations were poured largely from the mid-1980s through the early 2000s. On behalf of the Commissioner, we have issued 31

CIDs demanding information from homeowners' insurance carriers for information in their possession pertaining to the causes of crumbling concrete foundations.<sup>1</sup> We also issued CIDs to a cement manufacturer and to the Joseph J. Mottes Company ("Mottes"), the company that produced the only concrete associated with the problem. In addition, we have

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<sup>1</sup> There has been much public discussion about the refusal of insurance companies to provide coverage under homeowners' policies for damages to their foundations. Some homeowners have filed class action litigation against their insurers alleging violations of the Connecticut Unfair Insurance Practices Act ("CUIPA"), Conn. Gen. Stat. § 38a-815 et seq., breach of contract, and other claims based on coverage claim denials. We are aware also of anecdotal reports of some homeowners, whose coverage claims were initially denied, obtaining substantial settlements after initiating individual litigation against their carriers. Our understanding is that some of those homeowners and others have questioned the fairness and adequacy of disclosures made by some companies when coverage language was changed to erect barriers to these kinds of crumbling concrete claims. Those concerns are serious and warrant further review.

Our CUTPA CIDs to insurance carriers did not seek information concerning their coverage decisions or the propriety of those decisions or disclosures, and we have not determined if insurers are obligated to provide coverage for crumbling foundation damage or if any has engaged in unfair conduct in reviewing or denying coverage claims or in communicating with policy holders. Those determinations are beyond the scope of the Governor's referral, and, in any event, the authority to compel production of information to inform them would not derive from CUTPA but rather from the Connecticut Insurance Department's broad investigatory authority. CUIPA authorizes the Insurance Commissioner, upon reason to believe that an unfair insurance act has occurred to initiate a hearing if she believes it is in the public interest to do so. In the context of such a hearing, she may compel production of records and other information as she deems necessary. More broadly, Conn. Gen. Stat. § 38a-16 provides that the Insurance Department may, "as often as the Commissioner deems necessary, conduct investigations and hearings in aid of any investigation, on any matter under the provision of [Title 38, Insurance.]" In the course of such an investigation, the Commissioner may issue subpoenas, compel testimony, and order production of documents. *Id.* If the Insurance Department determines after investigation that an insurer has engaged in conduct constituting an unfair insurance practice it may order far-reaching relief, up to and including monetary fines and license revocation. *See* Conn Gen. Stat. § 38a-17.

The Insurance Department has not to my knowledge as of yet issued CUIPA or other subpoenas to gather information concerning insurers' coverage obligations, coverage denial conduct, or communications to their policy holders relating to crumbling foundation coverage. It has, however, recently issued data calls requesting some information concerning these topics. I applaud Commissioner Wade for taking this initial step and stand ready at her request to assist that and any further investigative efforts that may be warranted.

conducted over a hundred interviews and depositions, including of Mottes employees, past and present, and people involved in home construction and foundation installation in northeastern Connecticut over the past forty years.

We have retained Prof. Kay Wille, Ph.D., to conduct a scientific investigation into the underlying cause or causes of the crumbling concrete foundations. Professor Wille is an assistant professor of civil and environmental engineering at the University of Connecticut. His research focuses on concrete mixture design, and characterization of mechanical and durability properties, and he is the director of UConn's Advanced Cementitious Materials and Composites (ACMC) laboratory. He is the 2015 recipient of the National Science Foundation CAREER award.

Professor Wille has conducted a review of all available literature relating to crumbling concrete foundations. He has inspected Becker's quarry, the source of the stone aggregate used in Mottes' concrete, and he has taken and analyzed samples of stone from the quarry. He and his assistant, Rui Zhong, Ph.D., have also now taken and analyzed core samples from a representative sampling of seven homes with Mottes concrete foundations, six of which are crumbling, and they have conducted visual inspections of an additional 15 home foundations.

## **II. Relevant Factual Findings**

Professor Wille's review is ongoing and his final report is due in September. Nonetheless, he has conveyed to my office that his analysis of the stone aggregate from the quarry and from the core samples taken from home foundations, and his visual inspections, all suggest a likelihood that an iron sulfide mineral called pyrrhotite is the primary source of the problem.

Concrete used in home foundations is comprised of four main ingredients: cement, chemical admixtures, water, and stone aggregate. Since the early 1980s Mottes has used stone aggregate from Becker's quarry in its concrete. According to a geological map provided to us by the Connecticut State Geologist, Becker's quarry sits squarely in a vein of rusty weathering rock, containing significant amounts of pyrrhotite. Our investigation has not required us to examine other quarries in detail, but in light of the pattern of complaints presented, Becker's quarry appears likely to contain unusually high levels of pyrrhotite in its geological make up. It is certainly present at Becker's quarry in amounts greater than trace amounts. Pyrrhotite oxidizes in the presence of water and oxidant (oxygen or ferric ions). The oxidation leads to the formation of expansive mineral products, such as ferrihydrite, and the release of sulphate. The released sulphate promotes a reaction with tricalcium aluminate within the cement, resulting in deleterious secondary minerals such as ettringite. Further, at the presence of carbon, either from calcite in the aggregate or from carbon dioxide in the environment, another deleterious mineral, thaumasite, can be formed. Both of these secondary minerals (ettringite and thaumasite) are expansive and ultimately lead to the premature deterioration of the surrounding concrete foundations. More than

trace amounts of pyrrhotite are necessary to cause destructive expansive cracking and there may be other contributing factors necessary for the reaction to occur.

As part of their investigation, Professor Wille and Dr. Zhong conducted a literature review in an attempt to determine the state of knowledge about risks associated with pyrrhotite in concrete. Very significantly, although Professor Wille is confident in his conclusions about the necessary role of pyrrhotite in the present problems in northeastern Connecticut, he emphasizes that there has been insufficient study to yield a broadly recognized consensus on the role of pyrrhotite in concrete deterioration.

Concrete deterioration cases specifically associated with pyrrhotite have been reported in Oslo, Norway, in 1959, and in a dam in Spain in 2014. Cases associated with the oxidation of pyrrhotite or another iron sulfide mineral, pyrite, have been reported in Canada. Those cases apparently did not receive much attention until affected homes in the Montreal area were reported in the 1990s. Although the cases were investigated and a symposium on harmful pyritic rock fills was held in 1997 by the Montreal section of the Association of Engineering Geologists, the relevant scientific literature is sparse. There has yet to develop a broad or well understood consensus among scientists or building professionals about the risks associated with pyrite or pyrrhotite in concrete. No known regulatory body in the United States has restricted the amount of pyrrhotite in home foundation concrete.

Further, based on CID responses and depositions and interviews that my office and DCP conducted, we have insufficient evidence to support a finding that either Mottes or others in the concrete production or home construction industries had specific awareness of the deterioration risks associated with pyrrhotite at the time they provided concrete or aggregate for the now-crumbling foundations. Some witnesses have alleged instances of certain practices by Mottes and/or foundation installers – primarily practices involving introduction of excessive water into concrete mix – as potentially causing or contributing to concrete failures occurring many years later. While such practices may indeed have ultimately contributed to a subsequent pyrrhotite reaction in individual cases, it cannot be proved that any person knew or should have known at the time that their conduct could result in the pyrrhotite damage now being experienced. Simply put, the science relating to pyrrhotite was not sufficiently established at the time of the conduct, if it occurred, to support such a finding.

### III. Legal Analysis

As discussed below, CUTPA may be violated by conduct in trade or commerce that is deceptive or unfair, within the meaning of the statute. *See* General Statutes § 42-110b. Under these circumstances, as explained below, we do not anticipate that the State is likely to have a viable cause of action under either of these CUTPA theories against any party involved in the production or installation of the affected concrete home foundations.

For purposes of unfairness claims, "[i]n determining whether a practice violates CUTPA [the courts] have adopted the criteria set out in the 'cigarette rule' by the federal trade commission for determining when a practice is unfair: (1) whether the practice, with-

out necessarily having been previously considered unlawful, offends public policy as it has been established by statutes, the common law, or otherwise – whether, in other words, it is within at least the penumbra of some common law, statutory, or other established concept of unfairness; (2) whether it is immoral, unethical, oppressive, or unscrupulous; (3) whether it causes substantial injury to consumers (competitors or other businessmen)." *Cheshire Mortgage Serv., Inc. v. Montes*, 223 Conn. 80, 105-6 (1992). "All three criteria do not need to be satisfied to support a finding of unfairness." *Id.* "A practice may be unfair because of the degree to which it meets one of the criteria or because to a lesser extent it meets all three." *Id.*

Here, the investigation has not developed reliable evidence supporting a CUTPA unfairness claim based on the first two criteria: that any party involved in the production or installation of concrete home foundations committed any act or practice that offended an established public policy or that could be fairly characterized as immoral, unethical, oppressive or unscrupulous.

For a finding of unfairness based solely on consumer harm resulting from a business practice, the harm "...must be substantial; it must not be outweighed by any counter-vailing benefits to consumers or competition that the practice produces; and it must be an injury that consumers themselves could not reasonably have avoided," *Ulbrich v. Groth*, 310 Conn. 375, 474-75 (2013). Further, and critically, a showing of consumer harm must be accompanied by improper conduct by the defendants. *See, e.g., Genworth Fin. Wealth Mgmt., Inc. v. McMullan*, No. 3:09-CV-1521 JCH, 2012 WL 1078011, at \*12 (D. Conn. Mar. 30, 2012) ("[S]ubstantial harm to [plaintiff], unaccompanied by any improper conduct by the Principal Defendants, cannot support CUTPA liability.").

Here, although homeowners could not have reasonably avoided the substantial injury they have suffered from crumbling concrete foundations, a legal showing of improper conduct by any party is undermined by the absence of scientific consensus or regulatory restriction addressing the dangers of pyrrhotite in concrete.

Nor, for similar reasons, has our investigation developed evidence supporting a deception-based CUTPA claim against any party involved in manufacturing or installing the concrete at issue. To prevail on a claim for deception against a party, the State would need to demonstrate that (1) the party made a representation or omission or engaged in another practice likely to mislead consumers, (2) consumers interpreted the message reasonably under the circumstances, and (3) the misleading representation, omission, or practice was material (i.e., likely to affect consumer decisions or conduct). *See Caldor, Inc. v. Heslin*, 215 Conn. 590, 597 (1990).

Here, the State lacks evidence that any party made any representations, omitted information or engaged in any other practice likely to mislead consumers who, interpreting the message reasonably under the circumstances, made decisions based thereon to purchase the affected concrete for their home foundations. As noted above, it does not appear that those involved in the production and installation of concrete home foundations knew or should have known of the risks of pyrrhotite in concrete, and thus it cannot be proved that they misled consumers about such risks.

The precise manner that pyrrhotite in aggregate can cause or contribute to damage in concrete is not yet completely understood. Numerous homes built on concrete from Mottes using Becker's stone are completely unaffected. Yet to be fully determined is the amount of pyrrhotite necessary to cause a reaction (although it appears clear that more than trace amounts are necessary to cause a problem), what other factors are necessary contributors to the problem, and how such factors must interact to create damage. The only concrete producer of which we are aware that has produced home foundation concrete with stone aggregate containing pyrrhotite is Mottes, and the only quarry of which we are aware that has produced stone aggregate containing high levels of pyrrhotite for home foundation concrete is Becker's quarry. On May 9, 2016, Commissioner Harris and I accepted an assurance of voluntary compliance from both businesses. Under the terms of the assurance, neither business will sell any product containing stone aggregate from Becker's quarry for use in home concrete foundations in Connecticut until June 30, 2017. This date gives the General Assembly an opportunity to react to the final report of Dr. Wille and the conclusions of Commissioner Harris by passing protective legislation. Neither business admits to any wrongdoing or liability under any cause of action, however, and the assurance itself is not evidence of a CUTPA violation.

My investigation has been focused primarily on the legal viability of CUTPA claims. I should also point out, however, the substantial limits to the practical utility of bringing sovereign CUTPA claims for monetary relief, even if legally viable, against concrete producers or aggregate suppliers. Most significantly, the likeliest defendants would almost certainly lack sufficient assets to allow meaningful financial recovery relative to the dramatic scope of the damages collectively faced by affected homeowners. The assets necessary to address the problem are likely to be in the millions of dollars. The individuals working for corporations cannot be held personally responsible for the actions of the corporation without evidence necessary to pierce the corporate veil or evidence to support a responsible corporate officer doctrine claim – both of which theories require the establishment of detailed facts about specific individual actions that occurred decades ago, and which we have no basis at present to pursue.

I note that although the State has no apparent basis to pursue a claim under CUTPA against any party involved in the production or installation of concrete home foundations affected by pyrrhotite, individual homeowners may have private claims under, for example, tort, contract or CUTPA theories. Such claims could be supported by evidence, not developed through the State's investigation, that individual installers were negligent in their installation practices. Mottes, for one, contends that installers added too much water to their concrete at installation sites to facilitate the flow of the concrete down the chutes from the trucks into the ground, contributing to (if not causing) the subsequent deterioration. To the extent that any such circumstances exist, however, they would vary too widely from home to home to support a sovereign enforcement action.

Lastly, I note that some evidence exists, albeit conflicted and subject to challenge, that Mottes employees themselves may in some instances have caused excessive water content in concrete (e.g., through the practice of "hot-loading", that is adding excessive water to remnants of previous concrete loads to permit their reuse). To the extent that

foundation failures are attributable in part to excessive water content or other construction or materials defects, the circumstances would vary too widely from home to home and be subject to other proof problems such that a sovereign enforcement action is not practicable.<sup>2</sup> Those problems include the lack of available information about specific practices at specific homes by identifiable businesses and individuals, wide variations in circumstances among affected homes, contradictions among witness statements, hearsay obstacles, diminished recollections over long time periods, and witness bias or self-interest. We express no opinion about whether such problems would exist or be surmountable in private lawsuits involving individual homes.

#### **IV. Conclusions/Recommendations**

The investigation that my office has conducted in coordination with DCP has not to date resulted – and will not likely in the future result – in evidence supporting a sovereign enforcement action under CUTPA against any party involved with the production or installation of the concrete home foundations now crumbling. In short, the risks of pyrrhotite in home foundation concrete were not sufficiently known at the time that the concrete was produced and poured, undermining any unfairness or deception claim that could be brought under CUTPA.

In light of the above, strong consideration should be given to enacting through statute or regulation building standards limiting the presence of destructive expansive iron sulfide minerals (like pyrrhotite and pyrite) in home foundation concrete. The absence of such governmental standards, and the public policies embodied therein, inhibit the State's capacity to pursue claims, including CUTPA unfairness claims, against businesses that sell concrete containing the deleterious minerals. As noted, the assurance of voluntary compliance from Mottes and Becker Construction Company expires on June 30, 2017. This date was chosen so that the Legislature could have an opportunity in its next session to enact appropriate building standards legislation informed by our investigation before the agreement with the companies expires. The failure to do so would hamper any legal effort to protect consumers from future use of residential concrete containing dangerous levels of destructive minerals.

Finally, as has been publicly reported, informal discussions my office has had with some major insurers lead me to believe that at least some insurers, while maintaining a denial of coverage responsibility, may be willing to engage in a voluntary program to provide meaningful financial relief to affected homeowners. A majority of the market participants have not as of yet indicated any willingness to join such a program, but further outreach by government officials could be instrumental in gaining insurer participation in a voluntary

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<sup>2</sup> It is vital to emphasize that not every foundation in northeastern Connecticut that has exhibited cracking suffers from a pyrrhotite-related problem. Based on the investigation, crumbling caused by excessive pyrrhotite presents certain characteristics in foundation walls, such as multiple cracks within inches of each other that intersect and that are present in random directions, including horizontal cracks. This "map cracking" is generally recognizable to home inspectors and structural engineers upon visual inspection.

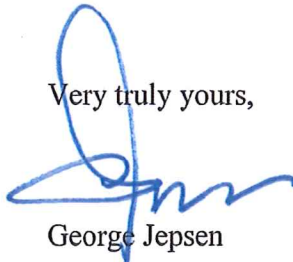


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relief program. Exploring this option is particularly important in light of the failure to this point to identify other monetary sources for homeowner relief, such as federal emergency or other public funds. In addition, as discussed above, consideration of further appropriate investigation into insurers' conduct and coverage responsibility as it relates to foundation failures is warranted, and may aid in informing or advancing the availability of relief from insurance companies. My office remains available to assist in any such efforts.

If you have any questions or concerns about any of the foregoing, please feel free to contact me.

Very truly yours,

A handwritten signature in blue ink, appearing to read "G. Jepsen", is written over the typed name. The signature is fluid and cursive, with a large initial "G" and a long horizontal stroke at the end.

George Jepsen