



CREOSOTE-TREATED WOOD PRODUCTS ARE AN INTEGRAL PART OF THE NATION'S CRITICAL INFRASTRUCTURES

In the wake of 9/11, Congress and the President repeatedly have reaffirmed the importance of protecting our nation's critical infrastructures. Creosote-treated wood products, especially (i) railroad crossties, switch ties, and bridge timbers, (ii) electrical and telephone utility poles, and (iii) marine and foundation piling, are well established industrial materials that are *integral* to the operation and maintenance of several critical infrastructure industrial sectors, including transportation, energy, and telecommunications. Ensuring the continuity of these and other critical infrastructure sectors, and the availability of the products and services that support them, is national policy. *Federal, state, or local officials considering banning, restricting, or discouraging use of creosote-treated wood products should take into account the vital role that such products play every day in sustaining the transportation, energy, and telecommunications critical infrastructure sectors, and thus, facilitating homeland security.*

Critical Infrastructure Protection

Less than two months after the 9/11 attacks, Congress enacted the "Critical Infrastructures Protection Act of 2001" ("CIPA"), 42 U.S.C. § 5195c, as part of the USA Patriot Act of 2001. CIPA defines "critical infrastructure" as "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters." *Id.* § 5195c(e). More specifically, Congress found that there is "an interdependent network of critical physical and information infrastructures, including telecommunications, energy . . . and transportation sectors," and that "[a] continuous national effort is required to ensure the reliable provision of . . . infrastructure services critical to maintaining the national defense, continuity of government, economic prosperity, and quality of life in the United States." *Id.* § 5195c(b)(1) & (2). Thus, the statute declares that "[i]t is the policy of the United States that any physical . . . disruption of the operation of the critical infrastructures of the United States be rare, brief, geographically limited in effect, manageable, and minimally detrimental to the economy." *Id.* § 5195c(c)(1).

When Congress, at the President's request, established the Department of Homeland Security (DHS) in 2002, the enabling statute and a subsequent implementing

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Presidential Directive, again discussed the need to protect both the day-to-day and emergency operation of specific critical infrastructure sectors such as transportation systems, including rail and maritime systems, and interstate highways; energy, including distribution of electrical power; and telecommunications, including telephones. *See* 6 U.S.C. § 121(d)(5); Homeland Security Presidential Directive/Hspd-7, §§ 15, 18(d) (December 17, 2003). In a February 2003 report, the President described the essential role that the nation’s critical infrastructure plays in the lives of all Americans:

America’s critical infrastructure sectors provide *the foundation for our national security, governance, economic vitality, and way of life*. Furthermore, their continued reliability, robustness, and resiliency create a sense of confidence and form an important part of our national identity and purpose. Critical infrastructures frame our daily lives and enable us to enjoy one of the highest overall standards of living in the world.

The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets, at viii (Feb. 2003) (emphasis added). The report also explains that unlike national security,

Homeland security, particularly in the context of critical infrastructure and key asset protection, is a shared responsibility that cannot be accomplished by the federal government alone. It requires *coordinated action on the part of federal, state, and local governments*; the private sector; and concerned citizens across the country.

Id. at vii (emphasis added). Thus, state and local governments, as well as the federal government, share the responsibility for ensuring that the nation’s critical infrastructures continue to operate no matter what the circumstances.

During the past five years, the impetus for enhanced critical infrastructure protection has been the threat of terrorist attacks. Nevertheless, the fundamental reasons why the nation’s critical infrastructures must be maintained apply equally to *any* type of action—including scientifically unwarranted prohibitions or restrictions on use of creosote-treated railroad ties, utility poles, or marine and foundation piling — that could disrupt or impair the operation of any critical infrastructure industrial sector.

Creosote-Treated Wood Products’ Role In Maintaining Our Critical Infrastructures

1. ***Railroad Ties and Bridge Timbers***—To put it simply, the nation’s railroads, which are used primarily to transport freight, could not operate without

creosote-treated crossties, switch ties, and bridge timbers. Creosote-treated crossties, whose average life is 35-40 years, literally serve as the foundation for a very high percentage (95%) of the more than 210,000 miles of railroad track in the United States. This represents approximately 648 million creosote-treated crossties that currently are in service. In 2006 it is expected that 18 million new or replacement creosote-treated crossties will be installed.

The basic purpose of the crosstie is to maintain the gauge between the steel rail track so that trains can operate safely and efficiently. The rail is attached to the crosstie with spikes that are driven through a steel plate into the tie.

➤ Crossties are made from two hardwood types – the oaks and several other high density hardwood species. The ties selected for use are high quality and free of defects. They conform to a national industry and railroad standard. The standard wood crosstie is 7-inches by 9-inches and 8 ½ feet in length. The ties are usually spaced at 19-inch intervals.

➤ Switch ties have the same cross-section dimensions except the lengths will be random. These ties are used where the track moves away from the main track to a side-track, for example into to an industrial storage yard area. The length of a switch tie could be as long as 20 feet.

Creosote is by far the predominant preservative used in the pressure-treatment of wood crossties. The wood crosstie represents 93% of all the crossties in use. Concrete (6%) and steel (1%) ties are used primarily for passenger rail systems or only under special circumstances, and are not interchangeable with wood crossties on a given stretch of track. Compared to concrete or steel, wood is the only renewable resource used as crosstie material.

In addition to creosote-treated crossties and switch ties, there are currently approximately 35,000 creosote-treated timber bridges in service on the railroads. Creosote-treated large timbers are used as structural components of bridges over small streams and roadways. The treated timber is a significantly less expensive alternative compared to steel and concrete construction materials.

2. ***Utility Poles*** – Within the United States there are approximately 135 million wood utility poles in service that support electricity distribution and telephone systems. Creosote is one of the three major wood preservatives used to treat the wood pole. In 2004 approximately four million wood utility poles were treated and installed by the electric utility and telephone industries. Treated wood utility poles have been in use since the early 1900s. During that time period, treated wood poles have established a documented record of long-term performance and a reputation for safety and reliability throughout the industry. Treated wood poles are manufactured from a sustainable

renewable natural resource that is both abundant and reasonably priced. They provide the most cost-effective material for the electric utility construction and maintenance requirements.

➤ Utility poles are made from predominately two softwood tree types – southern pine and Douglas-fir. The trees selected for use as a pole must be “straight” and free of structural defects – a very high quality natural material that meets national utility structural and code standards. Wood poles are far less energy intensive to produce than concrete, plastic or steel poles, and they are safer for utility workers due to their low conductivity.

3. *Marine and Foundation Piling* – Wood piling are an integral part of our nation’s seaport facilities. Both the private sector and the military use treated wood piling and heavy large treated timbers in their dock facilities. Treated marine wood piling are used in numerous commercial facilities to support pier/dock structures in all of the nation’s major seaports. The piling act as support beneath the dock structure. Although in some areas concrete and steel have become a factor for use in supporting pier construction, wood piling still remains the most economical choice. Wood is the only structural renewable resource and is far less energy dependent to produce than concrete, plastic or steel piling.

➤ Treated wood piling provide structural support beneath pier and dock structures of commercial cargo facilities at most all of the nation’s major seaports. These treated timber piling materials have been used since the early 1900s and have provided decades of continuous service in these commercial marine facilities.

➤ Large wood timbers are used as a bumper or cushion against the large ships as they dock. The treated wood prevents damage to both the dock structure and the vessel during the docking procedure.

➤ Many U. S. Navy submarine port facilities make use of what is known as a “camel-log” (often made from creosote-treated wood) to protect the hull of the submarine from being damaged.

In addition, treated timber piling are often a more economical choice - -

➤ To support the foundation of building structures in areas were the soil is unstable – for example the wet sandy loam soil conditions often found in seacoast areas in the southern States of Alabama, Florida, Louisiana and Mississippi.

➤ To provide structural support beneath the nation’s highways as they approach bridges. This situation again is an unstable soil condition and requires structural support, which is provided by the treated wood foundation piling material. For many locations on

the Interstate Highway System, the “approach” to the bridges has made use of foundation piling in construction beneath the highway.

CONCLUSION

Creosote-treated wood railroad ties, utility poles, and marine and foundation piling are vital for maintaining the nation’s railroads, electrical distribution systems, telecommunications systems, highways, and seaport facilities. There is no valid scientific evidence demonstrating that creosote-treated wood products, when handled and used properly, cause human or environmental harm. Government officials, and the public, should carefully weigh the public’s continuing need for creosote-treated wood products in helping to maintain critical infrastructures and homeland security against any perceived health or environmental risks.

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