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TOXIC TORT LITIGATION:

PRINCIPLES OF A TORT SYSTEM APPLIED TO CHINA

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Introduction

Imagine living in a small town and one day a company builds a waste incinerator in your back yard. The company told you it would be safe to continue living in the area, despite their internal documents that suggested otherwise. Furthermore, the company has decided to cut costs and does not install the best pollution filtration device on the market, so dioxins filter out into the air and members of the community become ill. Now, imagine working in a factory with chemicals that you do not know are dangerous and the company does not provide protective equipment. Again, co-workers at the factory become ill, unexpectedly. Imagine a third scenario, where a company dumps chemicals, which cause the cattle you raise to become ill and die. In each of these scenarios, the plaintiffs have likely experienced a toxic tort. Toxic torts involve allegations of harm to a person, property, or the environment, as a result of exposure (inhalation, ingestion, or dermal exposure) to a toxic substance, product or process that caused physical injury or disease.¹ These types of cases can be complicated because they involve environmental law and tort law.² In the scenarios, the injured parties may expect to be able to sue for and be awarded compensatory and perhaps even punitive damages for the injuries they have sustained for these toxic torts. In reality, these plaintiffs will likely struggle with being able to prove causation, especially if the case involves a long latency period, or multiple sources, or proof may require extensive epidemiological studies. This paper examines cases that deal with toxins in the air. Air pollution is more difficult to deal with than water pollution because water has organisms

¹ JANET S. KOLE & STEPHEN SPITZ. *Environmental Litigation*. 108. (2d ed. 1999).

² *Id.*

that act to clean the water, whereas air does not have this assimilative capacity.³ The air pollution cases this paper examines illustrate the difficulty in proving causation especially when the toxin is in the air because it spreads so easily.

This paper will use a comparative case study method between China and the United States to examine the challenges of bringing successful environmental toxic tort suits. The paper is not a study of what could have been done to prevent the injuries, but rather what can be done now to compensate the injured parties. Many approaches will be explored, with a focus on the feasibility of implementing tort law theories. Part I will describe a case studies where a Chinese plaintiff believes his family should be awarded money damages for toxic torts. Part II will provide a brief synopsis of the Chinese legal system and explain the current state of toxic tort litigation in China. Part III will outline options for obtaining money damages for toxic torts in the US and examine the likelihood of success in China. Part IV will examine ways to increase the probability of being awarded damages in China and alternatives to damages.

I. Case Study in China: Xie Yong's case in Nantong, Jiangsu Province

Xie Yong and his wife, Ma Hongmei, are from Nantong, Jiangsu Province, where during Ma's pregnancy, they lived near a waste incineration plant.⁴ Ma gave birth to a son, Yongkang, in 2008, and soon after his birth, his parents noticed that he twitched incessantly and was eventually diagnosed with cerebral palsy.⁵ Hospital officials believed Yongkang's disease had been caused by environmental factors, including living near the waste incineration plant during Ma's pregnancy.⁶ Xie contacted a China-based legal NGO, Center for Legal Assistance to Pollution Victims (CLAPV), to explore his options for filing a suit against the owner of the

³ DAVID B. FIRESTONE & FRANK C. REED, *Environmental Law for Non-Layers*. 85 (4th ed. 2008).

⁴ Elizabeth Balkan, *The Dirty Truth about China's Incinerators*. The Guardian, Jul. 4, 2011, <http://www.guardian.co.uk/environment/2012/jul/04/dirty-truth-chinas-incinerators>.

⁵ *Id.*

⁶ *Id.*

plant: Jiangsu Tianying Saite Environmental Protection Energy Group.⁷

Xie began the first case against a waste incinerator in China in 2010, when he filed suit in a local court. The local judge rejected his claim on the basis of legal insufficiency; Xie then filed an appeal in the county court, where his evidence at trial was also ruled insufficient. Xie submitted the following evidence to both courts: (1) analysis revealing dioxin concentrations in nearby air exceeded local limits; (2) reports documenting the physical condition of workers and children living near the plant; (3) scientific papers demonstrating a link between dioxin and birth defects; (4) health records for the illness.⁸

After failing with the court system, Xie turned to the authorities to request emissions data for the plant from the local Environmental Protection Bureau (EPB) but he was denied on the account that doing so would compromise the company's business secrets.⁹ Xie then went one level higher, to the Ministry of Environmental Protections (MEP) and they also turned down his request.¹⁰

II. The Chinese System

A. General Law

U.S. - China trade relations have influenced the Chinese government's recent push to develop a "genuine legal system based upon the rule of law."¹¹ Both Presidents, Clinton and George W. Bush remarked that positive trade relations would encourage China to be more respectful of rule of law at home and abroad.¹² China has a long and complicated history, which began with Confucianism—

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

¹¹ Orts, Eric W., *The Rule of Law in China*. Vanderbilt Journal of Transnational Law, Vol. 33, January 2000. Available at SSRN: <http://ssrn.com/abstract=260070>.

¹² *Id.*

“Contemporary social control is rooted in the Confucian past. The teachings of Confucius have had an enduring effect on Chinese life and have provided the basis for the social order through much of the country's history. Confucians believed in the fundamental goodness of man and advocated rule by moral persuasion in accordance with the concept of li (propriety), a set of generally accepted social values or norms of behavior. Li was enforced by society rather than by courts. Education was considered the key ingredient for maintaining order, and codes of law were intended only to supplement li, not to replace it ... The criminal code was not comprehensive and often not written down, which left magistrates great flexibility during trials. The accused had no rights and relied on the mercy of the court; defendants were tortured to obtain confessions and often served long jail terms while awaiting trial. A court appearance, at minimum, resulted in loss of face, and the people were reluctant and afraid to use the courts. Rulers did little to make the courts more appealing, for if they stressed rule by law, they weakened their own moral influence.”¹³

In 1911, Chinese reform advocates in the government implemented certain aspects of the Japanese legal system, which was based on European civil law.¹⁴ China became communist in 1949, but the courts had little role in the judicial system until 1979, when the ministry of justice was re-established.¹⁵ China's historical focus on social harmony and avoidance of conflict has caused laws and regulations to be more of an afterthought¹⁶ than the central force of the judicial system in the west. As a result, laws in China are weak and the enforcement of those laws has

¹³ FACTS AND DETAILS, <http://factsanddetails.com/china.php?itemid=299;subcatid=50#360>. (last visited May 8, 2013).

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

also been weak.¹⁷ Because of China's break from isolation, increased use of technology, and an increasingly educated workforce that has an interest in how other countries work and think, scholars are now concerned that struggles within and between units of government and party, center and region, and various other entities and individuals will intensify.¹⁸

Like the U.S., China has three branches of government: executive, legislative, and judicial.¹⁹ The State Constitution of 1982 provides for a four-level court system: (1) the highest level is the Supreme People's Court, which supervises the administration of justice by all subordinate local people's courts; (2) local people's courts at the provincial level; (3) local people's courts at the procurate level; and (4) basic people's courts at the town level.²⁰

The system China uses now is similar to the inquisitorial justice system, where judges and assessors review all of the evidence presented and play an active role in questioning witnesses, unlike the U.S. system where the judge is meant to be an impartial referee between the attorneys.²¹ After the judge and assessors rule on a case, they pass sentence; the aggrieved party can appeal to the next higher court.²²

“Many judges regard themselves as “soldiers of the state.” They take orders from party-controlled trial committees and require approval from the state for promotions and salary increases, which means they can be manipulated by the government. Lawyers are allowed to operate with more autonomy than judges but can face prosecution if they stir up public disorder or reveal information deemed sensitive or secret and in 2006, rules known as “guiding opinions” were

¹⁷ *Id.*

¹⁸ Orts, *supra* note 11.

¹⁹ CHINA'S LEADER IN ONLINE RESEARCH, <http://www.lawinfochina.com/Legal/index.shtm>. (last visited May 8, 2013).

²⁰ Orts, *supra* note 11.

²¹ *Id.*

²² *Id.*

introduced that require Chinese lawyers to submit to government supervision when representing clients in politically sensitive cases.”

Unlike the U.S., in China, there are no jury trials,²³ and each case stands on its own, meaning that the court is not bound by prior decisions, which can make China’s system more flexible, but also more unpredictable than the U.S. system.

B. Environmental Law in China

1. Structure

China has a structure and several laws in place to ensure the protection of the environment. The body of law is quite complex because it includes constitutional articles, environmental laws, and other legislation and rules containing environmental provisions.²⁴ Additionally, the implementation of environmental laws falls under the jurisdiction of administrative agencies rather than under the jurisdiction of the judiciary, which makes enforcement difficult.²⁵ China's environmental enforcement structure consists of the Ministry of the Environment (MEP) (formerly, the State Environmental Protection Administration (SEPA)); the MEP is responsible for the formulation and enforcement of national policy as well as the coordination and supervision of major environmental projects.²⁶ Four main reasons explain why current implementation of environmental laws in China is lax. The first is largely due to unrealistic legislation resulting from inadequate legal research, rapid creation of legislation, frivolous legislation, and the inability of current legislation to adapt new laws and rules.²⁷ The laws are supposed to promote social economic development, but economic development has

²³ *Id.*

²⁴ WANG CANFA., *Chinese Environmental Law Enforcement: Current Deficiencies and Suggested Reforms*. 8 *Vt. J. Envtl. L.* 121. (2007). Available at http://www.vjel.org/journal/VJEL10058.html#_edn64.

²⁵ *Id.*

²⁶ THE U.S. CHINA BUSINESS COUNCIL, <https://www.uschina.org/public/china/govstructure/mep.html>. (last visited May 8, 2013).

²⁷ *Id.*

taken priority over the environment²⁸ and the complexity of the interactions between the laws makes enforcement challenging. Second, local governments favor economic benefit over environmental protection.²⁹ Beijing pressures local offices to increase local GDP and revenue, which causes local offices to cut corners with the environment and thus contributes to a lack of enforcement of environmental regulations.³⁰ Third, a legislative void exists between administrative departments and court system, which allows for specific cities to have environmental protection administrations while others do not.³¹ Within the Chinese government there is no appraisal agency to determine causation between the polluter's action and the pollution, and no detailed law that determines proper procedures for assessment.³² With no direct procedure to redress pollution victim's claims, the public often remain confused and uninformed, distant from a process unable to effectively aid them, even when claims are brought to appropriate authorities.³³ Lastly, public participation remains underdeveloped in China.³⁴ Several laws in China call for public participation, but in order for public participation to be effective, both officials and citizens must be educated and trained on its mechanisms, such as when and where public hearings will be held.³⁵

2. Environmental Impact Assessment Law

China's Environmental Impact Assessment Law (EIA Law) requires the assessment of construction projects affecting the environment.³⁶ The EIA Law consists of 38 articles;³⁷ the

²⁸ Michael Faure and Song Ying. *China and International Environmental Liability Legal Remedies for Transboundary Pollution*. 302 (2008).

²⁹ CANFA, *supra*. note 24.

³⁰ Stanley Lubman. *Vital Task for China's Next Leaders: Fix Environmental Protection*. The Wall Street Journal. October 19, 2012.

³¹ CANFA, *supra*. note 24.

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ Lubman. *Supra* note 29.

³⁶ *Id.*

³⁷ Law on Environmental Impact Assessment (promulgated by the Standing Comm. Nat'l People's Cong., Oct. 28,

language of the articles focuses on the potential impacts the project will have in the future. Throughout the law, there is a general lack of specificity on how to assess the current state of the environment, so that an accurate assessment of the future environment can be made, using modeling and other approved scientific methods. EIA Law, Article 16 gives general guidelines about the required paperwork for projects that may have a significant, gentle, or minimal impact on the environment, but gives no guidance for how to determine what kind of an impact the project will have on the environment.³⁸ EIA Law, Articles 17 and 22 state that if the impact is significant, an in depth appraisal is required and then a decision shall be decided within 60 days.³⁹ If the impact is gentle, then a report form is required and the decision must be made with in 30 days.⁴⁰ If the impact is minimal, then a registration form is required and the decision shall be made with in 15 days.⁴¹ With such tight timelines and reporting of the impact is essentially on the honor system, reports are rarely scrutinized and projects begin construction before the state of the environment is adequately assessed.

An effective EIA would ideally create an accurate picture of the current state of the environment. The EIA would then be able to use models to predict the state of the environment in the future, based on the various project proposals, including a “no project” option. A “no project” option would allow scientists to compare the prediction for the natural development of the land without construction with the various project proposals to determine which project idea is least harmful to the environment.

3. Tort Liability Law of 2010

2002, effective Sept. 1, 2003) (China); Jesse L. Moorman & Zhang Ge, *Promoting and Strengthening Public Participation in China's Environmental Impact Assessment Process: Comparing China's EIA law and U.S. NEPA*, 8 VT. J. ENVTL. L. 281, 282 (2007).

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

The revised Tort Liability Law of 2010, brought about changes in environmental liability; the law now provides for a private right of action, but does not provide clear procedural guidance because it does not designate a regulating government authority.⁴² Because the law is very new, it is unclear how language which is vague, such as “other factors” will be interpreted.⁴³ The new law allows for injunctions and compensatory damages, but not punitive damages for environmental polluters.⁴⁴ A showing of negligence is not required because the law specifically creates a strict liability standard, however, the law remains weak because it seems to provide polluters with ways of escaping punishment.⁴⁵ The burden is on the polluter to show (1) that it is not liable under certain circumstances as provided by law, (2) that its liability should be mitigated under certain circumstances as provided by the law, or (3) that there is no causal relationship between its actions and the environmental damage caused.⁴⁶ The term “circumstances as provided by law” is unclear, so it is impossible to gauge how strict this burden of proof actually is, so polluters may be able to escape liability.⁴⁷ The law fails to address vicarious liability, successor liability, parent liability, and successor liability.⁴⁸

4. The Current State of Environmental Tort Law in China

Like other laws in China, environmental tort law is evolving, and it seems likely to evolve to become friendlier toward victims of environmental pollution. “Chinese law sets forth a no-fault liability regime for pollution compensation cases; that is, a plaintiff is not required to show a violation of applicable emissions standards or other fault by the defendant.”⁴⁹ Defendants

⁴² *China Matters*, PAUL HASTINGS NEWSLETTER FOR INVESTING AND OPERATING IN THE PEOPLE'S REPUBLIC OF CHINA. Aug. 2010.

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ Alex Wang, *The Role of Law in Environmental Protection in China: Recent Developments*. 8 Vt. J. Envtl. L. 195. (2007). available at <http://www.vjel.org/journal/VJEL10057.html>.

usually claim a “lack of violations” as a defense to liability and the trend has been for courts to accept this argument or utilize it as a basis for reducing compensation.⁵⁰ However, new standards set forth in the Regulations Regarding Evidence for Civil Suits reverses the burden of proof-- “the polluter carries the burden of proof with respect to ... demonstrating the lack of causal link between the polluter's actions and the harmful result.”⁵¹ The new standard, is opposite of that of the U.S. and will take some time for courts to adjust to, but when it is finally enforced, many more pollutions victims are likely to receive some compensation for their injuries.

Another option plaintiffs may have, which is beyond the scope of this paper, is to use public interest litigation to bring a citizen suit on behalf of the environment.

III. Tort Law Theory

A. Advantages of Tort Law

Tort law has been developing in the West over the past several hundred years.⁵² The most rapid period of growth occurred during industrialization in the late 19th and early 20th centuries.⁵³ Interestingly, China is in the midst of a hyper growth industrialization-like phase and is in a position to learn from the decisions the U.S. has made in regards to environmental laws and the development of tort law.⁵⁴ Tort law tends to curb the effects of competition, greed, and carelessness, which can lead to accidents, by providing the injured with rights to sue.⁵⁵ When the judicial system has the power to act, the ability to bring a case eliminates the opportunity for political and administrative authorities to quash the matter.⁵⁶ In Xie Yong's case, however, the judicial system does not seem to be as independent from the political and administrative

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² Andrew J. Green, *Tort Reform with Chinese Characteristics: Toward a “Harmonious Society” in the People's Republic of China*. 10 San Diego Int'l L.J. 121 (2009). available at SSRN: <http://ssrn.com/abstract=1354402>.

⁵³ *Id.*

⁵⁴ Wang, *supra* note 50.

⁵⁵ Green, *supra* note 53.

⁵⁶ *Id.*

authorities, as in the U.S., thus it does not have the power or the incentive to provide for a completely objective tort system. Additional economic pressures from Beijing also provide incentives to cut corners when dealing with toxic tort litigation.

Another positive about a tort system is that a substantial amount of money may be awarded to victims because damages are designed to make the victim whole again.⁵⁷ “Whole” involves examining the victim's education potential, work experience, personal characteristics, and family and personal health history.⁵⁸

B. Disadvantages of Tort Law

Despite the increased safety and possible money damages a tort system can award, it also has several disadvantages. Tort law uses the reasonable care standard and the reasonable person standard.⁵⁹ Using this objective standard can be quite limiting; in a negligence case, the jury evaluates only the defendant's conduct, without taking into account the defendant's state of mind.⁶⁰ Complications arise when one takes into account the defendant's age, inexperience, impaired vision, lack of coordination, and the fact that the standard evolves over time, as it began with the “reasonable man” standard in the 1800s.⁶¹

Tort law seeks to deter bad behavior based on the threat of paying damages, the sting of the official determination of liability, the fear of undesirable publicity from negative reports, and the administrative cost of defending one's position.⁶² One problem with this model is the knowledge or foreseeability requirement of the consequences of every action a person or a company.⁶³ This information is too difficult or impossible to obtain, and even if it could be

⁵⁷ DOMINICK VETRI ET AL., TORT LAW AND PRACTICE 565 (4th ed. 2011).

⁵⁸ *Id.*

⁵⁹ *Id.* at 78.

⁶⁰ *Id.*

⁶¹ *Id.* at 79.

⁶² Stephen D. Sugarman, *Doing Away with Tort Law*, 73 CAL. L. REV. 555, 560-561. (1985). available at <http://scholarship.law.berkeley.edu/californialawreview/vol73/iss3/2>.

⁶³ *Id.* at 565-567.

obtained, full rationality would take too much time money and attentiveness, so shortcuts are only natural.⁶⁴ Another problem is that the reasonable person is generally lacking in competence; the reasonable person has lapses in judgment, is clumsy, and can be rash.⁶⁵ Organizations are composed of reasonable people, who collectively suffer from the same incompetence problem.⁶⁶ Thus although tort law may reduce the occurrence of wrongs, it cannot completely deter wrongs because they are going to happen regardless of whether tort law exists.

Awarding damages to make a person “whole” is impossible for those who have suffered intangible losses, such as giving birth to a son with cerebral palsy, or losing a son in a car accident, as opposed to a having the opportunity to raise a healthy child into adulthood.⁶⁷ Some expenses, such as medical, educational, and equipment expenses are calculable, but no precise way to calculate these damages either, because inflation and other factors, like progression of the victim’s disability, are unpredictable, yet they constitute the largest tort damage awards.⁶⁸

C. Applying Tort Law Theories to Obtain Damages

Each tort law theory will be defined using the context of U.S. law and how the theory has been applied in the U.S. Each theory will then be applied to Xie Yong’s case. Generally, plaintiffs of toxic tort cases seek damages for injury to property, and can be compensated for diminution in value, lost profits, other economic losses, such as remediation of the property, loss in rental value, cleanup, and repair.⁶⁹ Plaintiffs may also seek damages for diseases, including increased risk of developing cancer, emotional distress, and medical monitoring for the early onset of such diseases, however relief for these types of claims varies widely because they are prone to being

⁶⁴ *Id* at 565-567.

⁶⁵ *Id* at 568.

⁶⁶ *Id.*

⁶⁷ Daniel W. Shuman. *The Role of Apology in Tort Law: An apology has the potential to help people who have suffered serious emotional harm through the wrongdoing of others in ways that monetary damages alone cannot.* 83 *Judicature* 180 (2000).

⁶⁸ *Id.*

⁶⁹ KOLE & SPITZ. *supra* note 1 at 130.

brought frivolously and are very dependent on being able to prove causation.⁷⁰

1. Negligence: Application to Bliss Oil Spray and Xie Yong

Negligence refers to actions that fall below the standard a reasonable person under similar circumstances would exercise.⁷¹ A successful suit will be able to prove four elements: (1) a duty to conform to a standard of conduct for the protection of others against unreasonable risks; (2) a breach of this duty; (3) a causal connection between the conduct and the injury; and (4) damage or loss. “Negligence suits are generally described as a 'one-shot deal' rather than continuing conduct and continuing harm ... [t]hus monetary compensation for harm is usually the appropriate remedy because there is not continuing wrongful conduct to enjoin.”⁷² The hope is that negligence suits deter pollution by encouraging greater care to take place in the first place to avoid pollution to avoid the costly lawsuit and damages that will be paid out if proper care is not exercised.⁷³

An example of a negligence suit in the U.S., also involving dioxins occurred in Missouri. Bliss Oil Company sprayed 2,000 gallons of oil with high concentrations of dioxins at a horse stable as a dust suppressant.⁷⁴ The spraying injured seven humans, including the stable owner’s daughter (Andrea) and many animals to die or become severely ill.⁷⁵ Furthermore, the stables lost a substantial amount of income as a result of the deaths and illnesses of their horses; the Public Health Service's Center for Disease Control (CDC) began an investigation into the causes of the illnesses and deaths. The investigation determined that Andrea's illness was caused by Bliss's oil spray, specifically the release of dioxins.⁷⁶

⁷⁰ *Id* at 130-131.

⁷¹ *Id* at 110.

⁷² FIRESTONE, *supra* note 3 at 95.

⁷³ Firestone., 95-96.

⁷⁴ SIX CASE STUDIES OF COMPENSATION FOR TOXIC SUBSTANCES POLLUTION: ALABAMA, CALIFORNIA, MICHIGAN, MISSOURI, NEW JERSEY, AND TEXAS. S. DOC NO. 96-2, at 281 [hereinafter TOXIC POLLUTION REPORT]. (1980).

⁷⁵ *Id.*

⁷⁶ *Id.*

Based on the results of the Bliss Oil case, where the plaintiffs filed a claim based on negligence,⁷⁷ it is unlikely that Xie Yong would have much success in a U.S. court. The Missouri court cited a 1984 case where the defendant did not breach its duty for reasonable care by failing to install an anti-pollution device because the device was not readily procurable on the market.⁷⁸ The technology for catching pollutants, such as mercury and dioxins has improved greatly since the 1980s and are widely available and used in Denmark,⁷⁹ which means Xie Yong could have a stronger argument for requiring such technology to be used in China. The next step would be to prove that the risk was foreseeable, which can be a substantial barrier to recovery.⁸⁰ In Xie's case, ample research has been done on pollution arising from waste-incineration; certainly enough to know that expensive filtering devices need to be installed. Even as early as 1996, Germany implemented the Federal Immission Control Act, which required these expensive filtering devices to be installed on all waste incineration plants, which reduced the toxins in the air by approximately three tonnes from the amount released in 1990.⁸¹ In determining how whether anti-pollution filters should be an industry standard in China, a court might examine the availability of European research in China, the affordability and ease of distribution of the technology to China, and how effective and widely used it is in Europe.

Even if Xie could convince a court that proper waste incineration filters are readily available and should be an industry standard, it is still unclear whether he can prove the third step: causation. Proving that dioxins caused his son's cerebral palsy is nearly an impossible task, especially without ample data and epidemiological studies to support the argument.

⁷⁷ *Id* at 298.

⁷⁸ *Id* at 298, 299.

⁷⁹ Elisabeth Rosenthal, *Europe Finds Clean Energy in Trash, but U.S. Lags*, The New York Times, April 12, 2010, www.nytimes.com/2010/04/13/science/earth.13trash.htm?pageswanted=all&r=0.

⁸⁰ TOXIC POLLUTION REPORT, *supra* note 75 at 299.

⁸¹ FEDERAL MINISTRY FOR THE ENVIRONMENT, NATURE CONSERVATION AND NUCLEAR SAFETY, WASTE INCINERATION—A POTENTIAL DANGER? BIDDING FAREWELL TO DIOXIN SPOUTING, (September 2005). http://www.bmu.de/fileadmin/bmuimport/files/English/pdf/application/pdf/muellverbrennung_dioxin_en.pdf.

In toxic tort cases, plaintiffs rely on four main types of studies to prove general causation: (1) structure-activity analysis; (2) in vitro analysis; (3) in vivo analysis; (4) epidemiological analysis.⁸² Structure-activity analysis examines similar substances and their chemical reactions.⁸³ These types of studies are used to show that a substance similar to the one at issue has been implicated in producing adverse health reactions.⁸⁴ Thus, Xie Yong, he would likely have to find a similar scenario where another woman gave birth to a son with cerebral palsy who also lived near the same waste-incinerator or near another one emitting a similar amount and concentration of dioxins. Although there are many waste-incinerators and people in China, this task could be very difficult and costly because of China's vast area and the cost of testing the emissions from each waste incinerator.

In vitro research focuses on living cells, bacteria, body organs, and animal embryos.⁸⁵ The implications to humans are not certain because the tests are done in isolation, and humans have many factors which can inhibit or accelerate certain reactions in the body.⁸⁶ Thus, in vitro research is not very compelling to a judge or a jury. In vivo studies measure the effects of a substance on laboratory animals under strictly controlled experimental conditions, which then requires two assumptions: (1) if the substance is toxic to animals, it will also be toxic to humans and (2) humans will suffer the same effects from a low dose even though animals are given high doses at a constant rate to induce a measurable reaction.⁸⁷ Although in vivo studies are more applicable to humans, they too are not very compelling in front of a judge or a jury.

Epidemiological studies are considered to be the best proof of causation; they are good because

⁸² VETRI, *supra* note 58 at 402.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

they measure the exposure in a human population.⁸⁸ However, they can still be unreliable, if the sample size of the population is too small, in which case, it becomes difficult to differentiate between causation and correlation.⁸⁹

Therefore, even if Xie had a plethora of epidemiological data, it is likely that he would still face an uphill battle in a U.S. court. The U.S. has a conservative judicial attitude and traditionally case reports have been given little weight and pathological evidence has been slighted.⁹⁰ Also, because of the jury system, the U.S. Court system relies on the ability to tell an effective story; epidemiological is lumped in with statistics, which tends to scare judges and juries because they think it is too complicated.⁹¹

When dealing with epidemiological data, Xie could have a better chance of convincing a judge in China because the judge is not bound by prior decisions by other judges and he/she can examine each case individually. Since *Daubert v. Merrel Dow Pharms*, courts have excluded plaintiff's experts on causation in environmental and pharmaceutical product because federal trial judges are first required to determine whether expert opinion evidence has sufficient scientific validity before it can be presented to a jury.⁹² Although the precedent only applies to Federal Court, State courts have also found the ruling persuasive.⁹³ Judges seem to not want to deal with complicated data, so they apply strict scrutiny to the causal relationship and a requirement of a doubled risk of disease, when sufficient epidemiological data is available.⁹⁴ Using the non statistical approach, the evidence would have to support a reasonable inference that the defendant's conduct contributed to the harm or that reasonable men may draw different

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ GEORGE W. CONK, *Against the Odds: Proving Causation of Disease with Epidemiological Evidence*. SHEPARD'S EXPERT AND SCIENTIFIC EVIDENCE QUARTERLY. Vol. 3 Summer, 1995. available at SSRN: <http://ssrn.com/abstract=895306>.

⁹² VETRI, *supra* note 53 at 401.

⁹³ *Id.*

⁹⁴ CONK, *supra* note 92.

inferences.⁹⁵ When the strict scrutiny method is required, it is harder to prove causation, because the lawyer is forced to ask “ what would have happened if the plaintiff never ...”⁹⁶ Now, many courts are now evolving toward a “substantial factor” test, which allows the lawyer to focus on “what are the biological effects of ...”⁹⁷ The focus on the substantial factor test could be advantageous for Xie Yong, because it allows the lawyer to focus on the effect of the specific dioxins that the incinerator was producing and whether or not they can cause cerebral palsy. It may also be easier for the lawyer to tell a more effective and persuasive story when using the substantial factor test.

2. Negligence per se: Application to Xie Yong

Negligence per se allows for a statute to replace the reasonable standard of conduct if that statute's purpose meets certain requirements: (1) to protect the class of persons that was harmed; (2) to protect the interest that was harmed; (3) to protect the interest against against the kind of harm that resulted; and (4) to protect that against the particular hazard from which the harm resulted.⁹⁸ Filing a case based on the theory of negligence per se could have the advantage of not using the reasonable person standard because as previously discussed, it can be difficult to define and it evolves over time. However, it could be difficult for Xie Yong to prove that a particular statute was designed specifically to protect against women giving birth to babies with cerebral palsy that live within a certain proximity to waste incinerators. Thus, the negligence per se theory is not an effective technique for Xie Yong.

3. Nuisance: Private and Public Claims and their Application to Xie Yong

Xie Yong could to be most successful with a nuisance claim because this theory is likely

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ KOLE & SPITZ. *supra* note 1 at 110, 111.

to be easily adapted to China. In the U.S., nuisance claims can be either private or public.⁹⁹ Private nuisance claims involve a substantial interference with someone's enjoyment of their land.¹⁰⁰ The interference must be intentional and unreasonable or if it is unintentional, it must be negligent, reckless, or involve an abnormally dangerous activity.¹⁰¹ A public nuisance claim would involve unreasonable interference with public land but individuals are limited from bringing such claims unless their injuries are different from the rest of the public's.¹⁰² Under the nuisance theory, generally equitable relief, such as an injunction will be granted in lieu of money damages.¹⁰³

An example of a private nuisance claim is *Boomer v. Atlantic Cement Company* (1970). In this case, a cement company was discharging smoke and dirt in to the air; land owners adjacent to the property sued for an injunction and money damages.¹⁰⁴ The injunction options were (1) to stop pollution or close down the facility or (2) to allow operation to continue and pay permanent damages to the plaintiffs to compensate them for the total existing and future economic losses.¹⁰⁵ The court weighed the options using a cost-balancing analysis and decided that the loss of jobs of 300 employees by closing a \$45,000,000 plant would be far more harmful than the plaintiffs' economic harm.¹⁰⁶ Interestingly, the Atlantic Cement Company had the most up-to-date technology and the court reasoned that an 18 month injunction would not result in meaningful advances in technology.¹⁰⁷ Furthermore, the court reasoned that it is not the responsibility of individual defendants to spur technological advances, but rather the industry as a whole is collectively responsible; requiring a company to pay compensatory damages is a

⁹⁹ *Id.* at 115.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*.

¹⁰² *Id.*

¹⁰³ *Id.* at 136.

¹⁰⁴ FIRESTONE, *supra* note 3 at 90.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 91.

sufficient deterrent to the entire industry to research future technological advances.¹⁰⁸ The dissenting judge argued that by merely allowing the company to escape by paying damages, the court was licensing a continuing wrong; thus, in essence, giving its stamp of approval to pollution, as long as the polluter pays a fine.¹⁰⁹ *Boomer* set the precedent for allowing courts to weigh the social utility of the environmental tort in question as a factor when deciding whether it is appropriate to issue an injunction.¹¹⁰

Trends in court's decisions indicate that there are some factors that can increase the plaintiff's likelihood of being granted a permanent injunction. These factors include, effects on a large number of a people, or an entire neighborhood, the type of injury (health, rather than property damage), and harshness of injury to the real-estate developer.¹¹¹ However, when these factors are taken into consideration, the nuisance becomes a public nuisance, rather than a private one, and the rulings are very limited.¹¹² For example, in *Spur Industries, Inc. v. Del E. Webb Development Co.* (1972), the court found that all of the above factors were present, but the court limited its decision to cases where a real-estate developer has, “with foreseeability, necessitated the granting of an injunction against a lawful business by coming into a previously agricultural or industrial area.”¹¹³ Despite the ruling, Webb was still required to indemnify Spur Industries for damages to Spur by the injunction that required Spur to cease operation or move its feedlot.¹¹⁴ “The court clearly finds that the polluting nuisance must be stopped, but it also acknowledges that when one who is engaged in lawful activity is stopped from continuing that activity because of changes in circumstances, consideration should be given to the idea of not

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 92.

¹¹¹ *Id.*

¹¹² *Id.* at 93.

¹¹³ *Id.*

¹¹⁴ *Id.*

requiring that the heretofore lawful enterprise also bear the economic losses brought about by the changed circumstances.”¹¹⁵ The *Spur Industries* case may be an example of the judicial system trying to find a solution to a problem where no one is at fault and where it believes the relevant parties should compromise and share the burden of fixing the problem.¹¹⁶ *Spur Industries* seems to indicate that when the developer or plaintiff is relatively well off and has the means to help the lawful polluter relocate, that the court will rule in favor of the shared cost solution.

Xie Yong would likely be most successful in a private nuisance suit, where he would ask for an injunction and possibly compensatory damages for medical expenses incurred. Xie Yong’s case can be differentiated from *Boomer v. Atlantic Cement Company* because not only does the technology to create safe waste incineration facilities exist, but the technology is also widely used, successfully, in Europe. Therefore, the court would not need to engage in a cost-balancing analysis where it would weigh the number of jobs created by the facility and the power output from burning the waste against the harm to the families in close proximity to the facility. In this scenario, the court would likely issue an injunction and order the facility to upgrade its anti-pollution filters.

If Xie Yong were to bring a public nuisance case in the U.S., he would have to prove that the nuisance caused the cerebral palsy and that that injury is unique to the rest of the public’s injuries. Here, the problem again is causation, which is difficult to prove because there are many potential causes for cerebral palsy.¹¹⁷ The other option for bringing a claim, in China, which would be similar to a public nuisance claim in the U.S. (but on private land, instead of public land) would be to bring a public interest citizen suit on behalf of the entire community; that kind

¹¹⁵ *Id.*

¹¹⁶ *Id.* at 94.

¹¹⁷ MAYO CLINIC STAFF, CEREBRAL PALSY, CAUSES AND RISK FACTORS, <http://www.mayoclinic.com/health/cerebral-palsy/DS00302/DSECTION=risk-factors> (last visited May 13, 2013).

of claim is beyond the scope of this paper.

4. Fraudulent or Negligent Misrepresentation, Concealment, or Nondisclosure: Application and Suggestions for Expansion in China for Cases like Xie Yong's

Claims in the U.S. for fraudulent or negligent misrepresentation are limited; however, they could be expanded in China. In the U.S. these types of claims generally deal with real-estate transactions, where the buyer has not disclosed information about the land, or has misrepresented contaminated land.¹¹⁸ Fraudulent misrepresentation occurs when a party makes a representation that it knows to be false, lacks accuracy, or knows that there is an inadequate basis for making the representation.¹¹⁹ Liability can also flow to someone who negligently misrepresented or failed to exercise reasonable care in communicating information.¹²⁰

China could expand the scope of these claims to hold government officials liable for fraudulent or false EIA's. Additionally the author or other people responsible for concealing or misrepresenting information in the EIA could be held liable for their actions and harms to the plaintiffs in cases like these. In Xie Yong's case, his lawyers could investigate the accuracy of the EIA report. If the EIA report is found to be grossly inaccurate, Xie Yong should be able to file a claim against the author of the EIA and the officials in charge of beginning work on the project, despite the lack of a comprehensive EIA.

IV. Alternatives to Tort Law

A. Tort Law Implementation in China: Possible Considerations

China's judicial system and traditions are rooted in Confucianism which emphasizes harmony and creating a cohesive society.¹²¹ These ideals and traditions are very different from

¹¹⁸ *Id* at 121.

¹¹⁹ *Id.*

¹²⁰ *Id* at 122.

¹²¹ FACTS AND DETAILS, <http://factsanddetails.com/china.php?itemid=299;subcatid=50#360>. (last visited May 8, 2013).

the U.S. which focuses on the individual and self reliance.¹²² China's desire to maintain positive trade relations with the west to help it achieve and sustain economic growth could be the root of its desire to emulate the U.S. system by implementing new laws, regulations, and even experimenting with an adversarial system.¹²³ "Neither system is better than the other; both have their advantages and disadvantages and are more a choice of culture than anything else."¹²⁴ China's actions may be misguided; China has been attempting "to move toward a more adversarial-like system since 1996 when it amended its Criminal Procedure Code, but even now, many years later, the changes have yet to take hold."¹²⁵ China and the West have fundamental differences in the way they look at events. For example, in 2001, an American surveillance plane and a Chinese fighter jet collided over the South China Seas.¹²⁶ China demanded an apology from the U.S. and the U.S. refused because the U.S. blamed the Chinese fighter pilot for the accident.¹²⁷ The U.S. said the American pilot did nothing wrong, so why should the U.S. apologize?¹²⁸ The Chinese tend to look at the bigger picture, rather than placing blame, the Chinese emphasize the regrettable circumstances and tend to be "obsessed with saving face."¹²⁹ This incident highlights one of the reasons why China should not just succumb to pressure from the U.S. to establish "rule of law." China has the opportunity to explore and analyze various different systems that are in use all over the world. China can take bits and pieces that work from each system, and create one that works cohesively with its Confucian traditions. "And there is nothing wrong with reverting back to a more inquisitorial system [instead of forcing the

¹²² BRYAN CAPLAN, SELF RELIANCE AND CREATIVE DESTRUCTION, *available at* econfaculty.gmu.edu/bcaplan/davis2.htm. (last visited May 13, 2013).

¹²³ ELIZABETH M. LUNCH, 6 *Uighurs Sentenced to Death, 1 to Life Imprisonment in Unexpected Trial on Monday*, China Law & Policy (Oct. 12, 2009), <http://chinalawandpolicy.com/tag/adversarial-system/>.

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ PETER HAYS GRIES & KAIPING PENG, *Culture Clash? Apologies East and West*, 30 JOURNAL OF CONTEMPORARY CHINA, Vol. 11, 173, 173 (2002).

¹²⁷ *Id.* at 173-175.

¹²⁸ *Id.*

¹²⁹ *Id.*

adversarial system to work], a system that works well in continental Europe.”¹³⁰ China should not rush into a system just because the U.S. prefers it and the U.S. should understand that the system that works reasonably well in the U.S. may not work in China because of the vast differences in the long histories and cultures of the different countries.

B. Transparency

1. Securities Laws

In the U.S., one approach to attempt to control private pollution is to use federal securities laws; while this approach is rarely successful on its own, it does help control pollution indirectly through awareness and deterrence mechanisms.¹³¹ China could implement a similar system when a project involves a private company, seeking investors, instead of a government funded project. Federal securities laws, in the U.S., promote disclosure of facts by imposing liability on anyone who makes false statements or omissions in connection with the financial filings that a publicly traded company is periodically required to make with the Securities and Exchange Commission (“SEC”). In order to properly file documents with the SEC, companies must periodically audit compliance with federal, state, and local environmental laws, which in turn, promotes disclosure of past, present, and future environmental issues, which investors take into account when deciding where to invest their funds.¹³² Second, non-compliance with environmental regulations deters investors because of the disclosure requirements. Investors are likely to view companies with clean environmental SEC records as less risky investments because they are less likely to have environmental disasters and thus experience financial ruin or loss in the future¹³³.

Instead of the indirect approach the U.S. laws have on the environment, China could take

¹³⁰ *Id.*

¹³¹ FIRESTONE, *supra* note 3 at 96.

¹³² Firestone., 97.

¹³³ *Id.*

a more direct approach. China could prosecute people who make false statements in connection with loan applications, EIA's, or any document that is necessary for a project to break ground. This approach would better deter dishonest behavior and balance out the current pressures on local officials to rush projects to further economic development without analyzing data that would help determine whether the project will actually be beneficial to the area.

2. Scientific Data

An improvement in the quality, quantity, and transparency of raw data in China could improve the accuracy and usefulness of EIA reports. A collaborative study lead by researchers at Yale University concluded that the data in China is inadequate because less than half of the indicators of environmental conditions had baseline data (data to indicate the environment, before the commencement of a project) against which to measure environmental performance.¹³⁴ The lack of baseline data is problematic because measures tend to change over time which makes comparisons over a period of time difficult.¹³⁵ The Yale study also concluded that metrics used to measure air and water quality change, over time, are inconsistent; the inaccessibility of the environmental raw data also prevents scientists and researchers from collaborating effectively to create an accurate picture of the current and future environment.¹³⁶

Performance metrics are used to produce results in a variety of types of industries; they can be useful to measure other areas in need of tracking and accurate measurements, such as the environment. “Globally, the move toward a more data driven empirical approach to environmental protection promises to better enable policy makers to spot problems, track trends, highlight policy successes and failures, identify best practices, and optimize the gains from investments in environmental protection. China, like many countries, has employed performance

¹³⁴ DANIEL ESTY ET AL., TOWARDS A CHINA ENVIRONMENTAL PERFORMANCE INDEX, 3 (2012) [hereinafter YALE STUDY], available at environment.yale.edu/enviorcenter/files/China-EPI-Report.pdf.

¹³⁵ *Id.* at 9.

¹³⁶ *Id.*

metrics in areas such as economic, educational, and social policy. It is natural to extend this practice to the environmental sphere.”¹³⁷ China would especially benefit from greater transparency and freer access to data, especially raw data from monitoring systems and spatial data on environmental conditions.”¹³⁸

The Yale study measured the prevalence of baseline data and found that China collects the most measurements in the area of economic sustainability, less so in health indicators, and even fewer in regards to ecosystem monitoring.¹³⁹ Accurate raw data is a necessary first step to assessing the state of the environment and health indicators.¹⁴⁰ Enabling access to environmental and health-related raw data could increase the amount of epidemiological studies and increase awareness of the value of these types of studies. As awareness and education increase, the lawyers and the court system will gradually become more comfortable with and trusting of the results from such studies and use them to their advantage throughout the legal system. As judges and juries in the U.S. and China become more comfortable with using and trusting epidemiological data, they may be more inclined to award damages to plaintiffs who have relied on this type of data to prove causation of their harms.

3. Insurance

Finding a balance between facilitating rapid economic growth and keeping citizens and the environment safe will be a challenge. For example, an increased cost of consumerism is that China now produces one quarter of the world’s garbage.¹⁴¹ China's desire to continue its rapid growth rate also demands more electricity; China’s current electricity demand is estimated to be growing at a stunning 15 percent and, in the long run, growth is expected to continue at 4.3

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ Balkan, *supra* note 4.

percent over the next 15 years – triple the rate of western countries.¹⁴² The two problems can be solved together using waste incineration plants to burn the garbage and produce electricity. In March 2011, China released its 12th Five-Year Plan (FYP), which calls for 300 waste incineration plants to be operational by the time the FYP runs its course in 2015 which will be capable of handling 300,000 tonnes of garbage a day.¹⁴³ Additionally, municipal waste water and solid waste plants will generate an estimated Rmb 3.1trn in total investment.¹⁴⁴

China could supplement its current insurance policies by establishing an institute for assessing environmental pollution risk that uses the expertise of scientists and environmental pollution experts to perform risk assessments that are more detailed and more involved than the EIA law requires.¹⁴⁵ The company in charge of the project would then be required to purchase insurance to be able to compensate victims accordingly if there is an accident.¹⁴⁶ The institute could also establish caps on the compensation given to victims in predicted cases. The sliding scale used would allow for increased efficiency and keep victims from going through a lengthy trial, where they most likely would receive little compensation anyway. This type of a system could be more compatible with Chinese law, which has traditionally not been adversarial, like law in the U.S.

This proposed system would be better than the current system, which officials have announced will require heavy polluting industries (mining, smelting, chemical factories, lead battery factories, etc.) to carry environmental liability insurance.¹⁴⁷ These compulsory

¹⁴² MATTHEW DURNIN, *Situation Report: China's Nuclear Future*, (2008) available at http://www.chinasecurity.us/index.php?option=com_content&view=article&id=95&Itemid=8.

¹⁴³ YU DANWEI, *Chinese Waste: The Burning Issue*, CHINA DIALOGUE. available at <http://www.chinadialogue.net/article/show/single/en/4739>.

¹⁴⁴ *China Utilites: A Cleaner 12th Five Year Plan*, BOC INTERNATIONAL, UTILITIES, SECTOR Update (Jan. 24, 2011) available at <http://www.bocigroup.com/pub/sc/vision/yjbg/201101/P020110127638981903496.pdf>

¹⁴⁵ Michael Faure & Song Ying, *China and International Environmental Liability Legal Remedies for Transboundary Pollution*. 304, 304-308. (2008).

¹⁴⁶ *Id.*

¹⁴⁷ ALEXANDER GORDON OF AON RISK SOLUTIONS, *China Set to Make Environmental Insurance Mandatory*, AON

requirements would expand a system that began in 2009, but like other laws in China, enforcement of the policy is lax.¹⁴⁸ Lax enforcement has discouraged public involvement and reduces incentives for polluters to comply with existing legislation; as long as no added cost associated with pollution exists, there is no reason for the polluter to invest millions of dollars in compliance.¹⁴⁹ Thus, companies have little incentive to participate because the state has clearly prioritized economic growth above all other concerns, environmental protection laws are poorly enforced by courts, and the corporate risk culture in China has placed little stock in environmental responsibility.¹⁵⁰

With the proposed insurance system, cases where the cause of the pollution cannot be identified or cannot be attributed in large part to one particular polluter, a fund for environmental damage would compensate victims who are unable to collect through social insurance or other means.¹⁵¹ The victim would be able to mediate the case outside of the court system, through the fund management institute, and would not have to delve into intricate details of legal causation issues; the plaintiff would only have to prove that the damage was due to an environmental tort, the tortfeasor cannot be identified, or even if the tortfeasor can be identified, the victim cannot get relief through other means.¹⁵²

Under this proposed system, Xie Yong could receive some compensation for medical care for his son. Xie Yong's situation falls into the last category where the harm cannot necessarily be attributed wholly to the company responsible for waste-incinerator. The mediation would likely involve a scenario where the responsible company would present data to show it is

ENVIRONMENTAL (©2013), http://www.aon.com/risk-services/environmental-articles/article_china-make-envins-mandatory.jsp.

¹⁴⁸ *Id.*

¹⁴⁹ Canfa, *supra* note 24.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*, 305.

¹⁵² *Id.*, 306.

in compliance with current regulations and has the most up-to-date anti-pollution filtration system. Xie's lawyer would then present data to show that the levels of dioxins produced were too high and likely caused the cerebral palsy. The mediator could then assign a percentage blame to the responsible company based on the pollution caused by the waste-incinerator. Said percentage would then correlate to the cost of the medical care that the responsible company would then compensate to Xie Yong.

4. Apology

The current tort system in the U.S. is under attack for being too costly and inefficient.¹⁵³ The theory about how apology helps plaintiffs recover from harm uses the apology as a way to adjust the power balance.¹⁵⁴ In China's case, this technique could be very effective because of the role communism has played as the all-powerful entity that controls citizen's lives. "In the act of apology, the wrongdoer seeks to take the shame for the wrong and to give the person wronged the power to forgive the wrongdoer. This exchange of shame and power is regarded as central to apology's restorative relational benefits."¹⁵⁵ Mediators report that apologies help resolve disputes faster and that parties that receive apologies are more likely to settle than those who do not.¹⁵⁶ For example, in Japan in 1982, a plane crashed and killed 24 people and injured 71, however because the airline president formally apologized to the victims and their families and offered compensation, no lawsuits were filed.¹⁵⁷ However, compare this to Xie Yong, where he and those who lived by the waste incinerator have not received any compensation or an apology, Xie Yong remains angry with the responsible company. If the directors of the waste-incinerator

¹⁵³ Daniel W. Shuman. *The Role of Apology in Tort Law: An apology has the potential to help people who have suffered serious emotional harm through the wrongdoing of others in ways that monetary damages alone cannot.* 83 *Judicature* 180 1999-2000.

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

apologized to Xie Yong, he would likely feel that they empathize with his situation and it would help his anger to subside. Even if the apology was not sincere, as in the case with the American surveillance plane and Chinese fighter jet collision of 2001, the American “apology” did not convey a sincere apology, by U.S. standards, because the U.S. did not assume responsibility for the accident.¹⁵⁸ In this case, the waste-incinerator facility would likely only have to say, “We regret that your son was born with cerebral palsy and we will do what we can to install a better air filtration device.” An apology that includes future oriented measures might be more effective than one that merely regrets what happened but makes no attempt to create better results in the future. Xie Yong might also be more inclined to direct his energy toward something that would help prevent this kind of harm in other families in the future. Xie Yong could help raise awareness about the waste-incinerator filtration technology and work to have each facility install it to keep people safe.

5. Whistle-blowing

Encouraging whistle-blowers to come forward with reports of false EIA’s or other violations could encourage honesty and transparency, which would translate into better compliance with environmental regulations. There could be a lot of value to people who dissent in a system, such as China’s with a strong government and a history of corruption. If this strategy is used, the system would have to find a way to reward whistle-blowers, so they feel valued and thus are more willing to take a risk. Public affirmation or a statement from the government could be ways to reward such people and make them feel like they are playing an important role in their society. A possible down-side to encouraging whistle-blowing could be that superiors might retaliate against an employee. Compensation for a lost job or harassment in the workplace due to retaliation can be difficult to prove and the more vocal people become about the harassment they

¹⁵⁸ Gries & Peng., *supra* note 124 at 173.

have experienced as a whistle-blower would likely deter people in the future.

Conclusion

Despite the short-comings Chinese law may have, the Chinese government has been very proactive in some cases. For example, in May 2011, the Zijin County health bureau tested 1,468 people living near the Heyuan Sanwei battery Co., Ltd. (Sanwei) in Linjiang Township after hearing reports of lead poisoning occurring in Eastern Zhejiang Province.¹⁵⁹ Of those 1,468 tested, 136 had dangerously high levels of lead in their blood and 59 were diagnosed with lead poisoning.¹⁶⁰ The government paid for all of the patients' medical expenses and Sanwei, paid \$2.1 million.¹⁶¹

Guangdong University of Technology, who had been hired by Sanwei, conducted an environmental assessment report (EIA) in 2005, which concluded that only 11 households were located within 500 meters of the factory, far fewer than the actual figure. In theory, and according to Chinese laws and regulations, Sanwei should have released the results of the EIA to the community and negotiated a relocation package for the affected families.¹⁶² As a result, the Communist Party of China, seriously reprimanded and gave demerits to twelve officials from the governmental departments of environment protection, work safety, industry and commerce, education, land and resources, health and others.¹⁶³ The victims of lead poisoning and relocation have not filed a law suit.¹⁶⁴ In this case, the government acted quickly; early intervention is very important—“going to the patient, apologizing, explaining what happened and why, and

¹⁵⁹ XINHUA, *Excessive Lead Levels Found in 136 People in S.China*. CHINA.ORG.CN, available http://www.china.org.cn/china/2011-05/20/content_22601804.htm

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ XINHUA, *16 Punished over Lead Pollution in S China*, CHINA DAILY.COM.CN. available at http://www.chinadaily.com.cn/china/2011-09/06/content_13635002.htm.

¹⁶⁴ *Id.*

compensating for the costs.”¹⁶⁵ Not only was there quick action, but it was accompanied by compensation and a removal of the harm, so the aggression of the victims dissipated very quickly and the result was very positive.

China should consider a model of transparency because the amount of waste-incineration facilities is only going to grow per the 12th-FiveYearPlan. If the companies and the government do not act quickly when a health problem arises with someone living near the facility, many more lawsuits will be filed. In 2005, complaints submitted to environmental authorities within SEPA (now MEP) numbered more than 50,000.¹⁶⁶ Many of these conflicts were not settled in a timely fashion, with some remaining in dispute for over 10 years.¹⁶⁷ The Chinese government should make an effort be very proactive and offer some form of an apology or compensation to potential victims before they file claims for environmental harms, as in the Zijin case.

¹⁶⁵ *Id.*

¹⁶⁶ CANFA, *supra* note 24.

¹⁶⁷ *Id.*