

HAZARD AND BLIGHT: METHAMPHETAMINE WASTE'S INSIDIOUS PERSISTENCE AND WHY THE FEDERAL GOVERNMENT SHOULD BE GUIDED BY KENTUCKY'S APPROACH TO CLEANSE NATURAL RESOURCES

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I. INTRODUCTION - THE SILENT, ABEYANT, INVISIBLE MONSTER

There are times when the aftermath of an event is worse than the original incident. This is true of the methamphetamine empire. The enemy is decentralized and the refuse from production is toxic waste perhaps more hazardous to the public and natural resources than the clandestine labs' addictive product. Superlabs may individually pose the greatest waste hazards, but the aggregate of the small-time cooks and the mom-and-pop labs scattered in every conceivable location, compose the wider environmental hazards. These small-time operations should remain the prime concern of meth¹ legislation.

Natural resources, vital to life, occupy the same space as the "apartments, mobile homes, motel rooms, suburban homes,"² college campuses, and car trunks serving as makeshift labs.³ These makeshift labs produce up to six pounds of waste for every pound of meth.⁴ Furthermore, while some labs employ graduate chemists, it does not take finesse to be a meth cook.⁵ As an illegal business, green practices and public health are not the cook's concern. Generally, cooks would rather conceal the waste in their surroundings than abide by regulations, which put them under government scrutiny. On a small scale, meth production waste can attach to carpet, walls, and furniture.⁶ On a large scale, the toxic waste seeps into the soil, groundwater, rivers, and pollutes the air.⁷ To this end, state legislatures have implemented plans to clean up this waste.

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¹ "Meth" is the shortened term for methamphetamine.

² Jeff Wyble, *Methamphetamine-The New Epidemic*, 11 MICH. ST. U. J. MED. & L. 115, 128 (2008).

³ *Id.* at 129.

⁴ *Id.* at 129-30.

⁵ *Id.* at 128.

⁶ *Id.* at 130.

⁷ *Id.*

The lion's share of meth legislation has concerned one of two paths. The primary path has been to bottleneck meth manufacturers by restricting their access to the ingredients necessary to make their addictive product.⁸ The secondary path has been to contain the contaminant's effect on innocent bystanders.⁹ The real locus of harm, however, is meth production's effect on its surrounding natural resources.¹⁰ While the Environmental Protection Agency ("EPA") has failed to address this issue, Kentucky has risen to the occasion and implemented procedures to deal with the persistent and detrimental effects of methamphetamine waste. The Federal Government should adopt Kentucky's remediation methods, since they are more comprehensive than current federal solutions, and borrow from the most effective procedures of other states. Moreover, while adopting the Bluegrass State's more comprehensive approach, the Federal Government should adapt Kentucky's practices to be more aggressive, which will ensure a more successful conservation of natural resources across the United States.

II. UNDERSTANDING METHAMPHETAMINE'S RELATIONSHIP WITH AMERICAN CULTURE

Methamphetamine's notorious reputation did not begin with the premiere of *Breaking Bad* in early 2008.¹¹ In fact, methamphetamine has been around for over ninety years.¹² In 1919, a chemist by the name of Akira Ogata first synthesized the drug, and it was used in World War II "to keep soldiers in fighting form."¹³ It is thought that the practice of "home cooking" methamphetamine began in California around the 1950s, when Korean War Veterans brought back meth production methods from their service overseas.¹⁴ Around this time, news media covered meth's popularity for increasing users' alertness on overnight drives.¹⁵ Physicians prescribed meth to truckers, homemakers, college students, and athletes because it made people alert and active while also (allegedly) treating obesity, sinus inflammation, and narcolepsy.¹⁶

⁸ Deborah Ahrens, *Methademic: Drug Panic in an Age of Ambivalence*, 37 FLA. ST. U. L. REV. 841, 867 (2010).

⁹ *Id.* at 843.

¹⁰ Wyble, *supra* note 2, at 129-30.

¹¹ *Breaking Bad*, IMDB, <http://www.imdb.com/title/tt0903747/> (last visited Apr. 11, 2014) ("To provide for his family's future after he is diagnosed with lung cancer, a chemistry genius turned high school teacher teams up with an ex-student to cook and sell the world's purest crystal meth.").

¹² Ahrens, *supra* note 8, at 859-60.

¹³ Wyble, *supra* note 2, at 118.

¹⁴ Ahrens, *supra* note 8, at 861.

¹⁵ *Id.* at 861.

¹⁶ Wyble, *supra* note 2, at 118.

Over the next fifty years, methamphetamine's reputation grew to infamy and it became known under new names: ice, crystal, crank, speed,¹⁷ and poor man's cocaine.¹⁸ As medical research advanced, meth was found to be "a stimulant drug that acts on the central nervous system to produce a chemical high by stimulating the release of dopamine,"¹⁹ so much so that "repeated usage of the drug is associated with impaired dopamine production."²⁰ The quickness and variety of meth's side effects depend on how the drug is consumed.²¹ These effects include "an increase in energy and alertness and a decrease in appetite."²² Those who smoke or inject the drug feel "an instant rush" of intense pleasure, which lasts a few minutes.²³ These effects are delayed up to five minutes when the drug is snorted, and twenty minutes when ingested.²⁴ While methamphetamine has a "high potential for abuse,"²⁵ it is "classified federally as a Schedule II drug, [meaning it] is available legally, by prescription, under the trade name Desoxyn."²⁶

Methamphetamine's prescription drug classification has not barred abusers, as "[r]ecipes for methamphetamine production are readily available via print media and the Internet and use ingredients and hardware that historically have been easy to purchase at neighborhood stores."²⁷ A meth cook "can spend a [sic] \$100 on ingredients and produce a [sic] \$1000 worth of [methamphetamine]."²⁸ All necessary materials for meth production can be found at a local Wal-Mart. These ingredients include: acetone, alcohol (isopropyl or rubbing), fertilizer, cold medications containing ephedrine and pseudoephedrine, engine starter, pool-supply hydrochloric acid, iodine flakes or crystals, kitty litter, lithium batteries, gasoline additive, MSM nutritional supplement, matches and road flares, table or rock salt, lye, drain cleaner, brake cleaner, and gun cleaner.²⁹

The equipment to manufacture meth is a little harder to find, but can be obtained by a secondary trip to a hardware store and perhaps a manufacturer of laboratory glassware. The equipment list includes: aluminum foil, blenders, cheesecloth, clamps, coffee filters, funnels, gas cans, ice chests, jugs, bottles, laboratory beakers, measuring cups, buckets,

¹⁷ Ahrens, *supra* note 8, at 860.

¹⁸ Wyble, *supra* note 2, at 117.

¹⁹ Ahrens, *supra* note 8, at 860.

²⁰ *Id.*

²¹ *Id.*

²² Wyble, *supra* note 2, at 120.

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.* at 117.

²⁶ Ahrens, *supra* note 8, at 860-61.

²⁷ *Id.* at 865.

²⁸ Wyble, *supra* note 2, at 121.

²⁹ *Id.*

paper towels, plastic storage containers, propane cylinders, rubber gloves, rubber tubing, strainers, tape, tempered glassware, a thermometer, towels, and bed sheets.³⁰ The ease of obtaining the ingredients and equipment, by virtue of their common, household nature, means that meth production is affordable in theory and quite lucrative if the manufacturer can keep suspicions low. Meth's burgeoning industry is also frightening when considering that "[o]n average, a cook will teach ten people how to manufacture [meth] each year."³¹

The alertness and euphoria associated with meth consumption come at a high bodily cost. The destruction of dopamine receptors means not only that the pleasures of use diminish with each dose, but also that the feeling of any pleasure at all will eventually be impossible.³² In fact, long-time meth users experience symptoms akin to Parkinson's disease long after they discontinue using the drug.³³ Psychotic behaviors develop over chronic use, such as "paranoia, insomnia, anxiety, extreme aggression, delusions, and hallucinations," making the meth user dangerous to both themselves and others.³⁴ With the destruction of tissues and blood vessels being paired with a paranoia that supersedes diet and hygiene, the human body deteriorates, giving the user the appearance of a haggard, older person.³⁵

While the bodily health risks of meth consumption have been popularized, the underrepresented harms at the environmental level are far more important. Beyond meth users, "[a]nyone spending time in an active or former meth lab faces health risk [sic] and sometimes death. Children, because of their small stature and still developing brains and vital organs, are especially vulnerable to the health problems caused by homes filled with toxic chemicals."³⁶ For the average person, acute exposure "can cause shortness of breath, cough, chest pain, dizziness, lack of coordination, chemical irritation, and burns to the skin, eyes, mouth and nose, and in severe cases, death."³⁷ These effects can occur any time before a meth lab has been ventilated, meaning that police officers working a drug case are at risk until the lab has been adequately cleaned and ventilated.³⁸

Police officers and narcotics agents are prime specimens for examining chronic exposure. Although very little is known about long-term exposure in clandestine meth labs, serious health problems have been

³⁰ *Id.* at 121-22.

³¹ *Id.* at 122.

³² *How Meth Destroys the Body*, FRONTLINE (May 17, 2011), <http://www.pbs.org/wgbh/pages/frontline/meth/body/>.

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*

³⁶ *What Health Problems Do Meth Labs Cause?*, METH LAB HOMES (July 5, 2011), <http://methlabhomes.com/how-meth-labs-can-effect-your-health/>.

³⁷ *Id.*

³⁸ *Id.*

observed. These include: brain damage, liver and kidney damage, and reproductive issues.³⁹ Since the common meth cook could be anywhere in the United States, meth lab locations are nearly unpredictable. Accordingly, by the time a lab is discovered, it is often far too late to mitigate the hazards. Investigators inevitably get too close to meth evidence and its acute effects set in before they realize their folly. If investigating agents are exposed too often, the resulting acute effects build into chronic exposure.

Unfortunately, most meth labs are small and clandestine, as opposed to superlabs. Where superlab waste is typically concentrated in one monstrous heap, clandestine lab waste is dispersed across the surrounding environment. Meth waste would be rather easy to contain if all of the hazards were centralized so that it could be fenced off like a garbage dump or nuclear reactor. Deadly fumes are released during meth production and can stick to the lab's walls and floor.⁴⁰ Water runs the risk of contamination as cooks drain waste through their sinks, or dump the waste covertly into streams and ground water.⁴¹ Furthermore, meth byproducts can sink into any surrounding soil and remain, contaminating land for long periods of time.

It is this contamination of natural resources that makes individuals sick and limits the use of natural resources. Meth waste can affect anything that comes in contact with it, including users, cooks, police officers, wildlife, and families moving into locations that were secretly former meth labs. In 2004 and 2005, America took meth out of its periphery and labeled it a social problem, so much so that all fifty states adopted new legislation in order to find a solution.⁴²

III. THE GOVERNMENT'S COMPLEX SOLUTION TO A COMPLEX PROBLEM

A. The Federal Government's Call: Foundations of Meth Cleanup or a Lifeless Skeleton?

The Drug Enforcement Administration ("DEA") and the EPA primarily manage the Federal Government's meth policies.⁴³ The DEA, funded under the Meth Act,⁴⁴ handles law enforcement issues surrounding methamphetamine.⁴⁵ The DEA's Clandestine Laboratory Training Program

³⁹ *Id.*

⁴⁰ Wyble, *supra* note 2, at 130.

⁴¹ *Id.*

⁴² Ahrens, *supra* note 8, at 859-60.

⁴³ Aaron R. Harmon, *Methamphetamine Remediation Research Act of 2005: Just What the Doctor Ordered for Cleaning Up Methfields--Or Sugar Pill Placebo?*, 7 N.C. J.L. & TECH. 421, 455 (2006).

⁴⁴ Jennifer Wieman, Note, *Meth Labs: "Cooking" Up Environmental Disaster*, 15 MO. ENVTL. L. & POL'Y REV. 127, 131 (2007).

⁴⁵ Harmon, *supra* note 43.

and Community Oriented Policing Services primarily investigate meth labs, not their remediation.⁴⁶ The DEA only cleans clandestine meth labs cosmetically, to remove visual evidence of meth production. The EPA's Resource Conservation and Recovery Act ("RCRA") fictitiously considers the DEA to be the initial "generator" of meth waste, thus giving the DEA the primary responsibility of cleaning up the hazardous waste.⁴⁷ In the end, however, the DEA primarily conducts criminal investigations and assess charges; it does not to remediate the crime scene. In response, the EPA attempts to fill this gap.

The EPA manages chemical and environmental issues.⁴⁸ The agency has broad powers to control meth cleanup through RCRA and the Comprehensive Environmental Response Compensation and Liability Act ("CERCLA").⁴⁹ RCRA gives the EPA power over cataloging, generating, transporting, storing, and disposing of waste.⁵⁰ In other words, RCRA allows the EPA to control existing meth waste at every level,⁵¹ which is about as broad and sweeping as it gets. The EPA, however, has chosen to delegate its broad powers to the individual states through a permit program.⁵²

RCRA's intended purpose appears to be handling hazardous waste at-large. Unfortunately, the legislation inadequately deals with meth pollution, as it lacks the necessary specificity to do so. RCRA's explicit goals are mainly structured around large-scale environmental waste. The Act speaks in vague and general language about the federal government's authority to control pollution, rather than offering solutions to any specific problem. Additionally, while RCRA establishes grounds for meth producers to be federally prosecuted, this deterrent is toothless when considering the difficulty of locating these individual offenders and their typical inability to pay the costs of cleanup.⁵³ RCRA was simply not designed to offer a tailored solution to meth, but is instead merely a cataloging system pushed onto the state governments.

As opposed to RCRA, CERCLA gives the EPA "broad powers to require and direct cleanup of hazardous waste sites."⁵⁴ Unlike RCRA, CERCLA focuses on remediating sites that have been exposed to toxic waste.⁵⁵ CERCLA's enforcement of punishments stretch to "current owners or operators, past owners and operators at the time of disposal, generators

⁴⁶ *Id.* at 464.

⁴⁷ *Id.* at 464-66.

⁴⁸ *Id.* at 455.

⁴⁹ *Id.*

⁵⁰ *Id.* at 456.

⁵¹ *Id.* at 455-56.

⁵² *Id.* at 456.

⁵³ *Id.* at 458.

⁵⁴ *Id.*

⁵⁵ *Id.* at 459.

who arranged for disposal or transportation, and transporters,”⁵⁶ believing that any of these parties could have been responsible for the waste. This presents a real problem with temporary clandestine meth labs, where the meth cook has since moved on. Under CERCLA, the innocent owners foot the bill for remediation, while the true culprit is out contaminating another location.⁵⁷

Abandonment is a very important concern in meth cleanup. Currently, innocent property owners are paying fines created by criminal meth cooks, who have used their property for temporary labs and moved on. The current property owners could be just as insolvent as the meth cooks in paying these costs, which places the financial burden on the government. CERCLA is a legislation that comprises a “superfund,” which aids in paying the costs of cleaning up places like meth labs.⁵⁸ Due to the broad scope of CERCLA, however, the EPA only uses its provisions to remediate “the most severely polluted properties in the nation.”⁵⁹

CERCLA plugged a few holes in RCRA, but those holes still involved large-scale environmental pollution like the Valley of the Drums located in Bullitt County, Kentucky, which was a toxic dump of industrial barrels.⁶⁰ For the EPA, clandestine meth labs are tiny in comparison. These small locations, however, cumulate into a widespread problem, as deadly as other large-scale matters, but are less noticeable. The federal government’s solution allocates the superfund to states through a grant system. Unfortunately, many individuals and state governments, faced with the disincentive of footing the bill, allow contaminated property to remain dormant and unprofitable, perhaps allowing contamination to spread, instead of cleaning up the property.⁶¹

In 1986, the Federal Government amended CERCLA in an attempt to get the EPA more involved with remediating contaminated properties, through the Superfund Amendments and Reauthorization Act (“SARA”). This Act address “health problems created by contaminated sites by utilizing standards and requirements found in other environmental regulations.”⁶² For clandestine meth labs, SARA did not provide a standard for cleanup and was virtually worthless for drafting a state’s own standards.⁶³ SARA’s purpose certainly filled a gap in CERCLA, but failed to address the ubiquitous holes in clandestine meth regulation.

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.* at 458.

⁵⁹ *Id.* at 460.

⁶⁰ *Valley of the Drums*, BULLITT COUNTY HIST., <http://bullittcountyhistory.org/bchistory/valleydrum.html> (last updated Jan. 2, 2014).

⁶¹ Harmon, *supra* note 43, at 460.

⁶² *Id.* at 461.

⁶³ *Id.*

The Small Business Liability Relief and Brownfield Revitalization Act created a program used to fill another gap. Specifically, the Brownfield program focuses on cleaning up commercial property with superfund money via CERCLA.⁶⁴ It was not an act destined to resolve all of meth lab remediation but it was a positive step toward clandestine meth lab concerns. The program, however, does not concentrate on the non-commercial properties that make up a significant portion of clandestine meth labs.

The Federal Government has acted to fill wide gaps rather than solve specific pollution concerns. Clandestine meth labs cleanup, for the most part, remains unregulated by the federal government. While federal regulation has assisted in reigning in meth's environmental effects, most of the work and responsibility of site cleanup is left to the state governments.⁶⁵

B. The State Governments' Response: A Divided House Caught in the Details Among a Spectrum of Regulations

The United States Constitution, Article XI, clause 2, establishes federal law as "the supreme law of the land," thus providing the preemption doctrine, where federal law trumps state law.⁶⁶ Conversely, under the Tenth Amendment, when the Federal Government has not acted, the states are not preempted.⁶⁷ Put another way, if the Federal Government will not act to solve a problem, it is up to the state governments to innovate. Thus, the Federal Government has not offered specific meth cleanup solutions because it wants the states to act as "laboratories of innovation," which the states have done with varying results. While breaking down the regulations of all fifty states would be enlightening for detailed comparison, such an analysis is beyond the scope of this Note, but is recommended for a holistic reform considering all of the best practices under a cost-benefit analysis. A general sense of how states have handled meth regulation shows that:

[S]everal states have focused on passing legislation to address the epidemic by limiting access to the cold medicines crucial to meth production and by requiring that renters and purchasers to [sic] be notified if a particular property was used for meth production. Some states have also developed cleanup standards to remediate methfields, but the requirements and specificity vary widely among programs, as do acceptable residual levels of the toxins. Most states that require meth detection levels to be below a

⁶⁴ *Id.* at 462.

⁶⁵ *Id.* at 447.

⁶⁶ U.S. CONST. art. VI, cl. 2.

⁶⁷ U.S. CONST. amend. X.

certain point do not address the many precursor chemicals involved in production. Some states require cleanup by state certified professionals, while others, including North Carolina, let owners handle it if they desire. Only three states--Washington, Oregon and Arizona--have written statutes and/or regulations that contractors must follow in order to become certified...West coast states such as Oregon and Washington are widely considered to have the most comprehensive standards and guidelines for response and remediation in the country.⁶⁸

Accordingly, the general trends among states have two different focus areas: penalties and remediation.

Under the penalty regime, states focus on individuals that produce meth. The restriction of precursor chemicals prevents the production of meth waste but the focus is obviously on catching individuals that buy the ingredients in suspiciously large amounts or various items that produce meth in one shopping trip.⁶⁹ The penalty regime further attempts to punish meth cooks with fines, which could be used to pay for cleanup but make more sense as a form of corrective justice upon the individual.⁷⁰

The other focus area is a remediation regime. Whereas the penalty regime attempts to cut off meth production before it is made, the states under a remediation regime try to clean up the mess as best they can.⁷¹ While both regimes tend to advocate the disclosure of former "methfield"⁷² sites to potential tenants and homeowners, such as South Dakota mandates,⁷³ this simple practice is not required in all states.⁷⁴ In Colorado, the seller must actually disclose a property's methamphetamine-laden past and allow the buyer to test the property for methamphetamine.⁷⁵

Eight states have implemented technology to approach cleanup: Alaska, Arizona, Arkansas, Colorado, Minnesota, Oregon, Tennessee, and Washington.⁷⁶ There is debate, however, over the technology-based approach's inaccuracies, which may put public health at risk.⁷⁷ Meth tests used in the field only detect the presence of meth and require the use of

⁶⁸ Harmon, *supra* note 43, at 450-52.

⁶⁹ See generally Deborah Ahrens, *Methademic: Drug Panic in an Age of Ambivalence*, 37 FLA. ST. U. L. REV. 841, 867 (2010).

⁷⁰ *Id.*

⁷¹ Compare *id.*, with Harmon, *supra* note 43, at 450-52.

⁷² "Methfield" is a common term for an area that has been contaminated by meth.

⁷³ Jean C. O'Connor et al., *Developing Lasting Legal Solutions to the Dual Epidemics of Methamphetamine Production and Use*, 82 N.D. L. REV. 1165, 1187 (2006).

⁷⁴ Harmon, *supra* note 43, at 452.

⁷⁵ O'Connor et al., *supra* note 73.

⁷⁶ Harmon, *supra* note 43, at 449.

⁷⁷ *Id.*

laboratories to get the results, putting investigations on hold and further delaying site cleanup.⁷⁸ Accordingly, this puts those who guard the site, such as police, at risk until the proper cleanup crews arrive.

States vary in the extent of their remediation. With too little remediation, public health is at risk, while too much remediation can lead to property owner costs outweighing the benefits. Without a guiding example that strikes a proper balance between these two extremes, state remediation remains inefficient. Thus, if it is up to the states to test effective legislation for the Federal Government to later implement, this inefficiency hinders the Federal Government's decision to choose the best state's approach.

Another aspect of the remediation regime involves public awareness. This begins with the individuals that own, live in, or live near the properties in which meth has been manufactured. Most of the crucial people that would be surrounded by clandestine meth locations, like garbage men, motel employees, and neighbors, are unaware of the warning signs.⁷⁹ A major problem is establishing a means of effectively spreading information on how to detect a meth lab. Such details include:

The chemicals used in [methamphetamine] manufacturing have distinctive smells: phosphine smells like garlic, sulfur smells like rotten eggs, ammonia smells like cat urine, and acetone smells like nail polish remover. Labs usually have low levels of traffic during the day, but have a dramatic increase in traffic during late nighttime hours. The windows to most labs are blacked out and have reinforced doors for privacy. Residents living or working at the lab smoke outside due to the volatility of the fumes inside. An excessive amount of trash containing anti-freeze containers, stained coffee filters, lantern fuel canisters, empty cold medicine blister packs, drain cleaner bottles, and duct tape is a significant indicator of clandestine lab activity. Vehicles loaded with glassware, tubing, lab paraphernalia, and trunks should also raise suspicions. Additionally, rental managers also need to be suspicious of tenants insisting on paying rent in cash.⁸⁰

Police may have the clearest training for detecting meth labs, but that is not nearly good enough for remediation purposes. Since clandestine labs are hidden in plain sight, it is the layperson that can best direct authorities to these labs. If the public was better informed to detect potential

⁷⁸ *Id.* at 447.

⁷⁹ Wyble, *supra* note 2, at 131.

⁸⁰ *Id.* at 131-32.

clandestine labs, then the police could know to wear the proper HAZMAT gear before being exposed.

Unfortunately, the penalty regime is more popular and is the major focus of most state laws regarding methamphetamine.⁸¹ As a result, remediation regimes have not been adequately developed. Most states require an initial cleanup, but no guidelines “to determine safe residue levels, proper clean-up [sic] procedures, or the governmental role in overseeing the decontamination process.”⁸² Accordingly, many states dispose of meth production’s visible hazards but not the hidden ones, *e.g.*, meth-manufacturing residues that remain in the structures and poison the environment and inhabitants.⁸³ Instead, these costs are left to the property’s owner or its tenants. These parties may not have the means, the desire, or a state mandate for them to clean the site. This means that many of the sites are not adequately remediated and the hazards continue to negatively affect the property, environment, and future occupants. To make matters worse, property owners are not usually inclined to share their property’s meth history with potential occupants.⁸⁴

State supervision of mandatory reporting requirements exacerbates inconsistencies when implementing cleanup regulation. Since there are no federal-level mandates on how to clean property or what constitutes a clean location, the states are free to create their own standards. States like Washington, Oregon, or Arizona, have defined how a contractor gets certified to clean a property and what cleaning methods are to be used.⁸⁵ Other states have “do-it-yourself” certifications to allow property owners to get the job done with less of a financial burden.⁸⁶ Unfortunately, with lower standards come higher risks.

Meth registries have become a popular means of warning the general public of meth hazards. Pioneered by Tennessee and followed by Montana, Minnesota, and Illinois, meth registries work like sex-offender registries and are met with similar criticism.⁸⁷ Some have argued that meth production and use are a strained connection that ostracizes registered meth users.⁸⁸ Meth users present dangers to the public through their paranoia and erratic behavior while meth producers present risks associated with chemical residues produced through the cooking process which linger well

⁸¹ O’Connor et al., *supra* note 73, at 1182.

⁸² Wyble, *supra* note 2, at 130.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ Harmon, *supra* note 43, at 451.

⁸⁶ *Id.*

⁸⁷ O’Connor et al., *supra* note 73, at 1187-88.

⁸⁸ *Id.* at 1188 (“These registries, which according to state officials, function as public warnings, similar to sex-offender registries, are controversial. The American Civil Liberties Union has taken the position that the connection between methamphetamine use and manufacturing is tenuous and that these registries accomplish little beyond unnecessarily stigmatizing recovering addicts.”).

after production has ceased. A recovering meth user, on the other hand, would cease to be a danger to the public.

While meth has traditionally been thought of as an epidemic of the Western part of the United States, when meth moved to Tennessee in 1999, the effects were much harsher due to the eastern state's inexperience.⁸⁹ Tennessee's attempts at battling meth were the impetus for establishing Kentucky's meth regulations and cleanup. Kentucky's approach to meth shows improvement when compared to other states, featuring a well-developed remediation regime. Kentucky's system emerged late but its treatment of the contamination of its natural resources by meth production could become the ideal.

IV. THE WAY OF THE BLUEGRASS STATE

A. Systematic Clarity and Concrete Directness

Kentucky may seem like just another state tossed into the mix of meth policy, but its system carved out a path to the middle ground, where efficiency and safety may balance. Since the Federal Government left meth cleanup standards to state authority, Kentucky emphasized its interest in taking up that challenge in the Kentucky Revised Statutes §§ 224.1-410.⁹⁰ KRS § 224.1 commences by outlining that the General Assembly has noticed the environmental and public hazards that meth production causes when clandestine labs are involved.⁹¹ The government laments that "[r]emediation of properties has been frustrated by a lack of comprehensive standards and procedures for decontamination of properties found to have been involved with methamphetamine production" and states that it will provide "specific cleanup standards and procedures."⁹² First and foremost, the state grants itself the authority to regulate cleanup of clandestine meth production, which directly addresses the hole that the Federal Government left unfilled in its own policies.⁹³

KRS § 224.3(b) uses 0.1 micrograms of methamphetamine per 100 square centimeters as Kentucky's decontamination standard.⁹⁴ This amount is inconceivably small. Reducing contamination to this standard greatly reduces the risk of short-term effects for the surrounding environment and humans who come in contact with the area, and almost completely eradicates the risk of long-term effects. Having a concrete goal for meth

⁸⁹ Note, *Cooking Up Solutions to a Cooked Up Menace: Responses to Methamphetamine in a Federal System*, 119 HARV. L. REV. 2508, 2523 (2006).

⁹⁰ KY. REV. STAT. ANN. §§ 224.1-410 (West, Westlaw through 2013 Legis. Sess.).

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

regulation is the best first step any state can take in attempting to regulate the aftermath of contamination. To achieve the goal of less than 0.1 micrograms per 100 square centimeters, KRS functions through the Kentucky Administrative Regulations, which lays out KRS mandates in more detail.

Kentucky's method of meth cleanup begins when police suspect a property has been used as a meth lab. Under 401 KAR 101:030, the Kentucky State Police and local law enforcement have access to an initial site assessment form.⁹⁵ This form is known as the "Clandestine Drug Lab Preliminary Assessment Tier Selection Criteria (TAS), DEP 1016."⁹⁶ Police use this form to take down their suspicions, assess the property for signs of former meth production, and assign the property to a tier of cleanup.⁹⁷ It is important to note that this form does not describe the tiers themselves but merely provides a set of characteristics to determine the tier that a property should fall into. While the assessment takes the form of a checklist, it is more beneficial to visualize the tiers as the segments of a flowchart. The form is a two-page form where the first page asks seven questions to establish whether or not the property demonstrates signs of meth production while the next page assists in determining the level of contamination.⁹⁸ The initial questions are as follows:

1. Is there evidence of the production or any spills or released hazardous materials inside the structure?

☐ Yes: Continue with next question

☐ No: STOP. This is not a contaminated property. Decontamination is not required.

2. Does the assessment indicate the property contains meth contamination?

☐ Yes: It is a contaminated property. Continue with Tier 1 Selection Criteria. P2P/Methylamine and / or reagent labs default to Tier 3 Recommendation.

☐ No: STOP. This is not a contaminated property. Decontamination is not required.

3. Is lab capacity greater than 2 ounces per manufacturing event?

⁹⁵ 401 KY. ADMIN. REGS. 101:030 (2009).

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ KY. DEP'T OF ENVTL. PROT., CLANDESTINE DRUG LAB PRELIMINARY ASSESSMENT TIER SELECTION CRITERIA (TAS), available at <http://dep.ky.gov/formslibrary/Documents/DEP1016.pdf>.

- ☐ Unknown: Go to Tier 3 - Selection Criteria
- ☐ Yes: Go to Tier 3 - Selection Criteria.
- ☐ No: Continue with next Tier 1 question.

4. Did suspects likely manufacture methamphetamine, its reagents, or precursors for more than 3 days at this location?

- ☐ Unknown: Go to Tier 3 - Selection Criteria
- ☐ Yes: Go to Tier 2 - Selection Criteria
- ☐ No: Continue with next Tier 1 question.

5. Are the chemicals found consistent with a phosphorous/iodine (Red-P, Hypophosphoric, Hydroiodic) type methamphetamine or reagent lab?

- ☐ Unknown: Go to Tier 3 - Selection Criteria
- ☐ Yes: Go to Tier 2 - Selection Criteria
- ☐ No: STOP - A Tier 1 Cleanup Response is recommended for this property.

6. Did suspects likely manufacture longer than two weeks at this location?

- ☐ Unknown: Go to Tier 3 - Selection Criteria
- ☐ Yes: Go to Tier 3 - Selection Criteria
- ☐ No: STOP - A Tier 2 Cleanup Response is recommended for this property.

7. Is lab capacity greater than 1 pound per manufacturing event?

- ☐ Unknown: STOP - A Tier 3 Cleanup Response is recommended for this property.
- ☐ Yes: Go to Tier 4 - Selection Criteria. Law enforcement agencies must consult with KDWM officials prior to making this Cleanup Response Tier recommendation.
- ☐ No: STOP - A Tier 3 Cleanup Response is recommended for this property.

Tier 4 – Selection criteria:

Due to the potential for significant environmental degradation and impacts to human health and the environment, all potential Tier 4 properties must be

immediately reported to the [Kentucky Division of Waste Management] Superfund Branch⁹⁹

The second page of the form follows up with questions that require open-ended responses, including: the property's address, the property type, the materials found on the site, and the location of those materials.¹⁰⁰ For example, the form explicitly asks which method was employed to produce the meth; in the absence of wipe testing and lab testing, a visual assessment of this caliber would cover all but the most invisible forms of meth contamination.¹⁰¹

The Tier Selection Form DEP 1016 is not the whole story when it comes to tier analysis. While the checklist is clearly worded for law enforcement to quickly categorize meth-contaminated properties, the administrative regulations can easily confuse a layperson with jargon and seemingly arbitrary lengths of time.¹⁰² Some outside scientific information and inferences reveal the structure and logic behind tier assessment. In order to avoid a one-size-fits-all approach to meth cleanup, Kentucky has divided clandestine laboratory clean up into four tiers based on the length of time of the cooking process and the quality of the methamphetamine being produced.¹⁰³ In this way, Kentucky does not waste money by over-cleaning an affected property, but also does not under-clean serious meth production hazards. For example, if Kentucky had a system with ten tiers, law enforcement may waste time speculating as to which narrowly defined category a property would fall under. If the police were mistaken in categorization, and each tier had varying cleaning requirements to reach the goal of decontamination, the property could easily remain contaminated and harm the occupants.

The first classification for a contaminated clandestine meth laboratory is Tier 1, which is characterized by the following signs:

- (1) Crime scene investigation shows that the methamphetamine manufacturing or cooking process was initiated;
- (2)
 - (b) limited amounts of reagents or precursors for methamphetamine manufacturing are present and open;
- (3)

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² See generally 401 KY. ADMIN. REGS. 101:030 (2009).

¹⁰³ *Id.*

- (c) It is uncertain whether a ‘cook’ was completed
- (4)
 - (d) The investigation by the police finds:
 - (a) One (1) or two (2) anhydrous ammonia “Nazi” ‘cooks’ were completed; and
 - (b) Less than (2) ounces of methamphetamine was produced per production event;
- (5) The investigation shows methamphetamine production lasted less than three (3) days or
- (6) Minor spills and staining are observed on surfaces near the suspected cooking location.¹⁰⁴

For this initial tier’s statutory language, the rationale behind Kentucky’s remediation method becomes manifest. At base level, all clandestine meth labs, if classified under any of the tiers, will at least qualify for this first level, as the crime scene will show signs that meth cooking occurred. This will be true even if the observer does not know if methamphetamine was produced from start to finish, which sometimes happens if the cook is caught mid-process and forced to flee the crime scene.

Police initially suspect a clandestine meth lab if they detect the presence of any meth-making ingredients and equipment, as described in Part I of this Note.¹⁰⁵ The residual scent of any of the ingredients is enough to prompt suspicion. If a statutory interpreter is confused by what the police must find to qualify for Tier 1, section 3 of Tier 1 measures four overlapping concepts for defining a small-time cook. For instance, if less than two ounces of meth appear to have been produced per cook, or if the cook appears to have lasted less than three days, or if minor spills are observed around the property, Tier 1 is the appropriate categorization. Thus, a Tier 1 cook is characterized by low production over a brief period of time with minimal waste.

There remains one curious phrase in the Tier 1 assessment: “Nazi cook.” This phrase refers to a particular method of producing methamphetamine and implies that other cooking methods will appear in

¹⁰⁴ *Id.*

¹⁰⁵ Wyble, *supra* note 2, at 121-22 (“[T]hese ingredients include: acetone, alcohol (isopropyl or rubbing), fertilizer, cold medications containing ephedrine and pseudoephedrine, engine starter, pool-supply hydrochloric acid, iodine flakes or crystals, kitty litter, lithium batteries, gasoline additive, MSM nutritional supplement, matches and road flares, table or rock salt, lye, drain cleaner, brake cleaner, and gun cleaner” and “the equipment list includes: aluminum foil, blenders, cheesecloth, clamps, coffee filters, funnels, gas cans, ice chests, jugs, bottles, laboratory beakers, measuring cups, buckets, paper towels, plastic storage containers, propane cylinders, rubber gloves, rubber tubing, strainers, tape, tempered glassware, a thermometer, towels, and bed sheets.”).

different tiers.¹⁰⁶ This begs the question of why a Nazi cook is specifically mentioned in the statute at all. The “Birch Reduction Method,” commonly referred to as the “Nazi” method,¹⁰⁷ “combines anhydrous ammonia and lithium or sodium metal with ephedrine or pseudoephedrine.”¹⁰⁸ Lithium is a poisonous metal and sodium is explosive, but the statute explicitly mentions anhydrous ammonia for good reason. Anhydrous ammonia spills create toxic clouds that are dangerous enough to call for evacuations of entire towns¹⁰⁹ because it is corrosive to the human eye, skin, and respiratory tract.¹¹⁰ Therefore, just because a property is classified as Tier 1 does not mean that the property does not come with significant hazards.

Tier 2 builds on the Tier 1 assessment. The second tier is triggered if it appears that three to four Nazi cooks may have been completed, the police find that the production lasted between three days and two weeks, or that the spills within the structures are located in multiple areas.¹¹¹ Also, the reference to a specific cooking method—the Nazi cooking method—in Tier 1 begins to make more sense as Tiers 2 and 3 are triggered by different cooking methods.¹¹² Thus, the tier assessment also rises alongside the danger of the cooking method implemented.

Tier 2 is characterized by a cooking method known as the “Red-P” method; unlike the Nazi method, “[t]he Red-P method produces methamphetamine by combining ephedrine or pseudoephedrine with red phosphorous, iodine crystals, and water.”¹¹³ The formula may lack the deadly ingredients for a Birch Reduction but the tradeoff comes with risks that are far more potent. The “Red-P” name comes from the red phosphorous used in the cooking method, which forms the byproduct phosphine.¹¹⁴ Phosphine proves more deadly than anhydrous ammonia because short-term exposure causes severe irritation of the respiratory tract and impairment of the central nervous system, cardiovascular system, heart, gastrointestinal tract, liver, and kidneys.¹¹⁵ On top of this, phosphine is highly explosive, which makes cooking methamphetamine one of the more

¹⁰⁶ Methamphetamine Synthesis Inhibition: Dissolving Metal Reductions, U.S. Patent No. 6,852,891 col. 2 II. 2 (filed June 21, 2001) (issued Feb. 8, 2005), *available at* <http://www.erowid.org/archive/rhodium/pdf/methamphetaminesynthesisinhibition.pdf>.

¹⁰⁷ Geoff Betsinger, *Coping with Meth Lab Hazards*, OCCUPATIONAL HEALTH & SAFETY (Nov. 1, 2006), <http://ohsonline.com/Articles/2006/11/Coping-with-Meth-Lab-Hazards.aspx>.

¹⁰⁸ *Id.*

¹⁰⁹ Methamphetamine Synthesis Inhibition: Dissolving Metal Reductions, *supra* note 106, at col. 1 II. 2.

¹¹⁰ Betsinger, *supra* note 107.

¹¹¹ See 401 KY. ADMIN. REGS. 101:030 (2009).

¹¹² *Id.*

¹¹³ Betsinger, *supra* note 107.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

dangerous uses of the product.¹¹⁶ Whereas anhydrous ammonia eats away at the external parts of the body, phosphine affects the crucial internal systems of the body—specifically the respiratory system.

Tier 3 classification arises when numerous Red-P or Nazi cooks are suspected.¹¹⁷ At this stratum, between two ounces and one pound of meth are produced during each event and the time period of the cooks has lasted between two weeks and several months with severe spills noticed around the structure.¹¹⁸ Contamination observed outside of the structure, meaning into natural resources at-large, becomes a factor at this level.¹¹⁹ This tier also encompasses property where tier assessment could not be completed due to insufficient evidence, meaning that authorities on the matter simply cannot know how contaminated the property actually is.¹²⁰ Following the pattern of the previous statutory sections, an additional method of production is explicitly mentioned in this tier: the P2P/Methylamine method.¹²¹

In the final of the three most popular methods of producing meth, P2P “involves phenyl-2-propanone reacted with methylamine, mercuric chloride, alcohol, and aluminum foil.”¹²² Similar to anhydrous ammonia, methylamine is a dangerous, corrosive material, exacerbated by its potential to cause fluid buildup in human lungs.¹²³ Side-effects can be delayed such that an individual may not know they have been exposed until the damage has fully set in.¹²⁴ Mercuric chloride is made up of mercury, a liquid known for its high toxicity that can seep straight through skin, and chlorine, which has side effects similar to phosphine.¹²⁵

Tier 4, the highest classification of contamination possible, encompasses large productions of meth that would be greater than one pound and occur over two weeks or more.¹²⁶ Whereas Tier 3 introduced the concept of outside environmental contamination, Tier 4 handles cases that show severe environmental effects.¹²⁷ This is likely due to the EPA having federal laws that better handle large, concentrated levels of contamination through its CERCLA and Brownfield regulations.

¹¹⁶ See Harry F. Skinner, *Methamphetamine Synthesis Via HI/Red Phosphorous Reduction of Ephedrine*, 48 FORENSIC SCI. INT’L 128, 128-34 (1990), available at <http://www.erowid.org/archive/rhodium/chemistry/meth.hi-rp.html> (discussing phosphine’s use in the Red-P production method).

¹¹⁷ 401 KY. ADMIN. REGS. 101:030 (2009).

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² Betsinger, *supra* note 107.

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ 401 KY. ADMIN. REGS. 101:030 (2009).

¹²⁷ *Id.*

After a property has been deemed contaminated, the Department of Public Health performs a posting of the property.¹²⁸ This process involves notifying the property owner and posting a “Notice of Methamphetamine Contamination” on the property entrance.¹²⁹ The homeowner retains the choice of whether to initiate cleanup.¹³⁰ When clean up does occur, 401 KAR 101:040 tailors the amount of cleanup necessary at each tier to reach the goal of 0.1 micrograms per 100 square centimeters, the standard required under KRS § 224.3(b).¹³¹ 401 KAR 101:040 addresses cleaning up for a Tier 1 contamination by reference of a few sections.¹³² A certified contractor gives a preliminary assessment. Air monitoring for volatile compounds occurs with a forty-eight hour ventilation period and HVAC filter replacement. Areas of likely contamination are inspected. Photographs are taken before and after cleanup, all hard surfaces are cleaned, absorbent items are removed, destroyed, and disposed of, and dust-collecting surfaces are cleaned. Finally, after all of the above have occurred, samples are taken to determine if the property is decontaminated.¹³³

Tier 2 cleanup is the same as Tier 1 with a few additional precautions. The ventilation is set at seventy-two hours and the ducts are replaced.¹³⁴ Appliances and fixtures are destroyed and disposed of if their decontamination is in doubt.¹³⁵ Stained surfaces and items are destroyed and disposed of in a special landfill.¹³⁶ Hard surfaces are double washed then painted or sealed.¹³⁷ Tier 3 adds a five-day ventilation, a screening of any septic tanks on site, and demands cleaning or removal of contaminated subfloor.¹³⁸ Tier 4, however, does not list any particular response, probably due to the amount of damage at this level being extremely difficult to clean, but Tier 4 does suggest that properties at this stratum may have a more economical solution through demolition, which avoids the cleaning problem almost entirely.¹³⁹

Contractors that clean these properties must be certified through a rigorous process.¹⁴⁰ Certified contractors also have to pay into a financial assurance that allows the state to pay for an alternative cleanup if a

¹²⁸ 902 KY. ADMIN. REGS. 47:200 (2009).

¹²⁹ *Id.*

¹³⁰ Interview with Kim Greenidge, Program Coordinator, Superfund Branch, Div. of Waste Mgmt., Energy & Env’t Cabinet, in Frankfort, Ky. (Oct. 14, 2013).

¹³¹ 401 KY. ADMIN. REGS. 101:040 (2009).

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ 401 KY. ADMIN. REGS. 101:010 (2009).

contractor fails to reach the decontamination goal.¹⁴¹ The Occupational Safety and Health Administration requires contractors to have forty hours of instruction, eight hours of annual refresher training,¹⁴² and proof must be given to the Environmental and Public Protection Cabinet that the contractor maintains a liability insurance policy of at least \$250,000.¹⁴³ Given the variety and amount of forms that a contractor must fill out to comply with Kentucky requirements proves that Kentucky takes diligent consideration of who is cleaning up meth contamination.¹⁴⁴

Unlike Tennessee's system, occupants are not quarantined from living on the property under Kentucky's method.¹⁴⁵ While it would seem better to quarantine a contaminated property, perhaps it is more beneficial to allow the occupants the choice to live in a contaminated property should they have no other place to go. Unfortunately, a perplexing situation emerges—the problem is not that the state refuses to keep the occupants out but that the owner is not forced to clean up. Kentucky's tier system is worthless without implementation. Since the cooks typically do not pay for cleanup, someone has to.¹⁴⁶ Part A of this Note has only illustrated the successful parts of Kentucky's cleanup regulations and, while that portion is large and teeming with optimal solutions, there remain some drawbacks to the system. While these drawbacks impede certain aspects of effectively ridding properties of meth waste, these imperfections are not fatal to its design and have a better chance of being altered when adopted at the federal level. If Kentucky's remediation regime is to fill the holes in current federal regulations then it must adapt beyond the few flaws holding it back.

B. Redundancies from a Communications Breakdown

Kentucky's regulations adequately handle meth in their current form; however, there remain small, but persistent inefficiencies. Kentucky's issues with cleaning up meth have an unsurprising parallel to the federal system's treatment of waste in general. Both systems divide the duties among different departments where none of them can easily perform the full duties of meth regulation.

¹⁴¹ 401 KY. ADMIN. REGS. 101:020 (2009).

¹⁴² *Frequently Asked Questions: HAZWOPER*, U.S. DEPARTMENT LAB., <https://www.osha.gov/html/faq-hazwoper.html> (last visited Apr. 14, 2014).

¹⁴³ 401 KY. ADMIN. REGS. 101:010 (2009).

¹⁴⁴ *Contractor Certification*, ENERGY AND ENVTL. CABINET, <http://waste.ky.gov/SFB/MethLabCleanup/Pages/ContractorCertification.aspx> (last visited Apr. 14, 2014).

¹⁴⁵ Interview with Kim Greenidge, *supra* note 130.

¹⁴⁶ Harmon, *supra* note 43, at 459.

Kentucky has a particularly cost-effective tier assessment; unlike other states that use lab testing before ever determining a tier, the police perform the initial assessment by using visual clues.¹⁴⁷ There are two other methods that Kentucky could utilize in the process: wipe and lab testing.¹⁴⁸ A wipe tells if the location has meth while a lab test that can show how much meth contamination is present.¹⁴⁹ A lab test can detect very specific amounts of chemicals within a structure, whether paired with a wipe test or not, which is ideal but costly.¹⁵⁰ Since meth can be detected from visual clues and law enforcement already investigates crime scenes, the use of lab testing appears overly cumbersome and wipe testing would only benefit contaminated properties that didn't show visual clues. While an initial assessment by police officers keeps the cost of testing down, it puts officers in danger due to the length of exposure during the search for visual clues.¹⁵¹

Kentucky State Police are commanded to assist in assessing property but the record-keeping form comes from the Energy and Environment Cabinet.¹⁵² Since this is not a Kentucky State Police form, the regulations command that it not be part of the criminal investigation, which gets in the way of law enforcement's search for evidence rather than encouraging mutual interests.¹⁵³ These procedures force the Kentucky State Police to fill out a tier assessment form and submit copies to the Local Health Department, Energy and Environment Cabinet, and the Department of Public Health.¹⁵⁴ Consequentially, this assessment form becomes nothing more than irritating paperwork to the police, since putting any substantial work towards tier assessment only delays their investigation. In addition, KAR already mandates that contractors do an assessment after the police are done and may change the classification to a more appropriate tier.¹⁵⁵ The cumbersome transport and copying of these papers and the heavy workload already put upon police mean that forms are often lost or improperly filed, which leaves the property sitting in limbo.¹⁵⁶

The Kentucky's Department of Public Health posts warnings on properties but does not quarantine them. This method has the advantage of warning occupants without removing them from their homes. Instead, the Department of Public Health is more than willing to assist homeowners through the cleanup process.¹⁵⁷ Furthermore, Kentucky's Division of Waste

¹⁴⁷ Interview with Kim Greenidge, *supra* note 130.

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² 401 KY. ADMIN. REGS. 101:030 (2009).

¹⁵³ 502 KY. ADMIN. REGS. 47:010 (2009).

¹⁵⁴ *Id.*

¹⁵⁵ 401 KY. ADMIN. REGS. 101:040 (2009).

¹⁵⁶ Interview with Kim Greenidge, *supra* note 130.

¹⁵⁷ *Id.*

Management already does a great job of listing cleanup contractors for the homeowners; however, the actual costs of these services are often levied on the property owners and contractors. Unfortunately, allowing the property owner to choose if a contaminated property needs to be cleaned contradicts the goal of preserving natural resources in the first place. This is not necessarily a problem for the homeowner, but rather a problem for which the government should be paying. Far from state idleness, this behavior is likely due to the superfund's allocation of money to fix this problem remaining underwhelming and hard to obtain despite the expansive nature of the waste problems it was designed to solve. The Federal Government should be paying for each tier of cleanup since it has several acts such as CERCLA, RCRA, and the Brownfield program that all collect and distribute money to handle blighted property. Property blighted by meth contamination is functionally no different than other forms of pollution and is widespread enough that it affects the nation. This sort of fiasco should not be left to taxpayers to solve because it essentially means they are double paying due to Federal oversights.

Kentucky's system appears effective. KRS and KAR certainly have a detailed system that directly confronts many of the issues that plague meth decontamination. In theory, the division of labor among departments should split the workload and enhance cooperation among the branches. In practice, however, communication between the two branches has been reduced to sending forms back and forth among departments for recordkeeping. Losing any one form in the shuffle can break down Kentucky's elegant process. Regardless, Kentucky maintains the best regime for eradicating meth. What is needed now is a unified system that can be implemented consistently.

C. Experiment to Theory, Theory to Practice

While Kentucky has a few inefficiencies for remediating contamination of natural resources, some minor adjustments will evolve Kentucky's experiment into a much wider federal practice, ideal for wider meth reform. One way to fix Kentucky's administrative inefficiencies would be to demand more cooperation from each of the branches of state government. The problem with this angle is that it takes a form more similar to punishment than encouragement. Demanding more cooperation would likely result in the micromanagement of honest workers who are already dealing with large disparate problems across the state. A more ideal method would be to set up a new department within state government, such as expanding the Division of Waste Management to include a dedicated subdivision—a Methamphetamine Branch instead of merely a Superfund

Branch—that handles methamphetamine remediation among other meth-related issues.

Under this division, superfund money would still be involved but most of the KRS and KAR process would be consolidated within a single team of people working in the same building. Police could at least perform their investigations until they suspect meth activity. At this point, the Methamphetamine Branch would be contacted to do an assessment. The Branch would take pictures of the scene just like the KAR demands and cut down the assessments into a more efficient two-step process. The first step would be a wipe test to safely detect contamination. If contamination were detected, a lab test would be performed to accurately determine how far the property's levels are from the decontamination goal. If a visual assessment suffices in an obvious tier selection, then wipe and lab testing can then be saved for situations that require them.

This method takes the pressure off of police officers to do their work, while encouraging them to stay connected directly with the Methamphetamine Branch for their own safety. This approach would drastically limit the police exposure to meth waste and its subsequent risks. Also, both departments could better relay information that would be useful to both the penalty regime investigations and remediation regime cleanup. Police would only have to fill out their police reports while the Methamphetamine Branch would fill out the crucial tier assessment forms. These forms would only need to be filled out once, since the Methamphetamine Branch would be trained in spotting meth contamination. This process would cut down on the risk of potentially contaminated property falling through administrative cracks, as long as police could spot the initial signs of meth.

As for posting the property, this new Methamphetamine Branch could implement the notice and posting processes right after performing their assessment. This could all be done in one fluid motion, making the Kentucky Administrative Regulations' guidelines more efficient and effective. Since the Methamphetamine Branch would be under the Division of Waste Management, it would be adequately equipped to guide homeowners through the decontamination process and could even outline the process in the posting notice. In the grand scheme, educating the general public on detecting the presence of meth could also generate incentives for protecting natural resources.

The decontamination process would be most effective at protecting natural resources if it was mandatory for every property that yielded a positive wipe test. Since Kentucky already pays for the initial tests for contaminated sites, paying for full decontamination makes full use of initial assessments. In this regard, the lab testing would only make the assessment more accurate and would allow for more tiers to divide cleaning procedures

which would add more precision,, although Kentucky's current system of visual assessment may arguably be as efficient as cleaning assessment gets. With a more divided tier system, cleanup could be further specified and tailored to greater economic utility while maintaining safety. The inevitable bottom line would be cost, which the Federal Government has the most abundant resources to solve.

Once Kentucky's system improves through changing a few policy redundancies, the entire system could be adopted as the Federal Government's scheme for meth cleanup, repairing its lack of specificity regarding meth remediation. The Federal Government's implementation of these same standards would make decontamination consistent across every state. This would fill the gaps that the Federal Government left to the states long ago. This route especially aids Tier 3 properties, which also contain significant contamination of natural resources.

V. CONCLUSION: UNITED WE STAND, DIVIDED WE FALL

The key to handling methamphetamine cleanup lies in procedure. States have been acting as laboratories for decades, implementing their own methamphetamine cleanup plans based loosely on federal guidelines. Many states have tried to clean up methamphetamine by keeping the ingredients away from cooks in the hope that meth cannot corrupt when it cannot be made. This has only served to make the meth cooks are more resourceful; outmaneuvering these regulations can be as easy as "smurfing," paying off several buyers to buy ingredients in unsuspecting amounts in various locations.

Some states have focused heavily on cleaning up meth through various cleanup regulations. While these regulations are more comprehensive in their approach to the remediation of meth pollution, some of these regulations appear to be over-inclusive (wasting money) and others under-inclusive (endangering lives). Since meth contamination does not vary by state, there must be a golden mean that can optimally solve meth cleanup in clandestine areas over the United States. For that, the Federal Government will need to reduce state variability by taking back cleanup regulation.

With Kentucky as a guide, the good must be taken in aggregate with that of other programs, while the bad is separated and discarded. Expanding the use of the superfund, decontamination would be paid for through taxes, which creates more incentive for homeowners to report suspected meth labs since they would not be footing the bill. If this process

proves successful enough, meth wipes might model radon testing¹⁵⁸ when property owners sell their homes, truly showing the government's concern with cleaning up meth waste and not just punishing meth cooks. Adapting Kentucky's remediation regulations to be more assertive and adopting them at a federal level would be a leap forward toward a meth-free world. With clandestine meth labs cured of their hazard and blight, the Federal Government can allow states to concentrate on solving any remaining problems, devoting proper time and resources to new issues in the wake of meth contamination's resolution. Now is the time for the Federal Government to respond to Kentucky's call for sustainability, keeping homeowners and homeland a top priority: a message to clear the air and clean up wrongful acts rather than solely punishing them.

¹⁵⁸ *Radon and Real Estate*, U.S. ENVTL. PROTECTION AGENCY, <http://www.epa.gov/radon/realestate.html> (last updated Mar. 26, 2013) ("In 2004, Dr. John C. Weicher, the Federal Housing Commissioner issued a radon gas and mold Notice (H 2004-08) requiring that a release agreement (HUD-9548-E) be included in all sales contracts for HUD-acquired single family properties. The agreement notifies purchasers of the potential health problems caused by exposure to radon and some molds.").