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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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In re:

"AGENT ORANGE" MDL 381
PRODUCT LIABILITY LITIGATION

----------X

THE VIETNAM ASSOCIATION FOR VICTIMS
OF AGENT ORANGE/DIOXIN, et al.,

04 CV 0400
(JBW)

Plaintiffs,

-against-

THE DOW CHEMICAL COMPANY, et al.,

Defendants.

----------X

MEMORANDUM OF LAW IN OPPOSITION TO DEFENDANTS' MOTION TO DISMISS ALL CLAIMS FOR FAILURE TO STATE A CLAIM UNDER THE LAW OF NATIONS

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Love, and do as you will.
Charity is no substitute for justice withheld.

St. Augustine (354-430)

I. INTRODUCTION

A. Preliminary Statement

In this action, plaintiffs charge defendants with supplying toxic chemicals for use during the war in Vietnam, use which was widespread and indiscriminate and which defendants knew was dangerous and inappropriate, considering their toxicity. Defendants instead focus their attention on the conduct of the armed forces of the United States, and allege that the use of herbicides was justified by military necessity. The defendants' focus is misdirected.

Military necessity may, in some circumstances, permit the use of non-toxic herbicides in war to prevent ambushes of combatants. Military necessity never permits the widespread and indiscriminate use of herbicides laced with toxic chemicals. The plaintiffs' claims against the defendants arise out of the defendants' culpable conduct, which stems from their knowledge of: A) the toxicity of the chemicals they supplied and B) the widespread and indiscriminate use to which these chemicals were put.

Rather than address their own knowledge of these two aspects of plaintiffs' claims, the defendants discuss, at great length, the lawfulness of the actions of U.S. armed forces during the war in Vietnam. They begin their analysis with a flawed assumption: that the herbicides supplied by defendants were not believed

to be toxic to humans. The expert affidavits submitted by defendants are expressly limited by this assumption and indeed, much of the scholarly literature which analyzes the use of chemical herbicides in light of international law principles also rests upon this assumption. Defendants focus on the intent of the United States armed forces to destroy plants and crops, not to poison people; this necessarily assumes a lack of knowledge of toxic effects of the herbicides on humans.

As set forth in the Amended Complaint, the defendants' own special knowledge of the toxicity of their product to human beings sheds a new and different light on the lawfulness of the use of the herbicides, principally with respect to the culpability of the defendants and other government officials who shared in the knowledge of this toxicity.

The plaintiffs do not contend that the United States soldiers who handled and sprayed the herbicides in Vietnam had any knowledge of this toxicity. The defendants' recent attempt to align their own interests with the interests of these American soldiers--the very soldiers that were accidentally contaminated by defendants' product, the very soldiers that took defendants to court and eventually uncovered and exposed the deceitfulness of the defendants on this issue--is deplorable.

This Court should not succumb to the specious argument that the defendants should escape liability because those who handled and sprayed their chemicals all over Vietnam did not have the intent to poison people. The

defendants must be ordered to make restitution for the damage they have visited on the people and land of Vietnam--damage which was unknowingly facilitated by United States soldiers--damage which the defendants were in a unique position to foresee and to prevent.

The use of chemical weapons in war, especially toxic chemicals, was prohibited by customary international law at the time defendants' chemicals were sprayed, spilled and dumped throughout Vietnam. This prohibition had evolved over centuries from an ancient prohibition on the use of poison and poisoned weapons into a prohibition of weapons of a nature to cause unnecessary suffering, especially with respect to noncombatants, and finally into a blanket, or *per se*, prohibition on modern chemical and biological weapons.

The earlier rules proscribing the use of poison and unnecessary suffering focus on the *use* of the weapon; the later prohibition on wanton devastation focuses on the *indiscriminate effects* of the weapon, and the *per se* prohibition on chemical and biological weapons focuses on the *nature* of the weapon. Regardless of which rule is applied, and regardless of whether they are labeled "herbicides" or "chemical weapons," the use of toxic chemicals supplied by the defendants violated the law of nations, and the defendants are responsible under the law of nations to remediate and make restitution for the damage they have caused.

B. Overview of this Brief

Plaintiffs acknowledge that this memorandum is voluminous and attempts to cover a great deal of ground, but believe this effort is necessary to address the various contentions of the defendants and their experts. This brief will not attempt to address these contentions point by point, however. To address the defendants' various contentions in the scatter-shot fashion in which they have been presented would be too confusing. However, many important principles are misrepresented or misconstrued in defendants' papers. The expert Opinions presented by plaintiffs with this submission will address many of the errors in defendants' papers.

Rather than address the defendants' errors in a piecemeal fashion, plaintiffs will build their own affirmative case on why they state a claim for relief under the law of nations and the Alien Tort Claims Act, based upon the culpable conduct of the defendants. Plaintiff will review the law of nations pertaining to the issues in this case in the only way in which it can be truly understood: in the context of history. Defendants instead attempt to divorce the law of nations from its historical context. Along the way, plaintiffs are confident that the errors or misstatements in the defendants, papers will become obvious. Plaintiffs will present many of the same documents and authorities cited by the defendants, but when viewed in their historical context, their true meaning and application will become clear.

Among the more important misstatements in defendants' papers are: A) that the prohibition of poison or poisoned weapons in Article 23 of the Hague Regulations does not apply to weapons invented after the date of that convention, and as a result, that each new weapon requires a new instrument to prohibit its use, B) that application of the concept of military necessity bars charges or claims regarding wanton devastation or renders them "too open-ended, imprecise and subjective" for prosecution, and C) that the precedent set by the war crimes trials resulting from World War II is only relevant to the most egregious atrocities, such as extermination in death camps. Plaintiffs' review of the applicable international law will also dispel defendants' contentions that corporations cannot be held civilly liable for corporate acts, or that reliance upon governmental immunity will shield them.

Furthermore, rather than quote from the actual documents and historical events that comprise the law of nations, the defendants rely upon their experts to tell the Court what the law is. Mindful of the Second Circuit's admonition in Flores v. Southern Peru Copper Corp., 343 F.3d 140 (2nd Cir. 2003) that "the primary evidence of customary international law is widely dispersed and generally unfamiliar to lawyers and judges," plaintiffs will present direct evidence of the development of the customary prohibition on poison and chemical weapons in war. Flores, supra, 343 F.3d at 171.

Plaintiffs are also mindful of this Court's admonition, at the initial conference in this matter, regarding the gravity of the issues raised by their

claims. As a result, the plaintiffs have undertaken a serious attempt to trace the provisions of the law of nations that they invoke to their historical origin.

The authorities regarding justiciability and political question in United States courts belong to a different body of law than the law of nations. In this brief, plaintiff will address only the law of nations and its applicability under the Alien Tort Claims Act with respect to the issues presented by plaintiffs' claims. Justiciability will be addressed elsewhere.

II. REVIEW OF THE LAW OF NATIONS WITH RESPECT TO CHEMICAL AND BIOLOGICAL WARFARE

A. FROM ANCIENT TIMES THROUGH THE NINETEENTH CENTURY

1. Early Examples of the Use of Poison in War

The word "toxic" originates from the Ancient Greek word *toxikon*, which means "poison, originally poison in which arrows were dipped." Webster's New Twentieth Century Dictionary (2nd ed. 1963). The use of poisons and poisoned weapons in war is as old as history itself. Traditionally, it involved the use of toxins derived from living organisms in order to cause or spread disease amongst the enemy (which is now known as biological warfare).

According to Herodotus, Scythian archers from the Black Sea region employed poison-tipped arrows. They reportedly used the decomposed bodies of several venomous snakes, mixed human blood and dung into sealed vessels and buried this mixture until it was sufficiently putrefied to create their poison. This poison most likely contained the bacteria that cause gangrene and tetanus.

Adrienne Mayor, Dirty Tricks in Ancient Warfare, Military History Quarterly, 10, 1 (2001) at 32-37.[1]

According to Thucydides, when a devastating epidemic broke out during the siege of Athens by the Spartans in the Peloponnesian War, "it was supposed that Peloponnesians had poisoned the reservoirs" because "the plague broke out directly after the Peloponnesian invasion." Thucydides, History of the Peloponnesian War 123, 127 (Rex Warner trans., Penguin Books 1954). Although it is unclear whether this is true, Sparta's reputation was destroyed notwithstanding its victory over Athens in the war. Id at 131. One commentator has suggested that the "plague of Athens" was actually the Ebola virus. Ramirez, A., Was The Plague of Athens Really Ebola? New York Times, Sunday, August 18, 1996.

In 1155, at a battle in Tortona, Italy, Barbarossa was reported to have used the bodies of dead soldiers and animals to poison wells. The poisoning of wells was a battle tactic used in incidents that span the history of warfare, and was employed as late as 1863 during the Civil War of the United States by General Johnson, who used the bodies of sheep and pigs to poison drinking water at Vicksburg. Christopher, G.W., Cieslak, T.J., Pavlin, J.A., Eitzen, E.M, Biological Warfare, A Historical Perspective. JAMA 1997, August 6; 278 (5) 412.

[1] Mayor concludes that "a tragic myopia afflicts those who practice biological war, according to the stories of Heracles, Philocetes and numerous victims and perpetrations, real and legendary . . . Once created, the legends warn, virulent weapons take on an uncontrollable life of their own, even imperiling the makers and their descendants. Consider . . . the delayed afflictions of veterans who deployed the defoliant Agent Orange in Vietnam." Id. At 37.

In the fourteenth century, the Tartar army used a combination of psychological warfare and biological warfare in its siege of the city of Kaffa near the Black Sea. According to an account given by Gabriele De'Mussi, the Tartar army succumbed to the plague while besieging the city. The Black Death (Rosemary Horrox, ed. and trans., Manchester University Press 1994) 14-26. The account continues:

> The dying Tartars, stunned and stupefied by the immensity of the disaster brought about by the disease, and realizing they had no hope of escape, lost interest in the siege. But they ordered corpses to be placed in catapults and lobbed into the city in the hope that the intolerable stench would kill everyone inside. What seemed like mountains of dead were thrown into the city, and the Christians could not hide or flee or escape from them. And soon the rotting corpses tainted the air and poisoned the water supply, and the stench was so overwhelming that hardly one in several thousand was in a position to flee the remains of the Tartar army.
>
> Id. at 18.

Although there is doubt as to whether the disease was spread from the Tartars to the inhabitants of Kaffa by use of the catapults or by fleas and rats, it is widely believed that the flight of infected defenders from Kaffa to Italy precipitated the four hundred year devastation of Europe by the bubonic plague.

This method of warfare was used again in 1422 at the siege of Carolstein and by the Russian army during the siege of Reval, in Estonia in 1710. The success of the tactic was due, in part, to the panic and hysteria that the plague induced in people. McNeill, W. Plagues and Peoples (Anchor Press 1976).

During the French and Indian Wars in North America, British forces used smallpox as a weapon, but the method of delivery was blankets rather than catapults. Sir Jeffrey Amherst, a British commander, formulated a plan to "extirpate" the Native American tribes that were hostile to the crown. Pursuant to this plan, on June 24, 1763, Native Americans were invited to Fort Pitt, the site of a smallpox outbreak amongst British troops. One of Amherst's subordinates, a Captain Ecuyer, ceremoniously gave them blankets and a handkerchief contaminated with smallpox. Ecuyer later wrote in his diary: "I hope it will have the desired effect." As a result of Ecuyer's "gifts," Native American tribes in the Ohio Valley were decimated by a smallpox epidemic. C. Hale Snipe, The Indian Wars of Pennsylvania (The Telegraph Press 1931) 423-424.

What is notable about all of the foregoing instances of the use of poisons in war is that they predated the discovery of germ theory and the method of transmission of disease in the late 1870's. William Bulloch, The History of Bacteriology (Oxford University Press 1938) 183-184 (discussing the scientific development of the germ theory). It is therefore doubtful that the perpetrators fully understood the ramifications of their actions.

2. Early Attempts to Proscribe Poison and Wanton Devastation

Attempts to proscribe the use of poison and poisoned weapons in war can be traced back almost as far as the acts of poisoning themselves. Attempts have also been made since the dawn of history to spare prisoners and non-combatants from the horrors of war. These limitations "gradually evolved into a set body of

principles--often violated but still honored in the main—which were remarkably similar from culture to culture and nation to nation." It appears to have been understood from the earliest times that unrestrained warfare "would jeopardize reconciliation and make later trade and peaceful intercourse impossible." Leon Friedman, The Law of War, A Documentary History—Volume I at 4 (Random House 1972).

A body of rules regulating land warfare found in the seventh book of the *Book of Manu* and dating back to India in the fourth century B.C.E. had this to say:

> 90. When (the king) fights with his foes in battle, let him not strike with weapons concealed (in wood), nor with (such as an) barbed, poisoned, or the points of which are blazing on fire.

The Ancient Greeks and Romans also believed in restraint in the conduct of war, at least when it occurs between peoples of the same nationality. In the Republic, Plato wrote about Socrates' comments to Glaucon that war among Greeks should have as its end "friendly correction" rather than destruction or enslavement of the enemy:

> And as they are Hellenes themselves they will not devastate Hellas, nor will they burn houses, nor ever suppose that the whole population of a city—men, women and children--are equally their enemies, for they know that the guilt of war is always confined to a few persons and that the many are their friends. And for all these reasons they will be unwilling to waste their lands and raze their houses; their enmity to them will only last until the many innocent sufferers have compelled the guilty few to give satisfaction.

It was also considered illegal by the Ancient Greeks and Romans to poison the enemies' water supply or to use poisoned weapons. Although these principles were violated in ancient times, such violations do not prove that the rules themselves had no force or validity. As has been written by one commentator:

> To point to offences against rules does not necessarily disprove the validity and juridicial significance of those rules. Within our own recent experience, many rules and provisions which were universally esteemed to be firmly established as a part of international law, have, on the outbreak of war, been deliberately disregarded. In ancient times, as in our own age, the violation of recognized international principles of conduct, whether committed willfully or through pressure of what was conceived to be insuperable necessity, did not negate the binding force of such principles, anymore than a breach of private law by a citizen pointed to its inoperativeness in his city.

Friedman at 3-6 (quoting from Coleman Phillipson, The International Law and Custom of Ancient Greece and Rome).

Another commentator has noted that, historically, the most ferocious wars have been those fought over ideology:

> When war is fought for broad, ideological objectives, such rules [limiting destructiveness] have tended to break down because the end is thought to justify all means and war has tended to become absolute. . . If one fights for democracy, it may be appropriate to destroy all the states and most of the individuals so that a clear field will remain in which democracy can grow. If it is Christianity against Islam, each may be prepared to destroy all the adversaries if only a few of its side can remain to perpetuate the true faith.

Friedman at 5 (quoting from Quincy Wright, A Study of War).

Throughout history, there have been occasions when belligerents were presented with opportunities to employ poisons or poisonous chemicals and have

voluntary refrained, out of a sense of legal and/or moral obligation. For instance, in 1846 a British government committee rejected a proposal by Admiral Cochrane to use sulfur dioxide to flush out troops from fortified places on the grounds that it would violate the rules of war. The British War Department rejected a proposal to use shells containing cacodyl cyanide against Russian ships during the Crimean War on the ground that it would be similar to poisoning the enemy's water supply. During the American civil war, General Grant had rejected the idea of chemical warfare as being uncivilized. Stockholm International Peace Research Institute, The Problem of Chemical and Biological Warfare (Solna, 1975) (hereinafter SIPRI), Vol. III at 104. [2]

3. Grotius and the Emergence of the Modern Conception of the Law Of Nations

In the fifteenth and sixteenth centuries, the laws of war were reexamined and systemized by a group of teachers, jurists and theologians, who synthesized contemporary practice with Ancient Greek and Roman writings and Christian dogma on the laws of war and developed the modern conception of the law of nations.

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[2] The Stockholm International Peace Research Institute has published a scholarly and comprehensive five volume treatise which expressly analyzes the applicability of conventional and customary international law to the use of chemical and biological weapons, including herbicides. This brief will refer to Volumes I and III of the treatise. Volume I is entitled "The Rise of CB Weapons" and covers historical events relating to chemical and biological warfare, and Volume III is entitled "CBW and the Law of War," and it examines the development of laws governing the use of chemical and biological weapons. Among its other attributes, the SIPRI treatise has great value as a well-researched and well-documented account and compilation of historical events and original documents and sources of international law. It is primarily for this purpose that plaintiffs make extensive reference to it herein. C.f. Opinion of Michael Reisman (hereinafter Reisman Opinion) at 7.

One such jurist was Alberico Gentili, an Italian writer, professor of law and advocate for the king of Spain in the British admiralty court. His work De Jure Belli (On the Law of War) in 1598 was one of the earliest on international law. In that work he discussed the prohibition of poison and poisoned weapons, for which he listed 19 reasons justifying the prohibition, including the clandestine and malicious character of the use of poison.

The most systematic and comprehensive work on the laws of war was that of Hugo Grotius. Grotius was a lawyer for the Dutch East India Company. In 1609 he wrote an important work on the law of prize to support his client's capture of a Portuguese galleon on the high seas. He also served in many official positions in the Dutch government. Friedman at 14-15.

In 1625, Grotius completed a three-volume work entitled On the Law of War and Peace. This work represents the first modern attempt to declare the rules of the law of nations by referring to the actual practice of states as evidence of natural law, as well as referring to authorities such as the Bible, Homer, Aristotle, Plato, Cicero, St. Augustine and others. The first volume deals with the lawfulness of war itself, the second with the causes of war. The third volume sets forth the law governing the actual conduct of war. Many of his suggested restraints later became part of the Hague and Geneva Conventions. Friedman at 14-15.

True to the period in which he lived, Grotius was harsh in his discussion of prisoners and civilian populations. Chapter V, section I of the third volume is

entitled: "Enemy property may be destroyed and pillaged," and Grotius explained that "the plunder or destruction of enemy fortifications, harbours, cities, men, ships, crops, and anything else of the kind, is included in the law of war," citing Polybius.

Among the prohibitions Grotius wrote about was the use of poisons. Chapter III, section XV is entitled: "By the law of nations it is forbidden to kill any one by means of poison." Here Grotius states that it is more noble to kill an enemy by the sword than by poison because it gives the enemy the chance to defend himself, and he cites to several authorities who concur on that point.[3] One quote is from Valerius Maximus, who stated: "Wars ought to be waged with weapons, not poisons." Grotius states that poisoning may be permitted by the "law of nature" but it is forbidden by the law of nations.

Chapter III, section XVI is entitled: "By the law of nations it is forbidden to poison weapons or waters." It begins with: "Different in a degree from poisoning of this sort, and more closely allied with the use of force, is the poisoning of javelins." Grotius refers to this as "doubling of the causes of death" and states that it is "contrary to the law of nations, not indeed of all nations, but of European nations, and of such others as attain to the higher standard of Europe."

[3] Whatever the justifications given by contemporary authors, the reasons for the (re-)emergence of the prohibition of poison in Europe between the fifteenth and eighteenth centuries were no doubt closely related to the naturalist conception of war as a contest between states to be decided by the use of force, not of magic and malice. This conception itself seems understandable in terms of the material conditions of warfare at the time, including the predominant role of mercenary armies and the security requirements of princes and military commanders. III SIPRI at 94 (citing Georg Schwarzenberger, The Legality of Nuclear Weapons).

Section XVI continues: "The poisoning of springs also, though the act either is not secret or does not long remain so, is said by Florus to be not only contrary to ancestral custom but also contrary to the law of the gods; just as we have pointed out elsewhere, writers frequently ascribe the laws of nations to the gods." Section XVII then states that the "pollution of waters without the use of poison, in such a way that one cannot drink from them" is permissible, because it is "like the diverting of a river, or cutting off the veins of a spring, which is permissible by nature and by convention." Hugo Grotius, The Law of War and Peace, Book III (1625) reprinted in Friedman at 37-38.

Chapter X, section IV provides:

Who are bound to make restitution, and to what extent

> Furthermore, according to the principles which in general terms we have elsewhere set forth, those persons are bound to make restitution who have brought about the war, either by the exercise of their power, or through their advice. Their accountability concerns all those things, of course, which ordinarily follow in the train of war; and even unusual things, if they have ordered or advised any such thing, or have failed to prevent it when they might have done so.
>
> Thus also generals are responsible for the things which have been done while they were in command; and all the soldiers that have participated in some common act, as the burning of a city, are responsible for the total damage. In the case of separate acts each is responsible for the loss of which he was the sole cause, or at any rate was one of the causes.

Hugo Grotius, The Law of War and Peace, Book III (1625) reprinted in Friedman at 76.

4. Early Trials of War Crimes

Precedent for trial of war crimes goes back to the Middle Ages, and it was not reserved for members of the military only. One of the first known trials by an international tribunal for atrocities took place in the Middle Ages. In 1474, Peter von Heigenbach, the governor of the territory of Breisbach, was tried by a court made up of Swiss, German, and Alsatian judges for murder, arson and robbery he had ordered to be committed while in command of the city. He claimed that he was acting under the orders of Duke Charles of Burgundy, but the court rejected his defense.

In medieval times there were also military court martials and heraldic courts under the chivalric code. Mercenaries who engaged in military acts without a formal declaration of war were tried; an example of this was the free companies who wandered through France during the Hundred Years War, burning and pillaging. If captured they were tried as war criminals before court-martials of the regular military forces on charges of treason or murder. The essence of their offenses, however, was that they committed offenses which fell outside the umbrella of the law of war.

In the nineteenth century, it became an established practice for armed forces to try their own soldiers and those of the enemy that fell in their hands for violating the law of war in military tribunals. One such army court-martial was that of Major Henry Wirz, the Swiss doctor who was in charge of the infamous Andersonville prison camp during the United States Civil War. Wirz raised the

defense of superior orders, but the tribunal, guided by the recently promulgated Lieber Code, rejected the defense and sentenced him to death.

The United States Army also court-martialed a number of its own soldiers who committed atrocities during the Phillipine insurrection of 1899-1902. During the same period, the British court-martialed some of their own soldiers for excesses committed during the Boer War. Once again the defense of superior orders was considered and rejected by the military tribunals hearing the cases.

Friedman at 775-776.

Telford Taylor, the chief prosecutor of the American military tribunals in post World War II Germany, defined war crimes, as acts which would normally be considered crimes, but to which the immunity which accompanies the state of war does not apply:

> War consists largely of acts that would be criminal if performed in time of peace—killing, wounding, kidnapping, destroying or carrying off other people's property. Such conduct is not regarded as criminal if it takes place in the course of war, because the state of war lays a blanket of immunity over the warriors.
>
> But the area of immunity is not unlimited, and its boundaries are marked by the laws of war. Unless the conduct in question falls within those boundaries, it does not lose the criminal character it would have should it occur in peaceful circumstances. In a literal sense, therefore, the expression "war crime" is a misnomer, for it means an act that remains criminal even though committed in the course of war, because it lies outside the area of immunity prescribed by the laws of war.

Telford Taylor, Nuremberg and Vietnam: An American Tragedy 19-20 (1970) at 19-20.

B. CODIFICATION OF THE LAWS OF WAR

1. Conventional Versus Customary International Law

Although principles of legality and morality have acted as restraints on the conduct of warfare since ancient times, the first serious efforts at codifying the rules of war as binding enactments of international law began in the nineteenth century. Before that time, individual states often negotiated treaties between themselves which dealt with specific areas of the laws of war, such as contraband and prize. The traditional legal and moral principles (also known as the laws and customs of war) and conventional (treaty) rules regarding the conduct of warfare constitute separate bodies of law and are separate sources of prohibition on the acts of belligerents, but their development can be tracked together.

Among the political and social developments which led to the interest in codification of the laws of war was introduction of compulsory military service, in which large national armies took the place of the small professional forces which had been subject to rigid discipline. Another factor was the increase in the victims and the horrors of war due to larger armies and rapidly advancing weapons technology. These factors resulted in a growing conviction in the Western world "that civilization was advancing rapidly and that it was therefore necessary 'to restrain the destructive force of war.'" Dietrich Schindler and Jiri Toman, The Laws of Armed Conflicts: A Collection of Conventions, Resolutions and Other Documents, vii (Martinus Nijhoff Publishers, 3rd ed. 1988) (quoting from Preface to the Oxford Manual of the Institute of International Law, 1880).

It is important to distinguish, however, between rules that are binding upon nations because of their inclusion in conventions or treaties to which they are parties, and rules which become binding on all nations because they have attained the status of customary international law. Rules of customary international law are evidenced by the general custom or practice of nations with an accompanying belief that they constitute legal obligations. Flores, supra, 343 F.3d at 154. With respect to war, that body of law is often referred to as the "laws and customs of war." As is clear from the Amended Complaint, plaintiffs base their claims under the Alien Tort Claims Act on violations of customary international law only.

One authoritative treatise on the laws of war in respect of chemical and biological warfare has noted that: "In the law of war the co-existence of a conventional rule and of a custom which have approximately the same content is the rule rather than the exception." III SIPRI at 15. The laws and customs of war have mostly arisen out of centuries-old "traditions and moral convictions as to what does and what does not constitute civilized warfare." Id. Many of these norms eventually were codified in treaties, or conventions. But those conventions, in effect, became declarations of existing custom. Conventions also may go beyond what can be considered effective custom at the time they take effect. In that case, conventions may be said to represent an "average opinion or even a more advanced opinion as to what the law is and ought to be, whereas a

customary rule is more akin to a least common denominator of prevailing legal conceptions." Id. at 16.

When a convention that codifies an existing custom enters into force, it provides evidence of and confirms and strengthens the custom, especially to the extent it is widely ratified. Indeed one of the reasons for enacting a convention that codifies a customary rule is to strengthen and provide evidence of that rule. "When a convention goes further than the generally accepted scope of the customary rule from which it arose, the custom may gradually change its scope to conform more closely with the convention. Such a process of reciprocal action has taken place in the case of the laws relating to chemical and biological warfare." Id.

Courts often look to the Statute of the International Court of Justice ("ICJ"), established by the Charter of the United Nations, for evidence of what customary international law provides. Flores, 343 F.3d at 156. Article 38 of the ICJ Statute provides:

> 1. The Court, whose function it is to decide in accordance with international law such disputes as are submitted to it, shall apply:
>
>   a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
>   b. international custom, as evidence of a general practice accepted as law;
>   c. the general principles of law recognized by civilized nations;
>   d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly

> qualified publicists of the various nations, as subsidiary means for the determination of rules of law.

The custom and practices of nations are generally evidenced by the overt acts of nations or by the decision to refrain from certain acts. The act or the restraint must be accompanied by a generally accepted sense that this conduct is required by a rule of international law ("*opinio juris*"). Generally customary international rules govern issues which are of mutual and universal concern to the community of nations.

The most reliable source of rules of international law is often the text of international treaties or conventions. This is because conventions usually govern issues which are of mutual and universal concern, and their language has been carefully selected by representatives of the nations. This language can provide the strongest evidence of the acknowledgment by a nation of a rule of law. Other documents can provide evidence of *opinio juris*, such as non-binding international declarations or resolutions (such as resolutions of the General Assembly of the United Nations) and the direct pronouncements of the leaders of nations. See SIPRI Vol. III, generally; Flores, supra, 343 F.3d 156-158; Opinion of Professor Jordan J. Paust, submitted herewith, at 33-38.

These principles can be better illustrated by referring to the particular rules governing chemical and biological weapons. Acceptance by a nation of a customary rule prohibiting the use of chemical and biological weapons can obviously be evidenced by observance of that rule by the nation. This would

consist of a nation's refraining from the use of chemical or biological weapons in a situation where it had the technical ability to use them to a strategic advantage, but refused to do so. The refusal must be at least partly motivated by a sense of legal obligation, and it must not be motivated solely by some other consideration, such as fear of retaliation. III SIPRI at 13-19.

However, the existence of *opinio juris* can also be recognized in the breach of a customary rule. This is the case where a nation that violates the rule shows guilt, such as by officially denying the use of chemical weapons, or by claiming that an exception applies, such as retaliatory use. Other possible evidence of the violation of a customary rule is the official condemnation by other nations of the violation. An important distinction can also be made between the use of a chemical weapon by a nation during a period when the customary rule, or *opinio juris*, is not fully formed, and the use of the same weapon after the formation and general acceptance of the rule. The former may often be described as an impediment to the formation of a customary rule, the latter will often constitute a violation of the rule. Id.

As alluded to above, another peculiar aspect of customary international law with respect to chemical and biological weapons is the difference between first use of those weapons and retaliatory use. First use of prohibited weapons constitutes a clear violation of customary international law. Retaliation in kind has generally become accepted as one of the available sanctions or remedies available to nations that have been victims of chemical or biological weapons

violations. III SIPRI at 141. John Norton Moore, Ratification of the Geneva Protocol on Gas and Bacteriological Warfare: A Legal and Political Analysis, 58 Va L. Rev. 419, 450 (1972) (hereinafter Moore). The other two generally accepted sanctions for infringements are penal sanctions and monetary compensation.

2. Predecessor Instruments to the Hague Regulations of 1907:

A. Lieber Code

The first effort to prepare a comprehensive codification of the laws of war was undertaken by Francis Lieber, a German-born professor of history at Columbia College in New York. Lieber suggested the idea of preparing a field manual for use by the Union army during the Civil War of the United States. Lieber prepared his code in early1863, and it was officially promulgated by President Lincoln on April 24, 1863 as General Orders No. 100 and entitled "Instructions for the Government of Armies of the United States in the Field." Although technically the Code was only binding on the forces of the United States, it corresponds "to a great extent to the laws and customs of war existing at that time." Schindler & Toman at 3.

> The importance of the Lieber Code lies in the fact that it was complete, humane, and easily comprehensible to commanders in the field. Many European nations quickly adopted instructions based largely on the Code, and it served as the basis for subsequent manuals for the American army. The Prussian army code of 1870 was also based on Lieber's work and the German army staff later reported that it worked so well that not a single case arose during the Franco-Prussian War to which its principles did not apply.

Friedman at 152. See also Schindler & Toman at 3.

With respect to the use of poison, and probably mindful of the poisoning of wells as a battle tactic during the Civil War, the Lieber Code provided as follows:

> Art. 70
>
> The use of poison in any manner, be it to poison wells, or food, or arms, is wholly excluded from modern warfare. He that uses it puts himself out of the pale of the law and usages of war.[4]

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[4] Contrast this definitive statement in the 1863 Lieber Code with the following provision in the U.S. Army's pamphlet on international law, published almost 100 years later:

> 2. The Contamination of Sources of Water
>
> The unpublished annotation to paragraph 37b of [Field Manual] 27-10 (1956), explained the change in the U.S. Army view on contamination of water as follows:
>
> > The previous edition of FM 27-10 (consistently with views expressed in earlier editions of the Manual) stated that it was lawful "to contaminate sources of water by placing dead animals therein or otherwise, provided such contamination is evident or the enemy is informed thereof." This view is squarely in conflict with the position taken in a number of British texts.
> >
> > It is doubtful whether this method of warfare will assume any substantive importance in the future and that conditions of warfare will permit informing the enemy that sources of water have been contaminated. Moreover, the previous United States interpretation of Article 23, paragraph (a), [Hague Regulations], appeared to overlook the fact that even though contamination might have been made evident through the posting of signs, either the elements or third parties might easily destroy the notices. The Manual has accordingly been brought into accord with the British views on this subject.

Department of the Army Pamphlet, 27-161-2, International Law, Volume II, October 1962.

The prohibition on poisoning of water supplies, whether it was done openly or in secret, was clear even in Grotius' time.

Compare the excerpt above with an analogous provision in the British military field manual: "Water in wells, pumps, pipes, reservoirs, lakes, rivers and the like, from which the enemy may

With respect to the general conduct of warfare and military necessity, the Lieber Code provided the following:

> Art. 15.
>
> Military necessity admits of all direct destruction of life or limb of armed enemies, and of other persons whose destruction is incidentally unavoidable in the armed contests of the war. . . it allows of all destruction of property, and obstruction of the ways and channels of traffic, travel, or communication, and of all withholding of sustenance or means of life from the enemy. . . Men who take up arms against one another in public war do not cease on this account to be moral beings, responsible to one another and to God.
>
> Art. 16
>
> Military necessity does not admit of cruelty – that is, the infliction of suffering for the sake of suffering or for revenge, nor of maiming or wounding except in fight. . . It does not admit of the use of poison in any way, nor of the wanton devastation of a district. . . and, in general, military necessity does not include any act of hostility which makes the return to peace unnecessarily difficult.

Instructions for the Government of Armies of the United States in the Field, prepared by Francis Lieber, LL.D., Originally Issued as General Orders No. 100, Adjutant General's Office, 1863, Washington 1898: Government Printing Office (hereinafter Lieber Code).

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draw drinking water, must not be poisoned or contaminated. The poisoning or contamination of water is not made lawful by posting up a notice informing the enemy that the water has been thus polluted." III SIPRI at 94, n. 9.

2. Predecessor Instruments to the Hague Regulations of 1907:
B. Declaration of Saint Petersburg

In 1863 another development occurred which served as a catalyst for the interest in codifying the laws of war. Russian military authorities invented a bullet which exploded on contact with hard substances, whose primary use was for blowing up ammunition wagons. In 1867 the projectile was modified to explode on contact with soft substances. The Russian government itself was unwilling to use this weapon, as it would have been "an inhuman instrument of war," and it naturally did not want other nations to use it either. Russia thus called for an international agreement banning the use of the projectile. Schindler & Toman at 102.

The Declaration of Saint Petersburg was the first formal agreement prohibiting the use of certain weapons in war. Adopted in 1868, the Declaration provided as follows:

> Considering:
>
> That the progress of civilization should have the effect of alleviating as much as possible the calamities of war;
> That the only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy;
> That for this purpose it is sufficient to disable the greatest possible number of men;
> That this object would be exceeded by the employment of arms which uselessly aggravate the sufferings of disabled men, or render their death inevitable;
> That the employment of such arms would, therefore, be contrary to the laws of humanity;

> The Contracting Parties engage mutually to renounce, in case of war among themselves, the employment by their military or naval troops of any projectile of a weight below 400 grammes, which is either explosive or charged with fulminating or inflammable substances.

The effect of the Declaration was to confirm the existing customary international rule that the use of arms, projectiles and material of a nature to cause unnecessary suffering was prohibited, and to confirm that the new exploding bullets fall within that prohibition. Schindler & Toman at 101.

2. Predecessor Instruments to the Hague Regulations of 1907:
C. Brussels Declaration

After the Declaration of Saint Petersburg was adopted by the European powers, a Russian scholar, Feodor de Martens, called for an international conference among the powers to prepare a comprehensive code on the laws of war similar to the Lieber Code and binding upon all nations. Upon the invitation of the Russian government, a group of 32 representatives from fifteen nations, including military men, diplomats and international lawyers met in Brussels in July 1874 to examine a draft of an international declaration concerning the laws and customs of war. Friedman at 152. The Conference adopted the draft with minor alterations, but not all governments were willing to accept it as a binding convention and it was not ratified. Schindler & Toman at 25.

The Brussels Declaration contained a section entitled "Means of injuring the enemy" which provided as follows:

> Art. 12. The laws of war do not recognize in belligerents an unlimited power in the adoption of means of injuring the enemy.

Art. 13. According to this principle are especially 'forbidden:'

(a) Employment of poison or poisoned weapons. . .

(e) The employment of arms, projectiles or material calculated to cause unnecessary suffering, as well as the use of projectiles prohibited by the Declaration of St. Petersburg of 1868. . .

(g) Any destruction or seizure of the enemy's property that is not imperatively demanded by the necessity of war.

Reprinted in Schindler & Toman at 25-35. Although the Declaration was not ratified, it formed an important step in the movement to codify the laws of war.

2. Predecessor Instruments to the Hague Regulations of 1907:
D. Oxford Manual

Later that year, the Institute of International Law, a multinational association founded the year before for the purpose of assisting in the gradual codification of international law, appointed a committee to study the Brussels Declaration. This study led to the unanimous adoption by the Institute of the Manual of the Laws and Customs of War at Oxford in 1880. Both the Brussels Declaration and the Oxford Manual formed the basis of the two Hague Conventions on land warfare and the Regulations annexed to them, adopted in 1899 and 1907. Many of the provision of the Hague Regulations can be traced back to these two formative documents. Schindler & Toman at 35-49.

The preface to the Oxford Manual states its purpose:

> It may be said that independently of the international laws existing on this subject, there are today certain principles of justice which guide the public conscience, which are manifested even by

> general customs, but which it would be well to fix and make obligatory. That is what the Conference of Brussels attempted, at the suggestion of His Majesty the Emperor of Russia, and it is what the Institute of International Law, in its turn, is trying to-day to contribute. The Institute attempts this although the governments have not ratified the draft issued by the Conference at Brussels, because since 1874 ideas, aided by reflection and experience, have had time to mature, and because it seems less difficult than it did then to trace rules which would be acceptable to all peoples.
>
> The Institute, too, does not propose an international treaty, which might perhaps be premature or at least very difficult to obtain; but, being bound by its by-laws to work, among other things, for the observations of the laws of war, it believes it is fulfilling a duty in offering to the governments a "Manual" suitable as the basis for national legislation each State, and in accord with both the progress of juridical science and the needs of civilized armies.
>
> Rash and extreme rules will not, furthermore, be found therein. The Institute has not sought innovations in drawing up the "Manual"; it has contented itself with stating clearly and codifying the accepted ideas of our age so far as this as appeared allowable and practicable.

Article 8 of the Oxford Manual provides: "It is forbidden: (a) To make use of poison, in any form whatever. . ." Article 9 provides: "It is forbidden: (a) To employ arms, projectiles, or materials of any kind calculated to cause superfluous suffering, or to aggravate wounds – notably projectiles of less weight than four hundred grams which are explosive or are charged with fulminating or inflammable substances '(Declaration of St. Petersburg)'. . ." Article 32 provides: "It is forbidden: . . . (b) To destroy public or private property, if this destruction is not demanded by an imperative necessity of war. . ." Reprinted in Schindler & Toman at 35-49.

3. Interpretation of Texts Concerning the Customary Prohibition of Poison

A comparison of the corresponding language in the Lieber Code, the Declaration of Saint Petersburg, the Brussels Declaration and the Oxford Manual serves to clarify the scope of the customary international rule on prohibited weapons. The concept of "employment of poison or poisoned weapons" contained in Article 13 (a) of the Brussels Declaration, consistent with the language of the Lieber Code and the Oxford Manual, was meant to prohibit the use of poison in any form or manner whatever, even under a claim of military necessity.

It is clear from the proceedings of the Brussels Conference that the reference to poison or poisoned weapons in the Brussels Declaration was meant to be comprehensive and to include toxins (like the mixture of blood and dung used by the Scythian archers) and the spreading of disease on enemy territory (like the plague-infected corpses of the Tartar army or smallpox-infected blankets of Captain Ecuyer). III SIPRI at 96. The language of the Brussels declaration was later imported almost wholesale into the Hague Regulations. Consistent with this intent of the drafters, a United States army manual in effect in 1914 (as well as 1940) stated that the prohibition of poison expressed in the Hague Regulations also applied "to the use of means calculated to spread contagious diseases." Id.

Although the official English (but not authentic) text of the Brussels Declaration used the phrase “calculated to cause unnecessary suffering” in Article 13 (g) (which was borrowed from the language of the Declaration of Saint Petersburg), the official (and authentic) French text used the phrase “of a nature to cause superfluous injury," which is more comprehensive than "unnecessary suffering." III SIPRI at 97. The (authentic) French “of a nature to cause” clearly lessens the scienter requirement which is implied by “calculated to cause.” See Paust Opinion at 28, n. 15.

It is thus clear that the intent behind the language in Article 13 (e) of the Brussels Declaration was to confirm a customary prohibition on inhumane weapons which was greater than scope than the customary rule described in the Declaration of Saint Petersburg, which was concerned with aggravating “the sufferings of disabled men.” The larger scope of the rule is also clear in Article 9 of the Oxford Manual, which prohibits the employment of weapons of any kind calculated to cause “superfluous suffering, or to aggravate wounds. . .” Although the drafters of the Oxford Manual reverted to the use of the word “suffering” instead of “injury,” the intent to expand the scope of the rule beyond aggravation of wounds of disabled men is clear.

The concept of “superfluous injury” is broad enough to include weapons whose effects are likely to reach the civilian population, even if the population is not directly attacked (as is the case with biological weapons) on the basis that the injury is out of reasonable proportion to the legitimate military advantage. III

SIPRI at 98. This distinction and interpretation of "superfluous injury" is important because this language from the Brussels Declaration was eventually carried forward into the Hague Conventions of 1899 and 1907 without discussion at the conference proceedings. Id. at 96.

This interpretation is borne out in a 1955 U.S. Navy manual section dealing with the customary prohibition on chemical warfare: "At the same time, it does seem correct to emphasize that, to the extent that [toxic chemical agents] are used either directly upon the noncombatant population or in such circumstances as to cause unnecessary suffering, their employment must be considered unlawful." United States Navy Manual, Law of Naval Warfare (1955) quoted in Department of the Army Pamphlet, 27-161-2, International Law, Volume II (October 1962) at 44 (hereinafter U.S. Army Pamphlet). See Also Case Concerning the Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion of 8 July 1996, General List No. 95, 1996 I.C.J. 226 ("hereinafter ICJ, Legality of Nuclear Weapons) at , para. 78 (Available at http://www.icj-cij.org/icjwww/idecisions.htm)

Thus the language of Article 13 (e) of the Brussels Declaration was meant to encompass both a) the unnecessary suffering of combatants and b) the indiscriminate targeting and resulting effects upon civilians.

4. The Hague Conventions of 1899 and 1907

The Regulations Respecting the Laws and Customs of War on Land (hereinafter "Hague Regulations") which are annexed to the Hague Convention

(IV) Respecting the Laws and Customs of War on Land (hereinafter "Hague Convention") were meant to codify the existing customary rules regarding restraints on warfare, as captured in the Brussels Declaration. The Hague Regulations were also meant to provide flexible rules of general application which could be adopted to advances in the tactics and weaponry of war.

It was again the advance in the technology of war—the development of the small bore rifle, the Maxim machine gun, Nobel's smokeless powder and the rapid-fire artillery piece--that spurred the powers into convening again for a conference on the laws of war. Concerned about the rising costs of the arms race, Czar Nicholas II of Russia proposed another international conference in August 1898. This time, the purpose was to consider a moratorium on new weapons, limitation of armaments and a plan for peaceful arbitration of international conflicts, as well as to consider "the revision of the declaration concerning the laws and customs of war elaborated in 1874 by the Conference of Brussels, and not yet ratified." Friedman at 152; Schindler & Toman at 63.

The Czar's invitation met with international interest, and representatives from 26 nations met in the Hague from May 18, 1899 to July 29, 1899 to consider these issues at the First International Peace Conference. The conference failed to produce an agreement on arms reduction, but adopted three Conventions, including one on the law of land warfare, to which Regulations were annexed. The Convention and Regulations were revised at the Second International Peace Conference, convened in the Hague in 1907, but the two versions differ only

slightly from each other. The Hague 1907 Convention was meant to supersede the 1899 Convention. Those nations that ratified both Conventions are bound only by the 1907 Convention; those that only ratified the 1899 are bound by it instead. See Article 2 of 1907 Hague Convention. Reprinted in Schindler & Toman at 63.

At the 1899 Conference, there was debate on the comprehensiveness of the Regulations, whether they were binding only as between parties to the Convention and the effect that a binding convention might have upon the laws and customs of war. Both the 1899 and the 1907 Conventions provide (in Article 2) that the Regulations are only binding during war between parties to the Conventions. However, the following language, drafted and introduced by Feodor de Martens (now known as the Martens clause) was unanimously approved by the Conference and became part of the preamble of both Hague Conventions:

> Until a more complete code of the laws of war has been issued, the High Contracting Parties deem it expedient to declare that, in cases not included in the Regulations adopted by them, the inhabitants and the belligerents remain under the protection and the rule of the principles of the law of nations, as they result from the usages established among civilized peoples, from the laws of humanity, and the dictates of the public conscience.
>
> Schindler & Toman at 63-100.

The clear import of the Martens clause is to confirm the co-existence and continuing validity of the laws and customs of war notwithstanding any particular nation's ratification of or accession to the Conventions. The purpose of the

Martens clause is to acknowledge and confirm that the principles set forth in the Regulations may become binding even upon nations which have refused to become parties to the Conventions though the process of customary international law.

As stated later on in the Judgment of the International Military Tribunal ("IMT") at Nuremberg in United States v. Alfried Krupp,et al.:

> The preamble [Martens clause] is much more than a pious declaration. It is a general clause, making the usages established among civilized nations, the laws of humanity, and the dictates of public conscience into the legal yardstick to be applied if and when the specific provisions of the Convention and Regulations annexed to it do not cover specific cases occurring in warfare, or concomitant to warfare.

Reprinted in Friedman at 1349. This "legal yardstick," or continuing development of the laws and customs of war, also operates as an evolving prohibition on newly introduced weapons which violate the principles of this body of law. III SIPRI at 90, n. 1. See also ICJ, Legality of Nuclear Weapons, para. 78.

It is indisputable that the Hague Regulations with Respect to the Laws and Customs of War on Land (as embodied in both the 1899 and 1907 Conventions) represent binding rules of customary international law. "The rules of land warfare expressed in the Convention undoubtedly represented an advance over existing International Law at the time of their adoption. . . but by 1939 these rules. . .were recognized by all civilized nations and were regarded as being declaratory of the

laws and customs of war." Schindler & Toman at 63 (citing Judgments of International Military Tribunals at Nuremberg and Tokyo).

5. Article 23 of the Hague Regulations

Article 22 of the 1907 Hague Regulations provides:

The right of belligerents to adopt means of injuring the enemy is not unlimited.

Article 23 of the 1907 Hague Regulations provides:

> In addition to the prohibitions provided by special Conventions, it especially forbidden –
>
> (a) To employ poison or poisoned weapons. . .
>
> (e) To employ arms, projectiles or material calculated to cause unnecessary suffering. . .
>
> (g) To destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war. . .

Article 3 of the 1907 Hague Convention provides: "A belligerent party which violates the provisions of the said Regulations shall, if the case demands, be liable to pay compensation." Reprinted in Schindler & Toman at 63-100.

It is clear from the Proceedings of the 1899 Hague Conference that the intent of the drafters was to revise and adopt the language of the Brussels Declaration as a binding treaty, especially with respect to the rules on "Means of Injuring the Enemy" (Brussels Declaration Article 13; Hague Regulations Article 23). The Reports to the Hague Conferences of 1899 and 1907 145 (James Brown Scott ed., Clarendon Press 1917).

The phrase "special Conventions" in Hague Article 23 meant "first the Declaration of Saint Petersburg, which continues in force, and then all those of like nature that may be concluded, especially subsequently to the Hague Conference." Id. With respect to Article 23 (g), the drafters intended this as a prohibition on the destruction of property during hostilities, as opposed to the prohibition on destruction of property in occupied territory, which appears elsewhere in the Regulations.

Although the official English (not authentic) text of Article 23 (e) of the 1907 regulations forbids weapons "calculated to cause unnecessary suffering" (language from the Declaration of Saint Petersburg), the official (authentic) French texts of both the 1899 and 1907 regulations and the official English (not authentic) text of the 1899 regulations for Article 23 (e) forbids weapons "of a nature to cause superfluous injury." The English text of the 1907 Regulations reverted to the "unnecessary suffering" language for reasons which are unclear and legally irrelevant, as it is the authentic French text which governs. III SIPRI at 97. Thus the language in Article 23 (e) of the Hague Regulations should be interpreted consistently with the larger scope of "superfluous injury."

6. Other Provisions of the Hague Conventions

Another binding convention which was promulgated at the 1899 Hague Conference was the Declaration Concerning Expanding Bullets signed at the Hague on July 29, 1899. It banned the use of expanding, or "Dum-Dum," bullets, again a particular weapon determined to fall under the existing customary

prohibition of weapons causing unnecessary suffering, like the exploding bullets of the Declaration of Saint Petersburg.

Still another binding convention promulgated at the 1899 Hague Conference was the Declaration Concerning Asphyxiating Gases signed at the Hague on July 29, 1899. It provided, in part:

> The Undersigned, Plenipotentiaries of the Powers represented at the International Peace Conference at the Hague, duly authorized to that effect by their Governments, inspired by the sentiments which found expression in the Declaration of Saint Petersburg of 29 November (11 December) 1868,
>
> Declare as follows:
>
> The Contracting Powers agree to abstain from the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases.

"This Declaration gives expression, with regard to a particular instrument of warfare, to the customary rules prohibiting the use of poison and of material causing unnecessary suffering." Schindler & Toman at 105. The customary prohibitions referred to are the same that were codified in Articles 23 (a) and 23 (e) of the Hague Regulations, and the prohibition of poison mentioned in Article 70 of the Lieber Code, Article 13 (a) of the Brussels Declaration and Article 8 (a) of the Oxford Manual. Id. See also, Memorandum from Myron C. Cramer, Judge Advocate General, for the Secretary of War, SPJGW 1945/164, March 1945, reprinted at 10 I.L.M. 1304, 1305, (hereinafter "Cramer Memorandum) (citing Hague Conference Proceedings) (**Exhibit 1** to Plaintiffs' Appendix submitted herewith.) The United States delegation to the Hague Conference opposed the

ban on poisonous gas and (along with Britain) on exploding bullets. Friedman at 153.

7. Continuing Applicability of Hague Article 23 to New Weapons

To the extent that Hague Article 23 applies to weapons of war, it was meant to prohibit certain *uses* of particular weapons or materials and it was meant to be flexible. To that end, it has a continuing applicability to newly developed weapons, which were not contemplated at the time of its enactment. Among the effects that Article 23 prohibits are poisoning or unnecessary suffering of combatants and civilians, and indiscriminate targeting with any kind of weapon of civilians.

It is significant that the participants at the Hague Conferences codified the general prohibition on the use of poison, poisoned weapons, and material of a nature to cause superfluous injury or unnecessary suffering in the Regulations (Article 23), on the one hand, yet enacted a separate Declaration to prohibit a particular type of poisoned weapon (deleterious gas) which falls within the general prohibition. It is clear that the general prohibition was already a part of the customary international law, and that the particular weapon sought to be banned (gas) was a new weapon with no history of use in war.

This indicates that the general prohibitions set forth in Article 23 of the Regulations focus on the way particular weapons or materials are *used* in war. For instance, Article 23 does not ban the use in war of animals *per se*. It only bans the use of dead animals *in such a manner as to poison drinking water or to*

spread disease amongst the enemy. In that regard, the use of any substance in war which has *the effect* of poisoning water or spreading disease is prohibited by Article 23.

Thus the customary rules which prohibit the use of chemical and biological weapons are of two kinds: 1) those that prohibit them *per se*, because of the chemical or biological nature of the weapons; and 2) those that prohibit them because of they way they are used, particularly those that are a) used as poison or for their poisonous effects or b) that cause superfluous injury or unnecessary suffering. The last concept encompasses both unnecessary suffering of combatants and the indiscriminate effect on civilians. Where there is no rule banning a specific weapon *per se*, such as when a new weapon is introduced into warfare, it is then necessary to make reference to the rules applicable to the use and target of the weapon. III SIPRI at 13-14.

Article 23 of the Hague Regulations is the main source of the second, general prohibition on possible uses of weapons described above. The main source of the first type of prohibition mentioned, based upon the chemical or biological nature of the weapon, is the 1925 Geneva Protocol. A U.S. Army pamphlet on international law issued in 1962 confirmed the continuing applicability of the Hague Regulations and customary rules to new weapons. It provided:

> A visit to Gettysburg National Park will impress upon the student of warfare the fact that less than one hundred years ago the user of a weapon had to see his target. The weapons used were

> aimed. The target was visible through the bore. Now, that has changed. Many of the most destructive weapons have become "blind." They know neither combatant nor noncombatant, public nor private property. It is such weapons that make inadequate to some extent the conventional and customary rules which have in the past controlled the use of weapons. . .
>
> The Declaration of St. Petersburg and the Hague Conventions of 1907 have attempted to control the use of weapons in warfare. The general rules they have codified or enunciated still serve as the norm against which the legality of new weapons must be measured.

U.S. Army Pamphlet at 39. See also ICJ, Legality of Nuclear Weapons, para. 75.

Or as stated by the United States military tribunal at Nuremberg in United States v. Freidrich Flick, et al., the Hague Regulations "are intended to serve as a general rule of conduct of the belligerents in their mutual relations and in their relations with the inhabitants." The tribunal further stated:

> This explains the generality of the provisions. They were written in a day when armies traveled on foot, in horse-drawn vehicles and on railroad trains; the automobile was in its Ford model-T stage. Use of the airplane as an instrument of war was merely a dream. The atomic bomb was beyond the realm of imagination. Concentration of industry into huge organizations transcending national boundaries had barely begun. Blockades were the principal means of "economic warfare." "Total warfare" only became a reality in the recent conflict. These developments make plain the necessity of appraising the conduct of defendants with relations to the circumstances and conditions of their environment. Guilt, or the extent thereof, may not be determined theoretically or abstractly. Reasonable and practical standards must be considered.

Reprinted in Friedman at 1297. Indeed, the U.S. Army Field Manual from 1956 provides further evidence that the customary rules based upon Hague Article 23 (a) regarding poison and poisoned weapons were deemed to apply to chemical

and biological warfare in the absence of the 1925 Geneva Protocol. Department of the Army Field Manual 27-10, The Law of Land Warfare (July 1956) (hereinafter U.S. Army Field Manual). This Field Manual was in effect before the United States ratified the 1925 Geneva Protocol prohibiting chemical and biological warfare.

Paragraph 37 of the Field Manual, entitled "Poison," comes just before the paragraph entitled "Gases, Chemicals, and Bacteriological Warfare," which notes that the United States is not a party to any treaty banning the use of chemical or biological weapons. After reciting the prohibition on poison and poison from Article 23 of the Hague Regulations, paragraph 37 of the Field Manual states, in a note: "The foregoing rule does not prohibit measures being taken. . . to destroy, through chemical or bacterial agents harmless to man, crops intended solely for consumption by the armed forces (if that fact can be determined)."

Implicit in the quoted provision from the Field Manual is the understanding that the prohibition of poison in Hague Article 23 *does in fact prohibit* the use of chemicals to destroy crops of the enemy armed forces that *are harmful to man*.[5] Also implicit in this provision is the assumption that chemical or biological substances existed that were harmful to plants but not harmful to humans. As will be seen, this second assumption was not implicit in the customary rule, the Hague Regulations, or the Geneva Protocol; this assumption is what caused the violation of the prohibition on chemical warfare during the war

[5] Clearly it also requires some inquiry into whether the crops were solely intended for use by combatants, something which the defendants entirely overlook in their papers.

in Vietnam; this assumption was known to be untrue by the defendant manufacturers of the Agent Orange herbicides at all times during that war, but probably believed to be true by the United States soldiers that sprayed it.

C. WORLD WAR I AND ITS AFTERMATH

1. Use of Chemical Weapons

The strength of the customary prohibitions on poisons, asphyxiating and deleterious gases and other such banned weapons was put to the test during World War I.

> The beginning of the development of chemical weapons during World War I was somewhat haphazard. The impetus came from chemists who had become aware of the noxious effects of certain chemicals in their laboratories, and who felt that these effects could be exploited to assist national war efforts. From about 1914 onwards, attempts were being made in several academic laboratories throughout Europe to convert laboratory chemicals into weapons of war. It took some time for these initial efforts (in which a number of scientists succeeded in killing or severely injuring themselves) to produce significant results on the battlefield. . . In some countries, notably Germany, a well-developed chemical industry served both to act as go-between and to stimulate the chemists. . . Despite the great physiological activity of the more obvious candidate CW agents, the weapons designers of 1914 soon realized that it was no easy matter to design a weapon that could deliver effective dosages of the agents to an enemy deployed over a distant target area. The only practicable way of delivering an agent was to contaminate the enemy's surroundings, particularly the air he breathed, in the hope that some of the agent would eventually penetrate his body.
>
> I SIPRI, at 26-27.

It was the Germans who first introduced the use of chemical weapons during World War I, in October 1914. France, Britain and the United States

retaliated against German attacks with chemical weapons of their own and Austria-Hungary soon followed suit. Among the many types of chemical weapons that were used in the war were: 1) Respiratory casualty (lethal-asphyxiating) agents, such as chlorine gas; 2) Vesicant (skin-blistering) agents, such as mustard gas; 3) Lachrymatory (tear-inducing) agents, such as brominated aromatic hydrocarbons; and 4) Sternutator (sneeze-inducing) agents, such as diphenylchloroarsine. Lachrymatory agents and sternutators were considered irritant or harassing agents, as their effects are generally less harmful to humans. The respiratory agents, like chlorine gas, were by far the most lethal. I SIPRI at 28-30.

The Germans launched their first major chemical weapon offensive at the second battle of Ypres in April 1915, using cylinders containing compressed chlorine in liquid form; the release of the chlorine from the cylinders had the effect of creating a low-hanging vapor over the enemy on the battlefield. The day after the attack, a German radio broadcast claimed that German troops had not fired any shell "the sole purpose of which is the spreading of asphyxiating or poisonous gases," a verbatim quotation from the Hague Declaration. A German newspaper claimed that there was no violation of the Declaration because the gas had been released from "cylinders," or "canisters," not from "projectiles." I SIPRI at 232-33. The Germans again used chlorine "cylinders" in a major chemical weapons attack in Bolimow in May 1915, and continued using chlorine gas throughout the war. III SIPRI at 31.

Mustard gas, a blistering agent which attacked the skin, was first used in the war by Germany in July 1917 during the third battle of Ypres. It was used to poison enemy troops that wore masks to protect against respiratory agents. Mustard gas was also a liquid which turned into a vapor and was generally delivered in artillery shells. Mustard gas was the most commonly used and most important chemical weapon of the war, "not only from a battlefield point of view, but. . . for the long-term development of [chemical weapons]." III SIPRI at 46. Mustard gas was rarely fatal, but if inhaled in large enough dosages, it had effects similar to respiratory agents like chlorine. Id.

Whether in liquid or vapor form, mustard gas was relatively odorless, and it had no immediate effect upon exposure, but was persistent in effective form in the field for long periods. Its effects upon exposure have been described as follows:

> Within about twelve hours, the eyes water and feel gritty, becoming progressively sore and bloodshot; the eyelids redden and swell. Temporary blindness is likely. Within thirty-six hours of exposure, the skin begins to redden and itch. Blisters then appear, accompanied by stiffness, throbbing pain and swelling, the burns most severe in moist areas of the body. . . Extensive exposure, either through inhalation or massive skin contamination, may lead to systemic effects, characterized by a state of shock accompanied by nausea and vomiting.
>
> I SIPRI at 50, n.10 (citing MarFarland, H.N., Medical Aspects of Chemical Warfare).

In order to retaliate with mustard gas of their own, the British and French had to build chemical plants during the war to make it. There were numerous

accidents at these plants resulting in burns, blisters and fatalities amongst the plant workers. Conditions at the main French plant were unpleasant, to say the least:

> The personnel . . . is 90 per cent voiceless. About 50 per cent cough continuously. . . [B]y long exposure to the small amounts of vapour constantly present in the air of the work rooms, the initial resistance of the skin is finally broken down. . . The chief result is that the itch makes sleep nearly impossible and the labourers become very much run down.

I SIPRI at 49 (quoting Senior, J.D., The Manufacture of Mustard Gas in World War I, Parts 1 and 2).

After failing to interest the U.S. chemical industry in the production of chemical weapons, the US Army began building a number of chemical weapons plants at Edgewood, Maryland, towards the end of 1917, which were collectively named "Edgewood Arsenal" in 1918. A month later the Army Chemical Warfare Service was created and it took control of Edgewood Arsenal. "At the time of the Armistice, the U.S. was manufacturing about as much gas (chlorine, phosgene, chloropicrin, bromobenzyl cyanide, diphenylchloroarsine, mustard gas and lewisite) as France and the UK combined, and nearly four times as much as Germany, although little of it reached Europe it in time to be used."[6] I SIPRI at 276.

Concern over the inhumane effects of the chemical weapons was not limited to combatants. In a widely publicized appeal in February 1918, the

[6] The bulk of US production came from Edgewood Arsenal. . . It was not until 1942-44 that the CWs began to acquire experimental facilities outside Edgewood, notably BW laboratories at Camp Detrick Maryland. . . I SIPRI at 276.

International Committee of the Red Cross (ICRC) appealed to the belligerents to stop using gas, because of its possible and foreseeable effects on civilians in war zones:

> . . . We are shown projectiles charged with poisonous gases which will deal out death horribly not only in the ranks of the combatants, but also in the rear, in the midst of the unoffending populations, destroying every living creature throughout wide zones.
>
> We protest with all our heart against this fashion of waging war which we can only describe as criminal. And if, as is probable, a nation is obliged to have recourse to counter-attacks or reprisals in order to force the enemy to renounce this odious practice, we foresee a struggle which will surpass in ferocity and brutality anything yet known to history. . .

I SIPRI at 233 (quoting from Poison Gas in Warfare: Red Cross Appeal for Abolition, New York Times, Feb. 11, 1918 at 5).

Although chemical weapons were never used specifically to attack civilian populations, there were nonetheless a substantial number of civilian chemical weapons casualties during the war. In his book *The Nation at War,* General Peyton March, Chief of Staff of the US Army during and after the war, recalls visiting a hospital in Paris and seeing "over one hundred French women and children who had been living in their homes in the rear of and near the front, and who were gassed. The sufferings of these children, particularly, were horrible and produced a profound effect on me." During a German bombardment of Armentieres in April 1918, there were 675 civilian mustard-gas casualties of which 12 per cent were fatal. I SIPRI at 233.

Despite its general usage in World War I, the use of chemical weapons was condemned by many. Among other reasons, it was condemned as being a violation of the prohibition of the use of poison. "As early as March 1918, representatives of the military authorities of the United States, France, Great Britain, Belgium, Italy and Portugal had informed the International Committee of the Red Cross that they considered the use of toxic and asphyxiating gases as being included in the prohibition of poison, and also in the prohibition of weapons, projectiles, or materials of a nature to cause superfluous injury. From its origin, the rule prohibiting modern types of chemical warfare has been linked to the prohibition of poison." III SIPRI at 95.

In United States v. Alfried Krupp, et al., the IMT at Nuremberg would later point out, with disapproval, the German resort to semantics to deny violations of the laws of war in initiating the use of poison gas:

> This brings to mind the German practices in the First World War in the use of poison gas. By the Hague Convention of 1907 [sic] . . . it was agreed that the signatories would not use "projectiles," the sole object of which is diffusing of noxious gas. The Germans sought to justify their use of gas by the insistence that in view of the explicit stipulation that "projectiles" are prohibited, the use of gas from "cylinders" was legal and this notwithstanding the effect upon the victim was much worse.
>
> Reprinted in Friedman at 1352.

"The widespread use of gas in World War I, causing possibly 1.3 million casualties and 100,000 deaths, engendered almost universal abhorrence for gas warfare." Moore at 430. It should be noted that although chemical weapons of

the type used extensively in World War I are often referred to as "gas," that term is not meant to be limited to substances in physical gas form, as chlorine, mustard and many of the other "poison gases" used were actually liquids.

2. Attempts to Prosecute for War Crimes After World War I

After the war, the Allies appointed a "Commission on the Responsibility of the Authors of the War and on Enforcement of Penalties" to investigate and recommend action on war crimes. The Commission met in Versailles, the site of the Peace Conference and the conclusion of the Treaty of Peace with Germany on June 28, 1919. The Commission issued its report on March 29, 1919, which recommended that a "High Tribunal" be established to try enemy soldiers who committed "violations of the laws and customs of war and the laws of humanity," and that higher officials who "ordered or abstained from preventing violations of the laws or customs of war" were also to be tried. The law to be applied was "the principles of the law of nations as they result from the usages established among civilized peoples, from the laws of humanity and from the dictates of public conscience." Reprinted in Friedman at 852-857.

Among the list of offenses to be prosecuted were: (4) Deliberate starvation of civilians. . .(18) Wanton devastation and destruction of property. . .(26) Use of deleterious and asphyxiating gases. . . 32) Poisoning of wells. The Commission recommended prosecuting the Kaiser of Germany himself, so as not to undermine the prosecutions against subordinate leaders. Id. at 851-852. In defense of this, the Committee's report states:

> There is little doubt that the ex-Kaiser and others in high authority were cognizant of and could at least have mitigated the barbarities committed during the course of the war. A word from them would have brought about a different method in the action of their subordinates on land, at sea and in the air.
>
> We desire to say that civil and military authorities cannot be relieved from responsibility by the mere fact that a higher authority might have been convicted of the same offence. It will be for the court to decide whether a plea of superior orders is sufficient to acquit the person charged from responsibility.
>
> Report Presented to the Preliminary Peace Conference, March 29, 1919, Reprinted in Friedman at 853-854.

The United States representatives to the conference, Secretary of State Robert Lansing and legal scholar James Brown Scott, objected to the proposal for an international tribunal to prosecute war criminals, preferring instead to have them turned over to military tribunals of the victorious powers. Claiming that an international criminal court "appears to be unknown in the practice of nations," they particularly objected to prosecution of officers for not preventing the commission of war crimes and to prosecution of the "sovereign agent of a state." Friedman at 776.

The American representatives also voiced their concern that the "laws and principals of humanity" were too vague and uncertain to form the basis of criminal prosecutions and that even the laws and customs of war, which were better established (and could form the basis of prosecutions), were not the subject of any international statute or convention making them a crime subject to prosecution.

However, in their "Memorandum of Reservations Presented by the Representatives of the United States to the Report of the Commission on Responsibilities," dated April 4, 1919, after stating their objections to an international tribunal, the American representatives included a "Memorandum of the Principles Which Should Determine Inhuman and Improper Acts of War." Among the principles set forth were the following:

> 6. The assertion by the perpetrator of an act that it is necessary for military reasons does not exonerate him from guilt if the facts and circumstances present reasonably strong grounds for establishing the needlessness of the act or for believing that the assertion is not made in good faith.
>
> 7. While an act may be essentially reprehensible and the perpetrator entirely unwarranted in assuming it to be necessary from a military point of view, he must not be condemned as willfully violating the laws and customs of war or the principles of humanity unless it can be shown that the act was wanton and without reasonable excuse.
>
> 8. A wanton act which causes needless suffering (and this includes such causes of suffering as destruction of property, deprivation of necessaries of life, enforced labor, etc.) is cruel and criminal. The full measure of guilt attaches to a party who without adequate reason perpetrates a needless act of cruelty. Such an act is a crime against civilization, which is without palliation.
>
> 9. It would appear, therefore, in determining the criminality of an act, that there should be considered the wantonness or malice of the perpetrator, the needlessness of the act from a military point of view, the perpetration of a justifiable act in a needlessly harsh or cruel manner, and the improper motive which inspired it.
>
> Reprinted in Friedman at 867.

Black's Law Dictionary (Eighth Edition) defines "Wanton" as "Unreasonably or maliciously risking harm while being utterly indifferent to the consequences" and provides the following quote from Rolin M. Perkins & Ronald N. Boyce, Criminal Law 879-80 (Third Edition, 1982):

> Wanton differs from reckless both as to the actual state of mind and as to the degree of culpability. One who is acting recklessly is fully aware of the unreasonable risk he is creating, but may be trying and hoping to avoid any harm. One acting wantonly may be creating no greater risk of harm, but he is not trying to avoid it and is indifferent to whether harm results or not. Wanton conduct has properly been characterized as 'vicious' and rates extreme in the degree of culpability. The two are not mutually exclusive. Wanton conduct is reckless plus, so to speak.

The Commission disregarded the American objections and demanded, in Articles 227 and 228 of the Treaty of Versailles, that the Kaiser be tried by an international tribunal, and that the Germans hand over all persons accused of war crimes to be tried by Allied and multinational military tribunals. The list of 896 alleged German war criminals initially submitted by the Allies was withdrawn, due to threats by the German authorities that there would be an insurrection or continuation of the war if they complied. The Allies were persuaded to submit a reduced list of 45 alleged war criminals, to be tried in German courts, which would apply international law. Of the 45, the Germans tried only 12, and of those, only six were convicted, receiving relatively light sentences. Friedman at 776-777.

Some of the more important cases at these trials involved German commanders of submarines that sank ships in violation of the 10th Hague

Convention of 1907. In one of these cases, a German commander who sank a British hospital ship in which all but six of the crew were saved, successfully defended against the charges on the basis that he was ordered to attack such ships by the German Admiralty. In another case, officers of a U-boat which sank a British troop ship and then shelled the survivors in life boats, which resulted in the death of over 230 men, defended against the charges on the basis that they were ordered to shell survivors by the captain, but the court rejected the defense. Friedman at 777.

The Allied powers reacted with outrage to the leniency of the German prosecutions, and considered reinvoking provisions of the Treaty of Versailles, but they soon discontinued their efforts. Id.

3. The Treaty of Versailles and Prohibition of Chemical Weapons

One penalty on which the Allied powers stood firm was that Germany should be forbidden from manufacturing chemical weapons and that an attempt should be made to weaken its ability to evade such a ban.

> Germany's strength in CW during the war had rested on the sophistication of its organic chemical industry, which had been built up before the war into something approaching a world monopoly, particularly in the case of dyestuffs and pharmaceuticals. Clearly Germany could speedily improvise a powerful chemical arm as long as this monopoly remained. Britain proposed that an article should be included in the peace treaty that would require Germany to divulge details of the manufacturing processes it had used for the production of war materials; this would of course mean the disclosure of many of the carefully guarded commercial secrets on which the monopoly was based.
>
> I SIPRI at 235.

President Wilson of the United States opposed the British proposal on the basis that it would be unfair to German industry. Because of the refusal of the U.S. Senate to consent to provisions concerning United States membership in the League of Nations, the United States did not become a party to the Versailles Treaty; however, Article 171 of the Treaty was incorporated by reference in the Treaty Restoring Friendly Relations between the United States and Germany of August 25, 1921. Moore at 431.

Article 171 of the Treaty of Versailles, which was drafted to address the concern over chemical weapons in Germany, was important in the development of on the laws and customs of war relating to chemical and biological warfare. It provided:

> The use of asphyxiating, poisonous or other gases and all analogous liquids, materials or devices being prohibited, their manufacture and importation are strictly forbidden in Germany.
>
> The same applies to materials specially intended for the manufacture, storage and use of the said products or devices.

III SIPRI at 153. The effect of this language is clear: it declares that the use of the chemical (or biological) weapons described is already prohibited by the laws and customs of war, and that prohibition, is being extended, by treaty, to the manufacture, importation and stockpiling of those weapons by Germany.

The language of Article 171 of the Versailles Treaty is significant in another respect: it modifies the language of the 1899 Hague Declaration to remove the reference to projectiles and to include "other gases and all analogous

liquids, materials or devices." In one respect, this was clearly a response to the German use of semantics to deny their use of chlorine cylinders violated the laws of war. But it also indicated an intent on the part of the drafters to provide the broadest and most open-ended definition possible of chemical warfare. III SIPRI at 45.

4. Interpretation of Versailles Treaty's Ban on Chemical Weapons

It is clear from the historical context and the language of Article 171 of the Versailles Treaty that it was intended to ban chemical weapons of any kind, because of their "chemical" nature, whether they had been invented at the time of the Treaty or were yet to be invented.

The official French and English texts of the Treaty of Versailles are equally authentic. In the French text, "toxique" takes the place of "poisonous" and "similaires" takes the place of "other." The French version thus reads "asphyxiating, toxic or similar gases." Since the adjectives asphyxiating and poisonous (or toxic) describe not the particular types of gases, but the physiological effects of the gases, a plain reading of this provision would indicate that the "other" or "similar" refers to the effects of the gases also. Thus gases which have lachrymatory (tear-inducing) or sternutator (sneeze-inducing) effects were some of the "other" or "similar" gases that were contemplated.

The word "materials" is obviously all-encompassing. The word "devises," or in the French text, "procedes (inventions)," was probably meant to prevent future violations in spirit such as occurred with the chorine gas "cylinders." "It

could be claimed, for instance that from a strictly formal point of view an aerosol, which is a suspension of solid particles or liquid droplets in air, is neither a gas nor a liquid, a material or a substance; but this suspension would certainly be covered by the term "device." There is no reference to any particular delivery method (such as projectile) indicating the intent to prohibit gases, liquids, materials and devices regardless of delivery method. III SIPRI at 45.

The important point about the interpretation of this language is that the drafters of this provision did not want to specify the particular types of gases, liquids, materials or devices that were prohibited: they intended to leave the definition open-ended such that it would encompass any new and as yet unknown substances that might be developed that might have the same or similar effects as asphyxiating or toxic chemicals. However, the prohibition is clearly aimed at the use chemical weapons, as a blanket category, because of the *nature* of the weapons, regardless of the *manner* in which they are used. The Versailles treaty provision also makes it clear that the source of this prohibition is existing customary international law. Id. at 45-46.

5. The Washington Conference and the Prohibition of Chemical Weapons

After World War I, the United States took an active role in seeking international consensus to ban the use of chemical weapons, because such use was considered to have been condemned by the "opinion of the civilized world." This

effort was not limited to toxic chemical weapons: it included all chemical weapons, whether toxic or non-toxic.

After the war, new and deadlier chemical weapons were developed for their deterrent value or for possible retaliatory use. The U.S. Army Chemical Warfare Service developed lewisite, which it claimed was a liquid poison so strong that three drops would kill anybody whose skin it touched. The British Society of Chemical Industry spoke of a new chemical weapon (probably an aerosol) which was so potent it could stop a man at atmospheric concentrations of one part in five million and which could penetrate gas masks. Public concern led to international organizations calling for new agreements on chemical warfare. I SIPRI at 237-241.

The Council of the League of Nations announced in October 1920 a proposal for governments to study the question of sanctions for use of chemical weapons. In the following month, the ICRC sent a letter to the General Assembly of the League proposing arms limitations measures including chemical weapons. "Six months later, the tenth International Conference of the Red Cross resolved to urge all governments to consider supplementing the Hague rules by an additional agreement that would make the ban on the use of chemical weapons more explicit and more extensive." Id.

From November 12, 1921 through February 6, 1922, the United States called for and hosted a Conference on the Limitation of Armaments in Washington D.C. The purpose was to discuss, *inter alia*, a proposed "Treaty. . .

to Prevent the Use in War of Noxious Gases and Chemicals. . .” I SIPRI at 242.

A resolution unanimously adopted by the Advisory Committee of the U.S. delegation to the Washington Conference stated as follows:

> Resolved, that chemical warfare, including the use of gases, whether toxic or non-toxic, should be prohibited by international agreement, and should be classed with such unfair methods of warfare as poisoning wells, introducing germs of disease, and other methods that are abhorrent in modern warfare.

III SIPRI at 50 (citing Report). On the same occasion the General Board of the US Navy filed a report with the US delegation which read:

> 5. Certain gases, for example, tear gas, could be used without violating the two principles above cited [i.e., (1) that unnecessary suffering in the destruction of combatants should be avoided, (2) that innocent noncombatants should not be destroyed]. Other gases will, no doubt, be invented which could be so employed; but there will be great difficulty in establishing a clear and definite demarcation line between the lethal gases and those which produce unnecessary suffering as distinguished from those gases which simply disable temporarily. Among the gases existing today there is undoubtedly a difference of opinion as to the class to which certain gases belong. Moreover, the diffusion of all these gases is practically beyond control and many innocent noncombatants would share the suffering of the war, even if the results did not produce death or a permanent disability. . .
>
> 6. The General Board believes it to be sound policy to prohibit gas warfare in every form and against every objective and so recommends.

I SIPRI at 50-51. R.R. Baxter and T. Buergenthal, Legal Aspects of the Geneva Protocol of 1925, 64 Am.J.Int'l Law 853, 858 (1970) (hereinafter Baxter and Buergenthal).

When drafting the language for the Washington Treaty, the U.S. delegation used the language from Article 171 of the Versailles Treaty, to which more than 30 nations were already parties, so as to minimize the possibility of objections to particular language. Article Five of the Treaty of Washington of 1922 Relating to the Use of Submarines and Noxious Gases in Warfare, signed at Washington, 6 February 1922 stated:

> The use in war of asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices, having been justly condemned by the general opinion of the civilized world and a prohibition of such use having been declared in Treaties to which a majority of the civilized Powers are parties,
>
> The Signatory Powers, to the end that this prohibition shall be universally accepted as a part of international law binding alike the conscience and practice of nations, declare their assent to such a prohibition, agree to be bound thereby as between themselves and invite all other civilized nations to adhere thereto.

Reprinted in III SIPRI at 153-154.

The language of Article Five, especially the new language (added to the Treaty of Versailles language), makes it clear that it was meant to confirm a customary international law prohibition on chemical weapons. Another significant point about the language is that the phrase "other gases" was retained by the U.S. delegation in the authentic English text instead of being replaced with the French "similar gases." This lends even more support to the argument that the prohibition extends to all chemical weapons, not just asphyxiating or poisonous chemicals.

The Washington Treaty was signed, and was eventually ratified by the United States Senate, but never entered into force, due to the French refusal to ratify the treaty, for reasons unrelated to the chemical warfare provisions. In historical terms, the main value of the treaty was as an indication of the state of customary law on chemical warfare at the time. I SIPRI at 244; Baxter and Buergenthal at 860. The treaty did not provide for sanctions for violations of the chemical warfare prohibitions; the U.S. delegation apparently felt that public opinion would be a sufficient deterrent:

> We may grant that the most solemn obligation assumed by governments will be violated in the stress of conflict; but beyond diplomatists and beyond governments, there rests the public opinion of the civilized world, and the public opinion of the world can punish. It can bring its sanction to the support of prohibition with as terrible consequences as any criminal statue of Congress or Parliament.
>
> I SIPRI at 244.

Or, as was stated in the U.S. Senate debate on ratification:

> This clause in the treaty is not expected to prevent the use of poison gases at present. It is expected to do something toward crystallizing the public opinion of the world against it, and trying to make that public opinion more effective. . .In some way we want to build up public opinion, and the attempt was made here. . . If the world is cursed with another such war I dare say they will break out and use poison gas again, but there is always the hope that the opinion of the world may be so crystallized that it will prevent it, as public opinion alone has practically prevented the poisoning of wells or the giving of no quarter to prisoners.

Congressional Record, March 29, 1922, Reprinted in I SIPRI at 244.

The Washington Treaty encouraged other efforts to abolish chemical warfare. One such effort was the Convention for the Limitation of Armaments of Central American States, signed at Washington, 7 February 1923, which provided, in Article Five:

> The contracting parties consider that the use in warfare of asphyxiating gases, poisons, or similar substances as well as analogous liquids, materials or devices, is contrary to humanitarian principles and to international law, and obligate themselves by the present convention not to use said substances in time of war.
>
> I SIPRI at 245

A year later, the Fifth International Conference of American States, held at Santiago, Chile adopted a resolution to which the U.S. subscribed, stating:

> The Fifth International Conference of American States resolves. . To recommend that the Governments reiterate the prohibition of use of asphyxiating or poisonous gases and all analogous liquids, materials, or devices, such as are indicated in the Treaty of Washington dated February 6, 1922.
>
> I SIPRI at 245.

6. The 1925 Geneva Protocol and the Prohibition of Chemical and Biological Warfare

The Geneva Protocol of 1925 was drawn up and signed at the Conference for the Supervision of the International Trade in Arms, Munitions and Implements of War, held at Geneva from May 4, 1925 to June 17, 1925. The conference was organized by the League of Nations, but the United States was represented. The U.S. State Department was keen on strengthening the prohibition on chemical warfare after the demise of the Washington Treaty. I SIPRI at 246.

An arms control convention was adopted at the conference, but never entered into force. The U.S. delegation introduced a proposal to ban trade in chemical weapons; it eventually resulted in a separate protocol to the arms control convention that was also adopted and signed by the representatives on June 19, 1925. The Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare used the language of the Washington Treaty, but added a clause on biological weapons. I SIPRI at 246-47; Schindler & Toman at 115.

> The Undersigned Plenipotentiaries, in the name of their respective Governments:
>
> Whereas the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, has been justly condemned by the general opinion of the civilised world; and
>
> Whereas the prohibition of such use has been declared in Treaties to which the majority of Powers of the world are Parties; and
>
> To the end that this prohibition shall be universally accepted as a part of International Law, binding alike the conscience and the practice of nations;
>
> Declare:
>
> That the High Contracting Parties, so far as they are not already Parties to Treaties prohibiting such use, accept this prohibition, agree to extend this prohibition to the use of bacteriological methods of warfare and agree to be bound as between themselves according to the terms of this declaration.
>
> The High Contracting Parties will exert every effort to induce other States to accede to the present Protocol. Such accession will be notified to the Government of the French

> Republic, and by the latter to all signatory and acceding Powers, and will take effect on the date of the notification by the Government of the French Republic.
>
> The present Protocol, of which the French and English texts are both authentic, shall be ratified as soon as possible. It shall bear to-day's date.

Reprinted in III SIPRI at 155-156.

Once again, the French text used "similar gases" while the English text used "other gases" both of which were authentic. Once again, the language used confirmed the customary prohibition. But although the Geneva Protocol borrowed heavily from the Washington Treaty, it also added key language. The "Treaties to which a majority of the world Powers are parties" referred to the 1899 Hague Declaration, the Treaty of Versailles, and the Washington Treaty. Schindler & Toman at 115. "Bacteriological methods of warfare" was also added.

7. Interpretation of Language of Geneva Protocol: Prohibition of "Bacteriological Methods of Warfare" and its Implication on Anti-Plant Warfare

The 1925 Geneva Protocol was generally understood by the delegates to codify an existing customary prohibition of all types of chemical or biological warfare, including weapons whose effect was to destroy plant life. The reason that the Protocol would not have distinguished between chemicals harmful to human beings and animals or chemicals harmful to plants is because those who promulgated it did not believe that such chemicals existed. In other words, it was generally understood at the time, with good reason, that chemicals that were harmful to plants would also be harmful to human beings.

The Geneva Protocol added the entire category of "bacteriological methods of warfare," or biological weapons, to the language of the Versailles and Washington treaties. That there is no qualification on this category indicates that the use of any biological weapons for any purpose was to be prohibited, regardless of whether they were to be used against, people, animals or plants. It is telling that, at the time of the Protocol, biological weapons, in the modern sense, had yet to be fully developed for use. (The use of diseased bodies and other natural toxins represented a more primitive method of warfare) The drafters thus indicated the intent to ban an entire category of weapon before it existed, which again confirms the all-inclusive nature of the prohibition.

At the 1925 Geneva conference, it was the Polish delegate who suggested the explicit reference to bacteriological weapons, and in doing so, he stated: "Bacteriological warfare can also be waged against the vegetable world, and not only may corn, fruit and vegetables suffer, but also vineyards, orchards and fields." The Polish delegate repeatedly warned that "great masses of men, animals and plants would be exterminated" unless biological warfare was outlawed. The acceptance of the broad language proposed by the Polish delegate can only mean that biological warfare against plants was contemplated and prohibited by the Protocol. Baxter and Buergenthal at 867; III SIPRI at 71.

The French delegate, in seconding the Polish proposal, stated that although the "extremely wide form of words" in which the prohibition of chemical warfare was expressed "should have been sufficient to cover bacteriological warfare, [it

was] not always a disadvantage to make an explicit reference, as the Delegate from Poland had done." Baxter and Buergental p. 867; III SIPRI at 75.

In addition, a report had been prepared in 1924 by the Temporary Mixed Commission for the Reduction of Armaments, a subcommittee of the League of Nations which was appointed to consider the question of chemical and biological warfare. The subcommittee had asked a number of experts for a statement on the effect which would be produced on human life, animal life and "vegetable life" by chemical and bacteriological warfare. This report had been made available to the delegates at Geneva in preparation for the conference. The report contained expert opinions on the effects of CBW attacks on animals and plants and the side effects on plants and animals of attacks on humans. It concluded that only biological agents could be used against plants, and dismissed as technically impossible chemical attacks on plants that would not simultaneously be injurious to human beings or animals. Baxter and Buergenthal p. 867; III SIPRI at 74. However, most of the experts felt that no existing bacteriological substances were "capable of destroying a country's. . . crops." Moore at 466.

The availability of this report to the delegates also confirms that anti-plant warfare was contemplated within the scope of the Protocol. It also explains why the delegates would not have distinguished between chemical or biological anti-plant warfare or between herbicides and other chemical weapons. It also confirms the wisdom and foresight of the experts and delegates at the conference in realizing, at that early date, that a substance which is hazardous to plant life would

most likely be hazardous to all life, including animal and human life. This fundamental principle was, unfortunately, not apparent to the authors of Ranch Hand, forty years later.

Phillip Noel Baker, who was present at the negotiations in Geneva, recalled the following with respect to anti-plant warfare:

> . . . a talk I had in Geneva while the Conference of 1925 was going on. . . with a young French colleague, Henri Bonnet. . . 'Oh yes,' he said, 'the form of words they've got is good. It [the Geneva Protocol] prohibits every kind of chemical or bacterial weapons that anyone could possibly devise. And it has to. ***Perhaps someday a criminal lunatic might invent some devilish thing that would destroy animals and crops.***' [Emphasis added] In 1925 everyone at the Conference agreed with Henri Bonnet. It was their purpose to ban all CB weapons; and they were satisfied that the Protocol would do that.

III SIPRI at 74, n. 68 (quoting from letter to the New York Times dated December 9, 1969).

The United States later took the position before the U.N. General Assembly in 1966 and at the Eighteen Nation Disarmament Conference that

> . . .the term bacteriological methods of warfare includes all biological methods of warfare. More specifically, this prohibition [the Geneva Protocol] applies to all anti-personnel, anti-animal and anticrop biological agents. This position is supported by the negotiation history at Geneva in 1925.
>
> III SIPRI at 72.

It would make little sense for the Protocol to distinguish between the use of chemical and biological weapons in prohibiting anti-plant warfare. III SIPRI at 71. Indeed, the very meaning of biological as opposed to chemical weapons is

unclear with respect to anti-plant warfare. According to the 1968 U.S. Joint Chiefs of Staff Dictionary, biological warfare is the "employment of living organisms, toxic biological products, and plant growth regulators to produce death or casualties in man, animals or plants or defense against such action." III SIPRI at 72 (quoting from Dictionary). Plant growth regulators, such as 2,4,5-T and 2,4-D are technically chemical substances, but apparently were considered biological weapons by the Pentagon in 1968, if used in war.

Although the language of the 1925 Protocol seems to indicate an intent to expand the existing customary rule to include biological weapons, a majority of the delegates to the 1925 conference believed that the Protocol actually codified an existing customary prohibition on chemical and biological weapons. "The position of the U.S. representative was not altogether clear, though at one stage he spoke of the prohibition as 'affirming a new principle of international law.'" III SIPRI at 104-105 (citing Memo by Hans Blix).

Although the United States was instrumental in drafting and signing of the Washington Treaty and the 1925 Geneva Protocol, the U.S. Senate refused to give its advice and consent to the Protocol and referred it back to the Committee on Foreign Relations in December 1926. It was withdrawn by the State Department before a vote because of the likelihood of a negative result, with the intent of resubmitting at an opportune moment. The Protocol was not ratified by the United States until 1975. The failure to ratify reflected a change in prevailing opinion, at least in the Senate, in favor of the proposition that chemical weapons

could be humane and effective in war, at a time when the U.S. chemical industry was expanding rapidly. I SIPRI at 250.

8. Subsequent Interpretation of the Scope of the 1925 Geneva Protocol

The scope of the 1925 Geneva Protocol was addressed by the community of nations in 1930. Once again, the scope of the prohibition was agreed to include anti-personnel, anti-animal and probably also anti-plant agents.

By 1930, 28 nations had ratified the Protocol, including France, Britain and Germany, and no government had expressed the view that the Protocol did not prohibit all forms of chemical warfare. The British Delegation to the League of Nations Preparatory Commission for the Disarmament Conference submitted a memorandum attempting to clarify the confusion over the inclusion in the draft disarmament convention of "similar" instead of "other" gases and the resulting difference between the English version of the Protocol and the draft disarmament convention. The memorandum stated:

> Basing itself on this English text [of the Geneva Protocol], the British Government have taken the view that the use in war of "other" gases, including lachrymatory [tear] gases was prohibited. They also considered that the intention was to incorporate the same prohibition in the present Convention.
>
> From every point of view it is highly desirable that a uniform construction should prevail as to whether or not the use of lachrymatory gases is considered to be contrary to the Geneva Protocol. . .
>
> Baxter and Buergenthal at 862

An internal document of the British Foreign Office indicated an understanding that tear gases were banned notwithstanding that they were believed to be harmless to human health. III SIPRI at 52.

The French delegation at the 1930 conference responded to the British memorandum in a special note which made reference to pre-existing French military regulations:

> I. All the texts at present in force or proposed in regard to the prohibition of the use in war of asphyxiating, poisonous or similar gases are identical. In the French delegation's opinion they apply to all gases employed with a view to toxic action on the human organism, whether the effects of such action are a more or less temporary irritation of certain mucous membranes or whether they cause serious or even fatal lesions.
>
> II. The French military regulations, which refer to the undertaking not to use gas for warfare subject to reciprocity, classify such gases as suffocating, blistering, irritant and poisonous gases in general, and define irritant gases as those causing tears, sneezing, etc.

Id. The response of the French delegation also made it clear that the use of "similar gases" in the French text of the Geneva Protocol could not be considered an attempt to narrow the scope of the prohibition to lethal chemicals, as some commentators have claimed.

Eighteen nations that had ratified the Geneva Protocol were members of the Preparatory Commission. Ten of these declared their acceptance of the British and French interpretation, and the remaining six did not respond to the British invitation for an expression of opinion. Although a number of the other nations that subsequently ratified the Geneva Protocol supported the British and

French interpretation, only the U.S. delegate expressed doubt. He stated that there would be hesitation on the part of many governments to bind themselves to a ban on an agent like tear gas, which they had adopted for use in peacetime against their own population. Baxter and Buergenthal at 863.

Article 48 of the Draft Convention of the Disarmament Conference of League of Nations (which the U.S. delegation found acceptable) applied the prohibition of the use of chemical weapons to "the use, by any method whatsoever, for the purpose of injuring an adversary, of any natural or synthetic substance harmful to the human or animal organism, whether solid, liquid or gaseous, such as toxic, asphyxiating, lachrymatory, irritant or vesicant substances." The draft convention never entered into force, for reasons unrelated to the scope of the prohibition of chemical and biological weapons. III SIPRI at 54; Baxter and Buergenthal at 863-64.

The fact that the statements of the various delegations and the draft convention of the 1930 disarmament conference did not mention harm to plants is again probably due to the tendency, based upon the 1924 League of Nations subcommittee report, to dismiss as technically impossible a chemical attack on plants that would not be harmful to humans or animals. III SIPRI at 75.

Several commentators have taken positions consistent with the opinion that the 1925 Geneva Protocol was meant to prohibit all substances harmful to humans, animals and plants. See III SIPRI at 75, (citing Kunz and Verwey; citing

Overweg for opinion that only substances harmful to humans and animals were meant to be prohibited) C.f. Baxter and Buergenthal and Moore articles.

Although the delegates to the 1925 conference that resulted in the Geneva Protocol did not and could not distinguish between chemical and biological agents that were harmful to plants and those that were harmful to animals and people, the drafters of the U.S. Army field manual in effect in 1956 attempted to draw this distinction in providing guidelines to troops on the legality of chemical/biological warfare. The U.S. Army Field Manual provides:

37. Poison

a. Treaty Provision. It is especially forbidden . . . to employ poison or poisoned weapons. (H.R., art. 23 par. (a).)
b. Discussion of Rule. The foregoing rule does not prohibit measures being taken to dry up springs, to divert rivers and aqueducts from their courses, or to destroy, through chemical or bacterial agents harmless to man, crops intended solely for the consumption by the armed forces (if that fact can be determined).

38. Gases, Chemicals, and Bacteriological Warfare

The United States is not a party to any treaty, now in force, that prohibits or restricts the use in warfare of toxic or nontoxic gases, of smoke or incendiary materials, or of bacteriological warfare. A treaty signed at Washington, 6 Febuary [sic] 1922, on behalf of the Untied States, the British Empire, France, Italy, and Japan (3 Malloy, Treaties 3116) contains a provision (art. V) prohibiting "The use in war of asphyxiating, poisonous or other gases, and all analogous liquids, materials, or devices," but that treaty was expressly conditioned to become effective only upon ratification by all of the signatory powers, and , not having been ratified by all of the signatories, has never become effective. The Geneva Protocol "for the prohibition of this use in war of asphyxiating, poisonous, or other gases, and of bacteriological methods of warfare," signed on 17 June 1925, on behalf of the United States and many other powers (94 League of Nations Treaty Series 65),

> has been ratified or adhered to by and is now effective between a considerable number of States. However, the United States Senate has refrained from giving its advice and consent to the ratification of the Protocol by the United States, and it is accordingly not binding on this country.

The attempt in paragraph 37 to distinguish between substances that are harmful only to plants and those that are harmful to humans probably runs afoul of the customary prohibition on poisons and chemical and biological weapons: no such distinction was made in the Hague Regulations or the Geneva Protocol or any of their predecessor documents. Notice also how the tortured recitation in paragraph 38 of the history of the Washington Treaty and Geneva Protocol never explicitly denies the customary prohibition on chemical and biological warfare.[7]

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[7] An even more confused, and confusing, attempt to distinguish between poisonous weapons and toxic chemicals appears in the U.S. Army Pamphlet on international law, published in 1962. In a section on poisonous weapons, the pamphlet sets forth the claim that the use of "toxic chemical agents" as weapons does not violate the laws and customs of war if such use is open and the enemy has notice:

1. Poisonous Weapons

> It is in the area of poisonous rather than poisoned weapons that the chief difficulty in applying the prohibition against poison is encountered. (a) The poisoned spear, arrow or bullet would be prohibited because the spear, arrow, and bullet are or have been legitimate weapons I their own right. The poison adds little to their effectiveness. The suffering produced by the poison is unnecessary, the weapon itself having already placed the victim *hors de combat*. Also, the application of poison to them converts them into a mere conveyance of the poisoned substance. It is the poison and the unnecessary suffering, not the bullet, which is really condemned. (b) Such is not the case with such modern weapons as toxic chemical agents and nuclear explosives. Here the poison, if it can be called that, is either an after effect of the use of the weapon or an essential part of the weapon itself. Prior to the perfection of modern weapons the use of poison had been condemned because its use was both unnecessary and unsoldierly, it being administered almost always in a covert fashion. It was a maxim of the Roman Senate that "war was to be carried on with arms, not with poison." Tiberius, in rejecting the use of poison, states, "It was the practice of the Romans to take vengeance on their enemies by open force, and not be treachery and secret machinations." These reasons are not applicable to modern weapons. The "poison" may be an arm and it may be administered by open

force. If so then other considerations may be more applicable in determining its legality or illegality.

Note how this section grossly misstates the principle, set forth by Grotius, that the use of poison is considered "unsoldierly" whether it is done openly or concealed. Note also how the above provision conflicts with another section in the very same U.S. Army Pamphlet, which provides as follows:

E. Toxic Chemical Agents

The United States, unlike a majority of the industrial states of the world, is not a party to any treaty which forbids it from resorting to the use of toxic chemical agents in the event of war. The Hague Conference Resolution of 1899, which forbad "the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases," was passed over the objections of the United States delegation. Another major attempt to outlaw gases was made in 1925 by the Geneva Protocol, a convention to which all major powers became a party with the exception of the United States and Japan. The United States Senate refused to give its advice and consent to this treaty and referred it back to the Committee on Foreign Relations on 13 December 1926.

During World War II, the United States, while declining a British invitation to adhere to the Geneva Protocol, adopted by Executive declaration the policy of using gas only in retaliation for a similar use by the enemy.

This absence of the United States from any treaty obligation raises the question of whether the United States is nevertheless restricted in the use of toxic chemical agents by a customary rule of international law. FM 27-10 is silent on this question, confining itself to the statement that the Untied States is not a party to any treaty which would prohibit its use of chemicals in war. However, the United States Navy Manual, Law of Naval Warfare (1955) at paragraph 612 states –

> Although the use of such weapons frequently has been condemned by states, including the United States, it remains doubtful that, in the absence of a specific restriction established by treaty, a state is legally prohibited art present from resorting to their use. . .

Such lack of a legal prohibition does not amount to a license. The Navy Manual, in note 6 to paragraph 612 adds the following qualification:

> At the same time, it does seem correct to emphasize that, to the extent that these weapons are used either directly upon the noncombatant population or in such circumstances as to cause unnecessary suffering, their employment must be considered unlawful.

Department of the Army Pamphlet 27-161-2, International Law, Volume II (October 1962)

However, the careful limitation in paragraph 37 (b) regarding the use of chemicals to destroy enemy combatants' crops to chemicals that are not harmful to man evidences a clear understanding of the prohibition of the use of toxic chemicals. It is also clear that the prohibition stems from the prohibition of poison in Hague Article 23.

D. WORLD WAR II AND ITS AFTERMATH

1. Voluntary Restraint in Use of Chemical/Biological Weapons

The period after World War I was notable for the United States' international efforts to control, and its own abstention from, chemical and biological warfare. These take on added significance when viewed in tandem with the U.S. technical capability during this time period to mass produce such weapons, and the opportunity presented by World War II. This restraint on the part of the U.S., which was shared by almost all other nations, is strong evidence of acceptance of a customary prohibition on chemical and biological warfare.

By 1935, the U.S. War Department had adopted the position that the U.S. must be prepared for defensive and retaliatory measures with respect to chemical and biological warfare and had decided to rehabilitate the mustard gas plant at Edgewood Arsenal. I SIPRI at 276.

At the outbreak of World War II, an exchange of pledges to observe the Geneva Protocol was made between the British, French, Italian and German governments; the United States, however, declined an invitation by Britain to

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The acknowledgment in this provision of the customary ban on the indiscriminate use of toxic chemicals in war is unmistakable.

adhere to the Protocol. However, the United States did not use chemical or biological weapons, despite recommendations from several military sources in May and June of 1945 that favored the use of such weapons in the Pacific theatre. Moore at 436; U.S. Army Pamphlet at 44.

The powerful manufacturing and administrative infrastructure that had supported German chemical warfare operations during World War I was destroyed by the terms and enforcement of the Treaty of Versailles by the Inter-Allied Control Commission, which hampered Germany's ability and preparedness to engage in chemical warfare at the outset of World War II. This may have provided some motivation for Germany to adhere to the Geneva Protocol during the War. I SIPRI at 284.

Prior to World War II, President Roosevelt had stated: "It has been and is the policy of this Government to do everything in its power to outlaw the use of chemicals in warfare. Such use is inhuman and contrary to what modern civilizations should stand for."[8] In response to reports during the War that the Germans might use chemical weapons, President Roosevelt issued an executive declaration:

> From time to time since the present war began there have been reports that one or more of the Axis Powers were seriously contemplating use of poisonous or noxious gases or other inhumane devices of warfare. . .

[8] As Assistant Secretary of the Navy, Roosevelt had been a member of the Advisory Committee formed by C.E. Hughes to advise the U.S. delegation at the Washington Conference. I SIPRI at 275.

> Use of such weapons has been outlawed by the general opinion of civilized mankind. This country has not used them, and I hope that we never will be compelled to use them. I state categorically that we shall under no circumstances resort to the use of such weapons unless they are first used by our enemies.

8 State Dep't Bulletin 507 (1943) (See also 6 Dept of State Bulletin 506 (1942) for an earlier, similar warning to Japan.) The plain meaning of the word "noxious" is "harmful to health." Webster's New Twentieth Century Dictionary (Second Edition, 1963) This declaration represents the adoption a policy of using chemical weapons only in retaliation for similar use by the enemy. U.S. Army Pamphlet at 44. These sentiments were later echoed in a statement by President Eisenhower. William A. Buckingham, Jr., Operation Ranch Hand: The Air Force and Herbicides in Southeast Asia 1961-1971 (Office of Air Force History, 1982) (hereinafter Buckingham) at 82.

U.S. Admiral Chester Nimitz later recalled that one of his toughest decisions during the War occurred "when the War Department suggested the use of poison gas during the invasion of Iwo Jima." He went on to say, "I decided the United States should not be the first to violate the Geneva Convention [sic]." Moore at 436. It was understood that the use of mustard gas or other chemical weapons would have greatly reduced the American casualties at Iwo Jima. I SIPRI at 299. The U.S. Chemical Warfare Committee had calculated that unrestrained chemical warfare would force Japanese surrender within three months. I SIPRI at 329. Indeed, the Japanese had even used chemical weapons against U.S. troops. However, these were apparently acts of desperation ordered

by local field commanders in extreme predicaments, such as the use of hydrogen cyanide hand grenades on Guadalcanal in January 1943. I SIPRI at 328 n. 19.

2. Consideration and Rejection of Use of Herbicides by United States During World War II

Of particular interest to the instant matter, the United States, during the war in the Pacific against Japan, had a specific opportunity to use chemical herbicides to great advantage, but declined to do so, due to a sense that it would violate the laws and customs of war unless a *specific, factual, scientific determination were made that the herbicides used would not be harmful to human beings*, either by ingestion or by direct contact with plants. It is the defendants' knowledge about this crucial factor, which they failed to disclose or take action upon, that forms the crux of plaintiffs' case against them.

In June of 1945, the U.S. Army recommended that ammonium thiocyanate be used as a defoliant in the Pacific theatre. A research team at Camp Detrick, the U.S. Army biological warfare research facility, had experimented with more than a thousand different chemical agents on living plants. The recommendation was rejected on the ground that "thiocyanate" sounded too much like "cyanide" and would invite accusations of poison gas warfare. I SIPRI at 163.[9]

In January 1945, the War Department had considered using chemical herbicides to destroy the rice crops of Japanese troops entrenched in the islands of the South Pacific and East Indies. Buckingham at 82. On January 11, 1945, the

[9] The assignment of this research to the Biological Warfare division is more evidence that herbicides, or plant growth regulators, were considered to be biological weapons by the U.S. Army.

Judge Advocate General of the Army, Major General Myron C. Cramer, was asked to opine on the legality of such use. Cramer prepared a memorandum to the Secretary of War on the issue in March 1945 (Cramer Memorandum, **Exhibit 1** to Plaintiffs' Appendix).

In his memorandum, Cramer reported that the Biological Warfare Committee was experimenting with "LN agents" about which it appeared that "while effective in low concentration against plants, are not injurious to animals or to human beings, even when eaten in relatively large quantities." Cramer then noted that the United States was not a party to the Geneva Protocol or bound by any treaty "which specifically excludes or restricts the use of chemicals, whether toxic or nontoxic in time of war." Cramer then states:

> An exhaustive study of the source, materials, however, warrants the conclusion that a customary rule of international law has developed by which poisonous gases and those causing unnecessary suffering are prohibited. [citing Naval War College, International Law Situations; Oppenheim, International Law, Bustamane y Sirven, Droit International Public]. . . The Unites States has officially announced that it will observe this principle. . . [citing Roosevelt's executive declaration]

Cramer then disputed that the customary international rule constituted a complete ban on all gases and chemical substances.

> A distinction exists between the employment of poisonous and deleterious gases against enemy human beings, and the use of chemical agents to destroy property, such as natural vegetation, crop cultivations, and the like. There is no rule of international law which proscribes chemicals in war absolutely, apart from their poisonous and toxic effects upon human beings. The true motive behind the movement to outlaw poison gas is that it is considered a barbarous and inhumane weapon against human beings, because it

> inflicts unnecessary suffering upon them. This purpose was expressly stated at the Hague Peace Conference of 1899 [citations omitted] and it underlies every international convention drafted since them [sic]. . .
>
> It follows that the use of chemical agents, whether in the form of a spray, powder, dust or smoke, to destroy cultivations or retard their growth, would not violate any rule of international law prohibiting poison gas; ***upon condition, however, that such chemicals do not produce poisonous effects upon enemy personnel, either from direct contact, or indirectly from ingestion of plants and vegetables which have been exposed thereto. Whether LN agents, used as contemplated, are toxic to such a degree as to poison an individual's system, is a question of fact which should be definitely ascertained. Should further experimentation disclose that they are toxic to human beings, I will be pleased to express my opinion on the facts which may be presented for consideration.*** (Emphasis added)
>
> Nor does the prohibition against using "poison or poisoned weapons" in Article 23 a of the Regulations annexed to the Hague Convention (IV) of 1907 [citing to U.S. Army field manual] render the use of these chemicals illegal. Even if Article 23 as is held to apply to toxic chemical substances [citations omitted], ***it would not preclude the use of crop-destroying chemicals which produce substantially no noxious effects upon enemy soldiers.*** [Emphasis added] That, because it destroyed plants, the chemical might be called a "poison", is an argument which is hardly open to the Japanese, who used strychnine in the Russo-Japanese war to kill Russian military dogs. . .

Cramer Memorandum at 1305-1306.

Thus Cramer indirectly acknowledged that the Hague Regulation Article 23 prohibition on poison and poisoned weapons may apply to herbicidal warfare, regardless of any toxic effect on humans--by virtue of poisoning plants--yet questions whether the Japanese have standing to raise the issue, considering their own record. Cramer ended the memorandum by pointing out the possibility that,

if the chemical or biological warfare operation were carried out by the U.S., the Japanese would invoke the use of the chemical agents as an excuse for retaliatory measures.

Regardless of whether the poisoning of plants was considered by Cramer to be a violation of the laws of war, it is clear that he found it impossible to determine the lawfulness of use of herbicides without a determination of the toxicity of the herbicides to humans. In essence, a factual determination of the toxicity of the herbicides would be a *prerequisite* to a determination of the lawfulness of their use in war. Again, this is a point that was lost on defendants and the authors of Ranch Hand, twenty years later.

In any event, when the idea of using chemical or biological agents to destroy the Japanese food crops was suggested to Admiral Leahy, he told Roosevelt that using chemicals to destroy the Japanese rice crop ". . . would violate every Christian ethic I have ever heard of and all the known laws of war." Buckingham at 82. Admiral Leahy apparently did not feel it was necessary to do a factual review of the toxicity of the chemicals. Herbicides were never used by the United States against the Japanese in World War II.

3. Japanese and Italian Use of Chemical and Biological Weapons During World War II

The use of chemical and biological weapons by Japan and Italy before and during World War II was roundly condemned and prosecuted by the community of nations. The condemnation and the attempt by Italy to justify its conduct

provide more evidence of a customary prohibition on chemical and biological weapons by the time of World War II.

The Japanese used chemical and biological weapons during World War II, including during the invasion of China. Like the United States, Japan at that time had not yet ratified the Geneva Protocol. Nonetheless, the Assembly of the League of Nations, the most authoritative international body at the time, condemned Japan and stated "that the use of chemical and bacteriological methods in the conduct of war is contrary to international law." III SIPRI at 133. Since Japanese troops had not been affected by the use of chemical weapons in World War I, the feelings of revulsion and horror that chemical weapons had aroused in the West may not have played any role in Japanese chemical weapons policy. I SIPRI at 287.

The Japanese biological weapons program, entitled Unit 731, was conducted outside of Japan (in Manchuria) under the direction of Dr. Shiro Ishii and Kitano Misaji under conditions designed to keep it secret. Biological and Toxin Weapons: Research, Development and Use from the Middle Ages to 1945 136, 147 (Erhard Geisslr, et al. eds., Oxford University Press 1999). There were allegedly six attacks on Chinese cities with biological agents; food and water supplies were allegedly contaminated with cholera, anthrax, salmonella and the plague, by means of dropping or spraying cultures from aircraft. Id. at 143-144. As a result of the secrecy of Unit 731, Japanese soldiers often became casualties of these attacks. Id.

Unit 731 was eventually captured by the Soviet Army. United States forces interrogated Ishii and Misaji and there is evidence that the United States granted them immunity from war crimes in exchange for divulging their knowledge of biological agents. The biological warfare programs of both the Soviet Union and the United States owed their germination to the work of Unit 731. The United States had no biological warfare program at the beginning of World War II, and initiated its own offensive germ warfare program at Camp Detrick, Maryland when it learned of Unit 731. Id. at 127-128.

The list of charges filed before the International Military Tribunal of Tokyo included the following violations of the laws and customs of war:

> Use of toxics, contrary to the international declaration concerning asphyxiating gases, signed, among others, by Japan and China at The Hague on July 29, 1899, and Article 23 (a) of the Annex to the Fourth Hague Convention of 1907 and to Article 171 of the Treaty of Versailles. During the wars of Japan against the Republic of China, toxic gases were used.
>
> III SIPRI at 141.

The indictment before the Tokyo War Crimes Tribunal included the following charge:

> Employing poison, contrary to the international Declaration respecting Asphyxiating gases, signed by (*inter alia*) Japan and China at The Hague on the 29th of July 1899, and to Article 23 (a) of the said Annex to the said Hague Conventions, and to Article 171 of the Treaty of Versailles. In the wars of Japan against the Republic of China, poison gas was used. This allegation is confined to that country.

III SIPRI at 118. In its decision, however, the Tokyo International Military Tribunal did not specify actions related to this paragraph of the indictment. Notice, however, how the indictment before the Tokyo War Crimes Tribunal applied the prohibition on poison in Article 23 of the Hague Regulations to modern chemical/biological warfare.

Japanese servicemen were tried and convicted by a Soviet military tribunal in Khabarovsk in December 1949 for having engaged in biological warfare against the Mongolian People's Republic. They were charged with having "prepared and used" a bacteriological weapon, and evidence was introduced regarding experimentation on human beings. The indictment was based upon domestic legislation, not international law, but the offense could arguably have been considered a war crime or crime against humanity. III SIPRI at 119, 141, n. 1.

Italy, a party to the 1925 Geneva Protocol, was also accused of using chemical warfare during its invasion of Ethiopia in1935. Although Italy never denied the charge, it took the position that chemical weapons were employed in retaliation for Ethiopian violations of the laws of war, but not related to chemical or biological warfare. It is doubtful that chemical warfare is a valid retaliation technique for other types of violations of the laws of war. I SIPRI at 142-146.

However, Italy's attempt to justify its conduct, together with the fact that it was a party to the Protocol, provide evidence of that nation's belief that customary international law prohibited the first use of such weapons. To the extent Italy's

use of chemical weapons was not valid as retaliation, it was a violation of the laws of war, rather than an impediment to the formation of a customary rule.

4. Establishment of the International Military Tribunal at Nuremberg

Prompted by rumors of German atrocities, the Allies began planning to hold military and civil authorities from Axis nations legally responsible for war crimes even before the end of World War II. In January 1942, representatives of occupied nations issued the "St. James Declaration" promising to punish those who committed war crimes, "through the channel of organized justice." In July, 1943, the United Nations War Crimes Commission was established to gather evidence of war crimes; its chief focus was on offenses related to the killing and mistreatment of civilians and other non-combatants. Friedman at 777-78.

Later that year, the Allies issued the Moscow Declaration of October 30, 1943, indicating their intent to send German war criminals "back to the countries in which their abominable deeds were done in order that they may be judged and punished according to the laws of these liberated countries," without prejudice to prosecuting in an international tribunal "the major criminals whose offenses have no particular geographical localization." Id.

Ironically, the British and American governments switched their respective positions on the prosecution of war crimes, as compared to their prior views after World War I. President Roosevelt insisted on an international tribunal to try German and Japanese leaders for war crimes. The British government,

instead, proposed that certain German leaders be considered wanted outlaws and shot on sight. The Russian government joined the American government in calling for an international tribunal, and the British acceded. ." Id. at 778.

The law and procedure for the tribunal which would try German war criminals were formalized at a conference in London during July and August, 1945. The London Agreement for the Prosecution and Punishment of the Major War Criminals of the European Axis of August 8, 1945 ("London Agreement") provided for an International Military Tribunal ("IMT") made up of representatives of the four major Allied powers: the United States, Great Britain, the Soviet Union and France. Id. at 779; I Trial of the Major War Criminals Before the International Military Tribunal (1947) at 8-9. The IMT would try German defendants "whose offenses have no particular geographical location whether they be accused individually or in their capacity as members of the organizations or groups or in both capacities." London Agreement, Art. 1. Annexed to the London Agreement was a Charter setting forth the constitution, jurisdiction and functions of the IMT. [Article 2] Charter of the International Military Tribunal at Nuremberg ("London Charter"), reprinted in Trial of the Major War Criminals at 10.

5. Law of the Nuremberg Tribunals

Section II of the London Charter, entitled "Jurisdiction and General Principles," provided as follows:

Article 6.

The Tribunal established by the [London Agreement] shall have the power to try and punish persons who, acting in the interests of the European Axis countries, whether as individuals or as members of organizations, committed any of the following crimes.

The following acts, or any of them, are crimes coming within the jurisdiction of the Tribunal for which there shall be individual responsibility:

(a) CRIMES AGAINST PEACE: namely, planning, preparation, initiation or waging of a war of aggression, or a war in violation of international treaties, agreements or assurances, or participation in a common plan or conspiracy for the accomplishment of any of the foregoing;

(b) WAR CRIMES: namely, violations of the laws or customs of war. Such violations shall include, but not be limited to, murder, ill-treatment or deportation to slave labor or for any other purpose of civilian population of or in occupied territory, murder or ill-treatment of prisoners of war or persons on the seas, killing of hostages, plunder of public or private property, wanton destruction of cities, towns or villages, or devastation not justified by military necessity;

(c) CRIMES AGAINST HUMANITY: namely, murder, extermination, enslavement, deportation and other inhuman acts committed against any civilian population, before or during the war; or persecutions on political, racial or religious grounds in execution of or in connection with any crime within the jurisdiction of the Tribunal, whether or not in violation of the domestic law of the country where perpetrated.

Leaders, organizers, instigators and accomplices participating in the formulation or execution of a common plan or conspiracy to commit any of the foregoing crimes are responsible for all acts performed by any persons in execution of such plan.

Article 7.

The official position of defendants, whether as Heads of State or responsible officials in Government Departments, shall not be considered as freeing them from responsibility or mitigating punishment.

Article 8.

The fact that the Defendant acted pursuant to order of his Government or of a superior shall not free him from responsibility, but may be considered in mitigation of punishment if the Tribunal determines that justice so requires.

Article 9.

At the trial of any individual member of any group or organization the Tribunal may declare (in connection with any act of which the individual may be convicted) that the group or organization of which the individual was a member was a criminal organization.

After the receipt of the Indictment the Tribunal shall give such notice as it thinks fit that the prosecution intends to ask the Tribunal to make such declaration and any member of the organization will be entitled to apply to the Tribunal for leave to be heard by the Tribunal upon the question of the criminal character of the organization. The Tribunal shall have power to allow or reject the application. If the application is allowed, the Tribunal may direct in what manner the applicants shall be represented and heard.

Article 10

In cases where a group of organization is declared criminal by the Tribunal, the competent national authority of any Signatory shall have the right to bring individual to trial for membership herein before national, military or occupation courts. In any such case the criminal nature of the group or organization is considered proved and shall not be questioned.

(reprinted in Trial of the Major War Criminals at 11-12).

The London Agreement, in Article 6, also allowed for national or "occupation" courts of the Allied powers in Germany, in addition to the IMT. The Allied Control Council's Law No. 10 authorized the military courts of each occupying power to try lower-level German officials for crimes against peace, war crimes, crimes against humanity and membership in a criminal organization, as set forth in Articles 6 and 10 of the London Charter. After setting forth the crimes in Article II, paragraph 1, Control Council Law No. 10 provided:

> 2. Any person without regard to nationality or the capacity in which he acted, is deemed to have committed a crime as defined in paragraph 1 of this Article, if he was (a) a principal or (b) was an accessory to the commission of an such crime or ordered or abetted the same or (c) took a consenting part therein or (d) was connected with plans or enterprises involving its commission or (e) was a member of any organization or group connected with the commission of any such crime or (f) with reference to paragraph 1 (a) [crimes against peace] if he held a high political, civil or military (including General Staff) position in Germany or in one of its Allies, co-belligerents or satellites or held high position in the financial, industrial or economic life of any such country.
>
> 3. Any persons found guilty of any of the crimes above mentioned may upon conviction be punished as shall be determined by the tribunal to be just. Such punishment may consist of one or more of the following:
>
> (a) Death.
> (b) Imprisonment for life or a term of years, with or without hard labour.
> (c) Fine, and imprisonment with or without hard labour, in lieu thereof.
> (d) Forfeiture of property.
> (e) Restitution of property wrongfully acquired.
> (f) Deprivation of some or all civil rights.
>
> Any property declared to be forfeited or the restitution of which is ordered by the Tribunal shall be delivered to the Control Council for Germany, which shall decide on its disposal.

> 4 (a) The official position of any person, whether as Head of State or as a responsible official in a Governmental Department, does not free him from responsibility for a crime or entitle him to mitigation of punishment.
>
> (b) The fact that any person acted pursuant to the order of his Government or of a superior does not free him from responsibility for a crime, but may be considered in mitigation.

Control Council Law No. 10, Punishment of Persons Guilty of War Crimes, Crimes Against Peace and Humanity, adopted December 20, 1945, reprinted in Trial of the Major War Criminals at XVII.

6. Trials of War Criminals

The tribunals that were established by the London Agreement and the similar Tokyo Agreement tried German and Japanese war criminals and some issued extensive judgments which interpreted many aspects of the laws and customs of war, including with respect to the defense of superior orders and liability of individuals and organizations. Friedman at 779-80.

Twenty-two leading members of the German government were tried by the IMT at Nuremberg from November 1945 to August 1946; the IMT issued its judgment on September 30 and October 1, 1946. Trial of the Major War Criminals at 6. Nineteen of the defendants were found guilty of one or more charges and twelve were sentenced to death. Thousands of lower-level defendants were tried by the "occupation" courts of the United States, Britain, France and the Soviet Union. More defendants were tried in military tribunals

established outside of Germany—in Italy, France and Yugoslavia. Still more defendants were tried in national courts in Belgium, Denmark, Greece, Holland, Poland, Norway and Russia, for crimes committed in those nations during occupation. Friedman at 780-781.

Leading Japanese military and political figures were also tried for crimes against peace, war crimes and crimes against humanity pursuant to a charter for an International Military Tribunal for the Far East, which was modeled on the London Charter. The judges were selected from the four major Allied powers with additional judges from Australia, China, Canada, India, the Netherlands, New Zealand and the Phillipines. Twenty eight defendants were indicted by the tribunal in Tokyo; twenty five survived the trial, and twenty three of them were found guilty, with seven sentenced to death. Id.

Of the judgments that resulted from the World War II war crimes trials, the most influential in the development of the laws and customs of war were those of the IMT at Nuremberg and the United States military tribunals established pursuant to Control Council Law No. 10, because they resulted in written decisions with reasoned opinions on all aspects of the law of war. Id.

In its judgment, the IMT explained the legality, under international law, of the London Charter and the offenses defined therein. Trial of the Major War Criminals at 171. The IMT also responded to the argument of the defendants that they could not be prosecuted for offenses which had never explicitly been made

crimes with specified penalties by statute or treaty, and for which no court had been previously created to try and punish offenders, particularly with respect to crimes against peace. Trial of the Major War Criminals at 219. The IMT cited the Treaty of Versailles and the Kellogg-Briand Pact as enactments which were binding upon Germany and prohibited the initiation of aggressive war as an instrument of national policy. Trial of the Major War Criminals at 219, 222. The tribunal continued:

> But it is argued that the [Kellogg-Briand] Pact does not expressly enact that such wars are crimes, or set up courts to try those who make such wars. To that extent the same is true with regard to the laws of war contained in the Hague Convention. The Hague Convention of 1907 prohibited resort to certain methods of waging war. These included the inhumane treatment of prisoners, ***the employment of poisoned weapons***, [emphasis added] the improper use of flags of truce, and similar matters. Many of these prohibitions had been enforced long before the date of the Convention; but since 1907 they have certainly been crimes, punishable as offences against the laws of war; yet the Hague Convention nowhere designates such practices as criminal, nor is any sentence prescribed, nor any mention made of a court to try and punish offenders. For many years past, however, military tribunals have tried and punished individuals guilty of violating the rules of land warfare laid down by this Convention. . . . In interpreting the words of the Pact, it must be remembered that international law is not the product of an international legislature, and that such international agreements as the Pact have to deal with general principles of law, and not with administrative matters of procedure. The law of war is to be found not only in treaties, but in the customs and practices of states which gradually obtained universal recognition, and from the general principles of justice applied by jurists and practiced by military courts. This law is not static, but by continual adaptation follows the needs of a changing world. Indeed, in many cases treaties do no more than express and define for more accurate reference the principles of law already existing.

Trial of the Major War Criminals 220-221.

In order to interpret the later Kellogg-Briand Pact, the IMT referred to the League of Nations 1924 Protocol for the Pacific Settlement of International Disputes, a draft treaty which was adopted by the League but never entered into force. Trial of the Major War Criminals at 221. The preamble to the draft treaty stated that waging a war of aggression was an international crime. That Germany was not a member of the League at the time of adoption of the Protocol and that the Protocol was never ratified was unimportant to the IMT:

> Although the [1924 Geneva] Protocol was never ratified, it was signed by the leading statesmen of the world, representing the vast majority of the civilized states and peoples, and may be regarded as strong evidence of the intention to brand aggressive war as an international crime.

Trial of the Major War Criminals at 221-222.

The IMT cited a 1927 League of Nations declaration which was adopted by Germany and the resolution of the 1928 Pan-American Conference for further support that aggressive war was branded a crime under customary international law. The IMT then specifically referred to Articles 227 and 228 of the Treaty of Versailles in which the "German government expressly recognized the right of the Allied Powers 'to bring before military tribunals persons accused of having committed acts in violation of the laws and customs of war'" including the German Emperor himself. Trial of the Major War Criminals at 222.

> It was submitted that international law is concerned with the action of sovereign States, and provides no punishment for individuals; and further, that where the act in question is an act of

> state, those who carry it out are not personally responsible, but are protected by the doctrine of the sovereignty of the State. In the opinion of the Tribunal, both these submissions must be rejected. That international law imposes duties and liabilities upon individuals as well as upon States has long been recognized. In the recent case of Ex Parte Quirin (1942 317 US 1), before the Supreme Court of the United States persons were charged during the war with landing in the United States for purposes of spying and sabotage. The late Justice Stone, speaking for the Court, said:
>
> > "From the very beginning of its history this Court has applied the law of war as including that part of the law of nations which prescribes for the conduct of war the status, rights and duties of enemy nations as well as enemy individuals."
> >
> > The IMT continued:
> >
> > [T]he very essence of the Charter is that individuals have international duties which transcend the national obligations of obedience imposed by the individual State. He who violates the laws of war cannot obtain immunity while acting in pursuance of the authority of the State if the State in authorizing action moves outside its competence under international law. . . The true test, which is found in varying degrees in the criminal law of most nations, is not the existence of the [State] order, but whether moral choice was in fact possible.

Trial of the Major War Criminals at 222-224.

The IMT noted that the war crimes defined by Article 6 of the London Charter were already recognized as war crimes under international law, as they were covered by Articles 46, 50, 52, and 56 of the Hague Convention of 1907, relating to conduct of military authorities in occupied territory, as well as certain provisions of the Geneva Convention of 1929, relating to treatment of prisoners of

war. "That violations of these provisions constituted crimes for which the guilty individuals were punishable is too well settled to admit of argument."

> But it is argued that the Hague Convention does not apply in this case, because of the "general participation" clause in Article 2 of the Hague Convention of 1907. . . Several of the belligerents in the recent war were not parties to this Convention.
>
> In the opinion of the Tribunal it is not necessary to decide this question. The rules of land warfare expressed in the Convention undoubtedly represented an advance over existing international law at the time of their adoption. But the convention expressly stated that it was an attempt "to revise the general law and customs of war," which it thus recognized to be then existing, but by 1939 these rules laid down in the Convention were recognized by all civilized nations, and were regarded as being declaratory of the laws and customs of war which are referred to in Article 6 (b) of the Charter.

With respect to membership in a criminal organization, the IMT had this to say:

> A criminal organization is analogous to a criminal conspiracy in that the essence of both is cooperation for criminal purposes. There must be a group bound together and organized for a common purpose. The group must be formed or used in connection with the commission of crimes denounced by the Charter.

Trial of the Major War Criminals at 256.

7. Charges Concerning Spoliation and Systematic Plunder

One of the many charges brought against the organizational and individual defendants as having constituted war crimes was the "systematic plunder of public or private property." Among the charges brought by the U.N. War Crimes

Commission and the IMT for the Far East were those alleging the wanton devastation and destruction of forests and farmlands.

Defendant Herrmann Goering had exercised control over the economic administration of occupied territories for the Nazi regime. The IMT quoted from a speech made by Goering on August 6, 1942 to German authorities in charge of occupied territories as illustrative of this policy:

> God knows, you are not sent out there to work for the welfare of the people in your charge, but to get the utmost out of them, so that the German people can live. That is what I expect of your exertions. This everlasting concern about foreign people must cease now, once and for all. I have here before me reports on what you are expected to deliver. It is nothing at all, when I consider your territories. It makes no difference to me in this connection if you say that your people will starve.

Trial of the Major War Criminals at 239.

As a consequence of a directive that Goering had issued in 1939, agricultural products, raw materials, machine tools and other valuable properties "were requisitioned in a manner out of all proportion to economic resources of [occupied] countries, and resulted in famine, inflation and an active black market." Trial of the Major War Criminals at 240. In the occupied countries of Eastern Europe, the large scale diversion of food and agricultural products to German needs resulted in widespread starvation. Trial of the Major War Criminals at 241.

After reviewing the acts of the government of Germany as a whole, and pronouncing judgment on criminal organizations such as the Gestapo and SS, the

IMT pronounced judgment against individual defendants. Trial of the Major War Criminals at 268, 273. Of the individual defendants tried by the IMT, the highest ranking was Goering, the most prominent man in the Nazi regime next to Hitler. Trial of the Major War Criminals at 279. Goering was convicted on all charges in the indictment, and sentenced to death. Trial of the Major War Criminals at 282. The IMT found him to be a director of the Nazi slave labor program and a creator of the oppressive program against Jews and other races, among other offenses. Trial of the Major War Criminals at 281-282.

Among the acts of Goering underlying the charges of which he was convicted were the directives he issued which resulted in spoliation of industry and agriculture in food deficit regions and the diversion of food to German needs in food surplus regions, resulting in starvation of civilians in occupied territories. Trial of the Major War Criminals at 281. Although not mentioned in the judgment of the IMT, the following report appears in the official history of the U.N. War Crimes Commission:

> During the final months of its existence the Committee was asked in a Polish case (Commission No. 7150) to determine whether ten Germans, all of whom had been head of various Departments in the Forestry Administration in Poland during the German occupation (1939-1944), could be listed as war criminals on a charge of pillaging Polish public property. It was alleged that the accused in their official capacities caused the wholesale cutting of Polish timber to an extent far in excess of what was necessary to preserve the timber resources of the country, with a loss to the Polish nation of the sum of 6,525,000,000 zloty. It was pointed out that the Germans, who had been among the first as a nation to foster scientific forestry, had entered Poland and willfully felled the Polish forests without the least regard to the basic principles of

> forestry. The Polish representatives presented a copy of a circular signed by Goering under date of 25th January, 1940, in which were laid down principles for a policy of ruthless exploitation of Polish forestry. It was decided by the Committee that prima facie existence of a war crime had been shown and nine of the officials were listed as accused war criminals.

History of the U.N. War Crimes Commission and the Development of the Laws of War, (London, 1948) at 496 (quoted in Richard A. Falk, Environmental Warfare and Ecocide, reprinted in The Vietnam War and International Law, Vol. 2, American Society of International Law, Richard A. Falk, Editor (Princeton University Press, 1969)).

In a similar vein, Japanese military officials were prosecuted at the Tokyo war crimes tribunal for "willful and unreasonable destruction of tillable soil and farmlands in China. . . [which] caused starvation." International Military Tribunal for the Far East, trial of Japanese war criminals. III SIPRI at 70 (citing IMT for the Far East, Indictment No. 1, Appendix D. Washington: Government Printing Office, 1946, at 96).

8. United States v. List: Wanton Devastation and Military Necessity

In United States v. List, et al., the United States military tribunal tried defendants charged with, among other things, being "principals or accessories to. . . the wanton destruction of cities, towns, and villages, frequently together with the murder of the inhabitants thereof, and the commission of other acts of devastation not warranted by military necessity in the occupied territories of Greece, Yugoslavia, Albania, and Norway. . ."

In its opinion and judgment, the tribunal described the situation in occupied Greece at the time that the relevant acts took place, several months after the invasion by Germany:

> In the early summer [of 1941], a resistance movement began to manifest itself. It increased progressively in intensity until it assumed the appearance of a military campaign. Partisan bands, composed of members of the population, roamed the territory doing much damage to transportation and communication lines. German soldiers were the victims of surprise attacks by an enemy which they could not engage in open combat. After a surprise attack, the bands would hastily retreat or conceal their arms and mingle with the population with the appearance of being harmless members thereof. Ambushing of German troops was a common practice. Captured German soldiers were often tortured and killed. The terrain was favorable to this type of warfare and the inhabitants most adept in carrying it on.

Although the tribunal noted that "the partisans were able to control sections of [the occupied] countries at various times, it is established that the Germans could at any time they desired assume physical control of any part of the country." Since the control of the resistance forces was only temporary, it did not deprive the German armed forces of their status as an occupying power under international law.

The defendant military commanders in List invoked the defense of military necessity as justifying the killing of members of the civilian population not involved in the resistance and the destruction of villages and towns in occupied territory. The defendants claimed that they were entitled to take harsh action against civilians and combatants in suppressing the resistance and

guaranteeing the safety of their armed forces. In rejecting the defense of military necessity in this instance, the tribunal borrowed language from Article 16 of the Lieber Code. It acknowledged that military necessity permits "the destruction of lie of armed enemies and other persons whose destruction is incidentally unavoidable by the armed conflicts of the war. . ." However, the tribunal went on to state:

> The destruction of property to be lawful must be imperatively demanded by the necessities of war. Destruction as an end in itself is a violation of international law. There must be some reasonable connection between the destruction of property and the overcoming of the enemy forces. It is lawful to destroy railway, lines of communication, or any other property that might be utilized by the enemy. Private homes and churches even may be destroyed if necessary for military operations. It does not admit the wanton devastation of a district or the willful infliction of suffering upon its inhabitants for the sake of suffering alone.

In rejecting military necessity as a defense, the tribunal held that "Military necessity or expediency do not justify a violation of positive rules," citing the defendants' violations of Articles 46, 47 and 50 of the Hague Regulations of 1907. The tribunal also noted that the cited provisions "make no such exceptions to its enforcement."

9. The Industry Cases: Flick and the Necessity Defense

Three of the cases tried by the United States military tribunals in Nuremberg involved German industrialists who were convicted of war crimes and crimes against humanity: United States v. Flick, et al., and United States v. Krupp, et al. and United States v. Krauch, et al. Flick and Krupp involved

corporations or firms that employed slave labor and participated in spoliation and plunder. The defendants in both cases raised the defense of necessity, i.e. that they were justified in committing their offenses to avoid a greater evil.

Defendant Friedrich Flick was the owner, though a holding company, of controlling interests in a dozen companies employing at least 120,000 persons engaged in mining coal and iron, making steel and building machinery and other products which required steel as a raw material. His co-defendants were his chief assistants and employees of his company. They were charged with war crimes and crimes against humanity. 6 Tr. War Crim. 1191 (1947)

In response to the defendants' protest that they were private citizens engaged as businessmen, and that "industry itself" was being persecuted by the tribunal, the tribunal duly noted a statement made by the prosecution during opening arguments which might give credence to that claim: "The defendants in this case are leading representatives of one of the two principal concentrations of power in Germany. In the final analysis, Germany's capacity for conquest derived from its heavy industry and attendant scientific techniques. . .On the shoulders of these groups Hitler rode to power, and from power to conquest." The tribunal then noted that the prosecution did not attempt to prove this charge and thus it had no effect as against the defendants. Id.

The actual charge in count one of the indictment was the commission of war crimes and crimes against humanity by defendants "in that they were principals in, accessories to, ordered, abetted, took a consenting part in, were

connected with plans and enterprises involving, and were members of organizations or groups connected with, enslavement and deportations to slave labor on a gigantic scale of members of the civilian populations of countries and territories under the belligerent occupation of or otherwise controlled by Germany" as well as the use of prisoners of war in work related to war operations "in the industrial enterprises and establishments owned, controlled, or influenced by them" in violation of the Hague Regulations of 1907 (including Article 23) and the Geneva Convention of 1929. The charge in count two of the indictment was the commission of war crimes by participating in the spoliation and plunder of occupied territories, in violation of the Hague Regulations of 1907. Id. at 1194.

The defendants invoked the defense of duress, or necessity. The tribunal quoted from Whartons' Criminal Law in defining that defense, as established in Anglo-American jurisprudence:

> Necessity is a defense when it is shown that the act charged was done to avoid an evil both serious and irreparable; that there was not other adequate means of escape; and that the remedy was not disproportioned to the evil.
>
> Id. at 1200

In considering the application of the necessity defense in that case, the tribunal noted that the slave labor program was created and rigorously supervised by the German Reich, and "any act that could be construed as tending to hinder or retard the war economy programs of the Reich would be construed as sabotage and would be treated with summary and severe penalties, sometimes resulting in the imposition of death sentences." Id. at 1197. The tribunal then found that the

reign of terror under the Nazi Reich constituted a "clear and present danger" sufficient to establish the defense of necessity as to all of the defendants except Flick and one of his assistants. The tribunal found Flick and one of his assistants guilty because they, unlike the others, actively sought more laborers and increased production quotas for the enterprise, which were not mandated by the Reich. Id. at 1201.

As to charge of spoliation, the tribunal held that the initial seizure of a factory in occupied France was justified by military necessity, because of the possibility of its use by the enemy, the absence of responsible management and the need for finding work for the idle occupied population. However, the tribunal went on to state:

> While the original seizure may not have been unlawful, its subsequent detention from the rightful owners was wrongful. For this and other damage they may be compensated. Laurent, as a witness, told of his intention to claim reparations. For suggesting an element of damage of which he had not thought, he thanked one of defendants' counsel. It may be added that he agreed with counsel that the factory had not been "mismanaged or ransacked."
>
> But there may be both civil and criminal liability growing out of the same transaction. In this case Flick's acts and conduct contributed to a violation of Hague Regulation 46, that is, private property must be respected. Of this there can be no doubt. But his acts were not within his knowledge intended to contribute to a program of "systematic plunder" conceived by the Hitler regime and for which may of the major war criminals have been punished. If they added anything to this program of spoliation, it was in a very small degree.
>
> Id. at 1207-1208.

In response to Flick's claim that he was unaware that expansion of his firm in occupied territory was a violation of international law, the tribunal held that "International law, as such, binds every citizen just as does ordinary municipal law."

> It was stated in the beginning that the responsibility of an individual for infractions of international law is not open to question. In dealing with property located outside his own state, he must be expected to ascertain and keep within applicable law. Ignorance thereof will not excuse guilt but may mitigate punishment.
>
> Id.

Accordingly only Flick himself was convicted on the second count, but his punishment was mitigated in consideration of the circumstances under which he acted.

10. The Industry Cases: Krupp and the Necessity Defense

Defendant Alfried Krupp inherited his family's business firm, which was founded in 1812 as Fried. Krupp. The business was incorporated in 1903 as a private limited liability company. In December 1943 pursuant to a decree issued by Hitler ("Lex Krupp") the company was dissolved and defendant Krupp became the sole proprietor of the firm, which owned and controlled directly and through subsidiary holding companies, mines, steel, armament plants, shipyards, collieries, machinery factories, development and research facilities and other enterprises. His co-defendants were the upper-level managers of his firm. 9 Tr. War Crim. 1327 (1947).

Count two in the indictment against Krupp alleged plunder and spoliation, for "having exploited, as principals or as accessories in consequence of a deliberate design and policy, territories occupied by German armed forces in a ruthless way, far beyond the needs of the army of occupation and in disregard of the needs of the local economy," in violation of Articles 46-56 of the Hague Regulations of 1907. Count three of the indictment alleged involvement in prisoner of war and slave labor, also in violation of the Hague Regulations. Id. at 1338.

As in Flick, the defendants invoked necessity as a defense to the slave labor charges. They claimed that production quotas for their plants were set by the Reich and that it would have been impossible to meet those quotas without use of the slave labor that was provided by the Reich, because of labor shortages. They asserted that they would have suffered dire consequences if they did not meet these requirements. Id. at 1439.

The tribunal discussed the necessity defense in great detail. It began by holding that necessity is an affirmative defense, in which the defendant has the burden of coming forward with sufficient evidence to raise a reasonable doubt, although the burden of proof is technically upon the prosecution throughout a criminal trial. The tribunal noted the Flick tribunal's partial application of the defense, but distinguished that case on the basis that the defendants acquitted in Flick were not "desirous of employing foreign labor or prisoners of war." In expounding further on the necessity defense, the Krupp tribunal held that "if, in

the execution of the illegal act, the will of the accused be not thereby overpowered but instead coincides with the will of those from whom the alleged compulsion emanates, there is no necessity justifying the illegal conduct." Id. at 1439.

The Krupp tribunal rejected the necessity defense for the defendants before it. It cited extensive evidence that the defendants actively sought out prisoners and deportees for labor in their plants. It also cited evidence that the defendants' mistreatment of their laborers actually went beyond what was ordered by the Reich. There was evidence that German military officials actually complained about the treatment of laborers at the Krupp firm: that they were being beaten, and were given insufficient food rations and time off, which led to illness and malnourishment. Id. at 1385, 1440-41.

The tribunal noted that government regulations actually made it the responsibility of the employer to see that laborers were in the proper physical condition, which meant proper feeding or whatever other measures were necessary, before being put to work. Many of the laborers working at the Krupp firm were malnourished or bordering on starvation; not only was this not required by government authorities, it was contrary to orders. Id. at 1386.

The tribunal also remarked that the defense evidence tended to show that the defendants acted not from necessity but from what they conceived to be a sense of duty. One of the witnesses testified that "a refusal to meet production programs does not occur in an orderly state which is at war." About the Krupp

firm in particular, he testified that "it regarded it as a patriotic duty to do what it could in aid of the war effort by meeting these production schedules." Id. at 1443.

There were was also testimony introduced at the trial, by Albert Speer, that if an industrialist refused to comply with government directives, he would have lost his plant, and would have lost every possibility of exerting any influence on his plant, and that this might happen merely because a plant failed to fulfill its production quota, even in the absence of willful refusal. The tribunal noted that Krupp was the only defendant who had an ownership interest in the firm to lose, and stated:

> So accepting Speer's testimony, the question from the standpoint of the individual defendants resolves itself into this proposition: To avoid losing my job or the control of my property, I am warranted in employing thousands of civilian deportees prisoners of war, and concentration camp inmates; keeping them in a state of involuntary servitude; exposing them daily to death or great bodily harm, under conditions which did in fact result in the deaths of many of the them; and working them in an undernourished condition in the production of armament intended for use against the people who would liberate them and indeed even against the people of their homelands.
>
> Id. at 1444-1445.

The tribunal rejected the contention that Krupp and his officials might have been sent to concentration camps, because of their influence in Germany and Krupp's friendship with Hitler himself. The tribunal cited, with approval, the proposition that "the fear of loss of property will not make the defense of duress available." It also cited defense testimony that the defendants flouted the directives of the Reich in continuing production of commercial or peacetime

goods and in selling off German government bonds towards the end of the war although these offenses were potentially punishable by death. The tribunal concluded that the defendants did not hesitate to run afoul of government orders when they stood to profit from it, which undercut their assertion that they were intimidated by the Reich. Id. at 1445-1447.

With respect to criminal liability of corporate officers, the tribunal quoted as follows from what it identified as an authoritative American text:

> Officers, directors, or agents of a corporation participating in a violation of law in the conduct of the company's business may be held criminally liable individually therefore. So, although they are ordinarily not criminally liable for corporate acts performed by other officers or agents, and at least where the crime charged involves guilty knowledge or criminal intent, it is essential to criminal liability on his part that the actually and personally do the acts which constitute the offense or that they be done by his direction or permission. He is liable where his scienter or authority is established, or where he is the actual present and efficient actor. When the corporation itself is forbidden to do an act, the prohibition extends to the board of directors and to each director, separately and individually.
>
> Id. at 1448.

In addition to sentencing the defendants to prison, it ordered the forfeiture of all of the property, both real and personal, of Krupp and one other defendant.

11. Industry Cases: Supply of Poison Gas; Krauch

Of the cases trying German industrialists, two involved charges that defendants, who acted through their firms or corporations, supplied poison gas for use in murdering prisoners, knowing how it would be used. One of these cases

was tried by the U.S. military tribunal, the other, by the British. Both serve as precedents for the instant case.

United States v. Krauch, et al., also known as the Farben Case, was tried by the U.S. military tribunal pursuant to Council Control Law No. 10. 8 Tr. War Crim. 1168 (1952). Among numerous other allegations concerning crimes against peace and the employment of slave labor, the defendants were charged with the production and supply of poison gas for use in the extermination of concentration camp inmates and the supply of drugs for scientific experiments on inmates. Id. at 1168-1170. The poison gas at issue was Zyklon B, an insecticide. It consisted mostly of prussic acid.

The defendants were all officers or top management officials of I.G. Farben Industrie, A.G. a German pharmaceutical corporation which mass produced many different types of consumer items. Id. at 1085-1086, 1088-1096. Although the corporation itself was not indicted, it was alleged that the twenty-two defendants acted "through the instrumentality of Farben and otherwise," in committing crimes against peace, war crimes and crimes against humanity. Id. at 1085. The indictment cited violations of Article 23 of the Hague Regulations and customary international law in connection with the charge regarding supply of Zyklon B, which had legitimate uses as a pesticide. Id. at 58-59, 1168.

However, it was not Farben itself that supplied the poison. Farben and two other manufacturers had entered into a distribution agreement with another company, Degesch. Id. at 1168-1169. Certain Farben officials were charged with

supply of poison gas only because they were also on the executive board of Degesch.

The defendants were acquitted on these counts after a full trial on the merits. Id. at 1169. The evidence showed that, although they were board members of Degesch, they did not have "any persuasive influence on the management policies of Degesch or any significant knowledge as to the uses to which its production was being put." The evidence adduced at trial also showed that the extermination program in the concentration camps was kept highly secret and that the defendants would not have known about it. The court also found that the defendants could have reasonably believed that the large quantities of Zyklon B that were being supplied by Degesch to the S.S. or concentration camps were being legitimately used as pesticides. Id.

With respect to the charge of supplying drugs for use in scientific experiments, the evidence at trial showed that Farben "***had stopped the forwarding of drugs to [S.S.] physicians as soon as their improper conduct was suspected***." Id. at1172 (emphasis added). The inference that the defendants' suspicion should have been aroused before that time was rejected by the tribunal by the fact that there was a great demand at the time for legitimate uses of the drug in question in the concentration camps. The tribunal found as follows, after a full trial on the merits of the charges: "Applying the rule that where from credible evidence two reasonable inferences may be drawn, one of guilt and the

other of innocence, the latter must prevail, we must conclude that the Prosecution has failed to establish that part of the charge here under consideration." Id.

12. Industry Cases: Supply of Poison Gas; Tesch

However, in trying other defendants on the same charges, the British military tribunal found differently. The Trial of Bruno Tesch and Two Others, also known as the Zyklon B Case, is probably the most important case decided by the British tribunal. 1 Tr. War Crim. 93 (1947). Defendant Tesch was the sole owner of the firm of Tesch and Stabenow, which distributed gas for disinfecting public buildings, predominately involving extermination of lice. Id. at 94. The chief gas they distributed was Zyklon B. Although the Tesch firm did not manufacture Zyklon B, it was the exclusive agent for distribution in certain areas. Tesch's co-defendants were employees of the firm. Id.

The defendants were charged with a war crime in that they "at Hamburg, Germany, between 1st January, 1941, and 31st March, 1945, in violation of the laws and usages of war did supply poison gas used for the extermination of allied nationals interned in concentration camps well knowing that the said gas was to be so used." Id. at 93. The prosecution was based upon Article 46 of the Hague Regulations which governs wartime conduct in occupied territory. Id. at 103. Much of the Zyklon B supplied by defendants was used in the Auschwitz concentration camp, in occupied Poland. Id. at 94.

The Tesch firm took orders and supplied Zyklon B in vast quantities to the largest concentration camps within their distribution area. These camps

systematically exterminated an estimated total of 6 million human beings. Defendants were charged with learning of this mass extermination, and having acquired that knowledge, continuing to arrange supplies of gas in ever increasing quantities, reaching quantities of two tons per month in 1944. Id.

One of Tesch's co-defendants was a Procurist for the firm, which made him second-in-charge to Tesch. He had full authority to direct the operations of the firm in Tesch's absence, which happened often as Tesch traveled frequently. The other co-defendant was a technical consultant who was not involved in the business affairs of the firm, and did not have access to its business records. Id.

Tesch testified that he had no knowledge that the Zyklon B was used to kill human beings; that he was under the impression that it was being ordered only for purposes of disinfection and for exterminating vermin at concentration camps. He also testified that the amounts which the firm supplied seemed quite normal in relation to the populations in the camps and the needs of the German armed forces. Id. at 96. His counsel argued that he was not charged with destroying human life and did not have the requisite intent; that it was no war crime merely to supply a material which also had legitimate uses. Id. at 98.

Tesch's testimony was contradicted by testimony of his employees indicating that he was aware that Zyklon B was being used to kill people, based upon his statements and notes in company files and travel reports. Id. at 95. One of his co-defendants testified that he had told Tesch that he had seen things happening in the camps that were contrary to human dignity. Id. at 98. There

was also testimony that by 1943 it was common knowledge in Germany that gas was being used to kill people in concentration camps. Id. at 96.

The prosecution argued that, by supplying gas, knowing that it was to be used for murder, the defendants had made themselves accessories before the fact to that murder. It was pointed out that the defendants, especially Tesch, the sole owner of the firm, must have known of the large quantities of gas that were supplied to the SS, and to Auschwitz, the second largest customer of the firm. It was also pointed out that defendants must have known that such large quantities of gas could not possibly have been ordered merely for the purpose of disinfecting buildings or exterminating lice. Id. at 101.

The co-defendant who was merely a technical consultant with the firm was acquitted on the basis that he had no ability to influence or prevent the supply of gas to concentration camps, due to his subordinate position. Tesch and the Procurist co-defendant were convicted. Id. at 102. The judge advocate pointed out to the court that they both had access to all business records of the firm, including travel reports and consignments of Zyklon B. Id. at 101-102. The Procurist was deemed to have knowledge of the gassing due to his authority with the firm and access to its records, and was presumed to have followed the profitability of the firm since he was compensated on a commission basis in addition to salary. Id. Both defendants pleaded for leniency; both claimed that they were under enormous pressure from the S.S. to supply Zyklon B and their refusal would have placed them in great danger. In addition, the Procurist asked

the court to consider his wife and three children. Notwithstanding, they were both sentenced to death. Id. at 102.

The decision in the Tesch case made it clear that a commercial transaction by a civilian who is not a government official can form the basis of war crimes liability. Any civilian who is an accessory to a violation of the laws and customs of war or assists in such violations can be held liable as a war criminal.

13. The Introduction of the Atomic Bomb, and its Relevance to Application of Customary Prohibitions to New Weapons

There is one more aspect of the laws and customs of war with respect to events taking place in World War II that merits discussion here. World War II saw the first (and only, to date) use of the atomic bomb, a new weapon of mass destruction, by the United States against Japan. This provides another example of a new weapon, not specifically banned by any convention or other instrument, whose legality is called into question.

The opinions of the ICJ, a Japanese court and the authors of the U.S. Army pamphlet on international law are in agreement that the customary prohibitions of poison and wanton devastation have continuing applicability to new weapons, depending upon how these weapons are used. Thus, specific uses of new weapons, like the atomic bomb, may be prohibited under customary international law, regardless of whether they is a *per se* prohibition on the weapon itself.

There was no mention of the use of the bomb at the Nuremburg trials. Clearly, the purpose of the tribunals was to mete out punishment to Axis war criminals; no prosecutorial action was taken against the victorious Allies. This, however, does not necessarily mean that the use of atomic weapons in war, generally, or in the specific instance in which they were used against Japan, was lawful.

As the defendants have noted, the ICJ issued an Advisory Opinion on the Legality of the Threat of Use of Nuclear Weapons on July 8, 1996. Since there is no treaty or other international instrument which specifically prohibits nuclear weapons, the ICJ found it necessary to review the history and application of the laws and customs of war with respect to poison, unnecessary suffering and the targeting of civilians. The opinion of the ICJ supports the analysis presented herein on the distinction between customary prohibitions based upon the *use* of the weapon, the *target* of the weapon, and the *nature* of the weapon itself.

The ICJ begins its analysis of the use of nuclear weapons in war with a conclusion that neither the Hague Declaration of 1899, Article 23 (a) of the Hague Regulations or the 1925 Geneva Protocol provide a blanket prohibition on use of nuclear weapons. Clearly, nuclear weapons are very different in nature from chemical or biological weapons, and are more similar to conventional explosives, in that their chief effect is blast. The ICJ's conclusion was that none of the foregoing provisions would prohibit nuclear weapons *per se*, for example, the way that the 1925 Geneva Protocol prohibits the use of mustard gas, regardless of

how it is used. (ICJ, Legality of Nuclear Weapons at 54-57) However, the ICJ provided no authority for its conclusion, and did not devote any time in its opinion to exploring whether the Hague provision might prohibit certain aspects of nuclear warfare. Instead it concentrated its attention later on other sources of prohibition for nuclear weapons.

Had the ICJ considered the issue further, it would probably have agreed with the analysis of the authors of the U.S. Army Pamphlet, who had this to say about the legality of particular uses of nuclear weapons:

> The provisions of international conventional and customary law that may control the use of nuclear weapons are (1) Article 23 (a) of the Hague Regulations prohibiting poisons and poisoned weapons, (2) the Geneva Protocol of 1925 which prohibits the use not only of poisonous and other gases but also of "analogous liquids, materials or devices," (3) Article 23 (c) of the Hague Regulations which prohibits weapons calculated to cause unnecessary suffering, and (4) the 1868 Declarations of St. Petersburg which lists as contrary to humanity those weapons which "needlessly aggravate the sufferings of disabled men or rend their death inevitable."
>
> It has been asserted that even if these four provisions are applicable to nuclear weapons they are inadequate to control them, without a new specific prohibition.
>
> Article 35, [Field Manual] 27-10 adopts the position that "explosive atomic weapons" are not violative of international law in the absence of a rule restricting their employment.
>
> The unpublished annotation to paragraph 35, [Field Manual] 27-10 (1956) explains the reason for the conclusion that such weapons are now (1956) lawful:
>
> > The weapon has already been used, it is still with us, and the major powers are virtually committed in an operational sense to its use in a

> future war. . . The weapon has gained such acceptance that it is spoken of in the context of disarmament rather than of illegality.
>
> The qualifying word "explosive" is inserted [in para. 35] to save taking a position on the use of an atomic weapons, the effect of which was confined to radiation. ***Such an arm might conceivably run afoul of the prohibition of paragraph (a), Article 23, [Hague Regulations], prohibiting the use of poison or poisoned weapons***. [emphasis added]

This last paragraph of the annotation is important because it underlines the fact that the atom bomb has not one effect, but three effects. They are fire, blast, and radiation. The weapon was used in World War II for its blast effect, a use similar to all high explosives. However, it can conceivably be used in a situation where only one of the three effects will result, that of radiation. This could occur if the bomb were detonated under water in a harbor. The port city would then be drenched with radioactive water. Similarly a high altitude explosion could create only a radiation hazard. ***It is this singular effect which the annotation warns may run afoul of Article 23 (a) [Hague Regulations] on the use of poison***. [Emphasis added]

Because the blast effect is similar to normal bombings, [Field Manual] 27-10 offers some guidance in its adoption of the rule of proportionality in bombardments:

> …loss of life and damage to property must not be out of proportion to the military advantage to be gained.

This norm of proportionality would apply equally well to the radiation side effects of the blast. If the radiation is cumulative, then the continued use of nuclear weapons might tend to make such use disproportionate despite the fact that the blast effects are confined to important military objectives.

U.S. Army Pamphlet at 42-43.

Thus the authors of the U.S. Army Pamphlet on international law agree that the Hague Article 23 prohibition of poison prohibits certain *uses* of weapons or materials, to the extent that they are *used as poisons.* Recall the rule with respect to animals: they are not banned *per se*, but they may not be used to poison wells. The authors of the pamphlet imagine the explosion of a nuclear bomb in such a way as to poison the waters of a coastal city or to poison the air, rather than employ the blast effect of the bomb to destroy enemy fortifications.

Consider now an analogy more relevant to this case: the use of herbicides. Herbicides that are used around the perimeters of military bases to destroy vegetation and improve visibility *are not* being used as poisons. Herbicides that contain toxic by-products that are sprayed indiscriminately over vast territory in such a way as to make contamination of food and water supplies inevitable, *are* being used as poisons.[10] This is the point made in the U.S. Army Field Manual, in paragraph 37 (b) ("chemical or bacterial agents harmless to man, crops intended solely for consumption by the armed forces").

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[10] The SIPRI treatise reached this conclusion on the use of herbicides in war:

> It seems incontestable that the use of herbicides and irritant-agent weapons in war, constitutes, in principle, a violation of the customary prohibition as it has developed over half a century. But it is equally clear that even in wartime, the occasional use of irritant agents for genuine police purposes or of herbicides to clear the perimeter of a base, while it may perhaps be criticized from a political angle as improper or reckless under the circumstances, cannot be regarded as a violation of the law of war: as a war crime. Illegality does not arise unless these twin-purpose agents are used with excessive frequency, in patent disregard of the concerns and appeals of other states, and after there has been a shift in the purpose and methods of use that indicates that these agents are no longer used for civilian-type operations but as military weapons: as methods of warfare. At which point, precisely, that limit between the improper and the illegal use of such agents is transgressed does not matter here, and it is in any case a question on which opinions may legitimately differ. III SIPRI at.138.

Returning now to the ICJ's opinion on Legality of Nuclear Weapons, attention was turned (in paragraph 76) to the prohibition of such weapons by customary international law:

> 76. Since the turn of the century, the appearance of a new means of combat has (without calling into question the longstanding principles and rules of international law) rendered necessary some specific prohibitions of the use of certain weapons, such as explosive projectiles under 400 grammes, dum-dum bullets and asphyxiating gases. Chemical and bacteriological weapons were then prohibited by the 1925 Geneva Protocol. . . .
>
> 77. All this shows that the conduct of military operations is governed by a body of legal prescriptions. This is so because "the right of belligerents to adopt means of injuring the enemy is not unlimited" as stated in Article 22 of the 1907 Hague Regulations relating the laws and customs of war on land. The St. Petersburg Declarations had already condemned the use of weapons "which uselessly aggravate the suffering of disabled men or make their death inevitable." The aforementioned Regulations relating to the laws and customs of war on land, annexed to the Hague Convention IV of 1907, prohibit the use of "arms, projectiles, or materials calculated to cause unnecessary suffering" (Art. 23)
>
> 78. The cardinal principles contained in the texts constituting the fabric of humanitarian law are the following. The first is aimed at the protection of the civilian population and civilian objects and establishes the distinction between combatants and non-combatants; States must never make civilians the object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets. According to the second principle, it is prohibited to cause unnecessary suffering to combatants: it is accordingly prohibited to use weapons causing them such harm or uselessly aggravating their suffering. In application of that second principle, States do not have unlimited freedom of choice of means in the weapons they use. . .
>
> The Court would likewise refer, in relations to these principles, to the Martens Clause, which was first included in the Hague Convention II with Respect to the Laws and Customs of

> War on Land of 1899 and which has proved to be an effective means of addressing the rapid evolution of military technology. . .
>
> . . .In conformity with the aforementioned principles, humanitarian law, at a very early stage, prohibited certain types of weapons either because of their indiscriminate effect on combatants and civilians or because of the unnecessary suffering caused to combatants, that is to say, a harm greater than that unavoidable to achieve legitimate military objectives. If an envisaged use of weapons would not meet the requirements of humanitarian law, a threat to engage in such use would also be contrary to that law.
>
> 79. It is undoubtedly because a great many rules of humanitarian law applicable in armed conflict are so fundamental to the respect of the human person and "elementary considerations of humanity" as the Court put in its Judge of 9 April 1949 in the Corfu Channel case (I.C.J. Reports 1949, p. 22), that the Hague and Geneva conventions have enjoyed a broad accession. Further these fundamental rules are to be observed by all States whether or not they have ratified the conventions that contain them, because they constitute intransgressible principles of international customary law.

The ICJ finally concluded that, although there is no specific treaty banning the use of nuclear weapons, the continuing applicability of the provisions of customary international law regarding unnecessary suffering and civilian targets, as voiced in such instruments as the Hague Regulations and Declaration of St. Petersburg, operate to make certain uses of nuclear weapons illegal. The ICJ disregarded the argument that the foregoing instruments could not possibly operate to ban nuclear weapons because they had not been invented at the time the instruments were enacted:

> 85. Turning now to the applicability of the principles and rules of humanitarian law to a possible threat or use of nuclear

> weapons, the court notes that doubts in this respect have sometimes been voiced on the ground that these principles and rules had evolved prior to the invention of nuclear weapons and that the Conferences of Geneva of 1949 and 1974-1977 which respectively adopted the four Geneva Conventions of 1949 and the two Additional Protocols thereto did not deal with nuclear weapons specifically. Such views, however, are only held by a small minority. In the view of the vast majority of States as well as writers there can be no doubt as to the applicability of humanitarian law to nuclear weapons.
>
> 86. The Court shares that view. Indeed, nuclear weapons were invented after most of the principles and rules of humanitarian law applicable in armed conflict had already come into existence; the Conferences of 1949 and 1974-1977 left these weapons aside, and there is a qualitative as well as quantitative difference between nuclear weapons and all conventional arms. However, it cannot be concluded from this that the established principles and rules of humanitarian law applicable in armed conflict did not apply to nuclear weapons. Such a conclusion would be incompatible with the intrinsically humanitarian character of the legal principles in questions which permeates the entire law of armed conflict and applies to all forms of warfare and to all kinds of weapons, those of the past, those of the present and those of the future. In this respect it seems significant that the thesis that the rules of humanitarian law do not apply to the new weaponry, because of the newness of the latter, has not been advocated in the present proceedings. On the contrary, the newness of nuclear weapons has been expressly rejected as an argument against the application to them of international humanitarian law. . .
>
> 87. Finally, the Court points to the Martens Clause, whose continuing existence and applicability is not to be doubted, as an affirmation that the principles and rules of humanitarian law apply to nuclear weapons.

In their briefs, the defendants have cited the ICJ opinion solely for the proposition that each new weapon requires a specific new international law treaty or instrument to ban its use in war. (See, e.g. Declaration of Kenneth Howard

Anderson Jr., at 20-21) This characterization of the ICJ's opinion is obviously incorrect. For the ICJ opined that, although there was no *per se* ban on the use of nuclear weapons, that certain uses of nuclear weapons in war would violate customary international law.

The ICJ declined to hold that any use of nuclear weapons in war whatsoever would violate international law, but rather that the circumstances surrounding their use would play an important role. In essence, the ICJ opinion is in harmony with the U.S. Army pamphlet on international law cited above, which opined that certain uses of nuclear weapons which have the effect of poisoning air or water might violate international law.

> 95. Nor can the Court make a determination on the validity of the view that the recourse to nuclear weapons would be illegal in any circumstance owing to their inherent and total incompatibility with the law applicable in armed conflict. Certainly, as the Court has already indicated, the principles and rules of law applicable in armed conflict (at the heart of which is the overriding consideration of humanity) make the conduct of armed hostilities subject to a number of strict requirements. Thus, methods and means of warfare, which would preclude any distinction between civilian and military targets, or which would result in unnecessary suffering to combatants, are prohibited. In view of the unique characteristics of nuclear weapons, to which the Court as referred above [blast, heat and radiation would kill and destroy in a necessarily indiscriminate manner] the use of such weapons in fact seems scarcely reconcilable with respect for such requirements. Nevertheless, the Court considers that it does not have sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable in armed conflict in any circumstance.

14. Use of Atomic Bombs in Japan: The Shimoda Case

Before concluding on the subject of nuclear weapons, it is instructive to consider the opinion on the legality of the particular use of the atomic bomb in World War II written by jurists from the nation that suffered from its effects--Japan. In Ryuichi Shimoda, et al. v. The State, the plaintiffs were residents of Hiroshima and Nagasaki when the atomic bombs were dropped on them by United States Air Force bombers in August 1945. Most of the members of their families were killed and many, including some of the plaintiffs themselves, were seriously wounded. Reprinted in Friedman at 1688-1702.

In 1961, the plaintiffs brought a civil suit against their own government for money damages on the theory that: 1) the United States had violated international law in dropping the atomic bombs on Japanese cities; 2) Japanese victims had a right of action against the United States government and President Truman; 3) the government of Japan had waived the plaintiffs claims against the U.S. in the Treaty of Peace with Japan of 1951; 4) as a result, the plaintiffs lost their claims for money damages; and 5) this waiver of plaintiffs' rights gave rise to an obligation of the government of Japan to pay damages to plaintiffs.

The court's analysis of the laws and customs of war in Shimoda was consistent with the ICJ's Advisory Opinion on the use of nuclear weapons. The Shimoda court held that the aerial bombardment with atomic bombs of Hiroshima and Nagasaki violated customary international law because it was comparable to an indiscriminate aerial bombardment of undefended cities. The court noted that,

notwithstanding the presence of military targets such armed forces and munitions factories, some 330,000 civilians lived in Hiroshima and some 270,000 civilians lived in Nagasaki at the time. Id. at 1693.

Even if the bombing was directed at military objectives only, the massive damage that resulted from the atomic blast was comparable to that sustained by a blind aerial bombardment. Nevertheless, the court dismissed the claims because it held that the plaintiffs could not bring suit for money damages for the violations for various reasons (including sovereign immunity) and had no rights to lose as a result of the waiver in the peace treaty with Japan. Id. at 1696-1697.

In its opinion, the court analyzed the atomic bomb attack through the lens of the prohibitions of poison, poisonous gas and weapons causing unnecessary suffering:

> When looked at from this angle, the question is whether the act of atomic bombing falls under 'the employment of poison or poisonous weapons' prohibited by Article 23 (a) of the Hague Regulations respecting war on land, or under the prohibitions provided for in the Declaration of 1899 prohibiting the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases, or the Protocol of 1925 prohibiting the use in war of asphyxiating, poisonous and other gases and bacteriological methods of warfare. With regard to this point, there is as yet no agreement among international lawyers on the difference between poisons, poisonous gases, bacteria, etc., on the one hand, and atomic bombs, on the other. However, in view of the fact that the St. Petersburg Declaration provides that '. . .considering that the use of a weapon which increases uselessly the pain of people who are already placed out of battle and causes their death necessarily is beyond the scope of this purpose, and considering the use of such a weapon is thus contrary to humanity. . .' and that Article 23 (e) of the Hague Regulations respecting war on land prohibits the employment of such 'arms, projectiles, and material as cause

> unnecessary injury,' it can safely be concluded that besides poisons, poisonous gases and bacteria, the use of means of injuring the enemy which cause injury at least as great as or greater than those prohibited materials is prohibited by international law. It is doubtful whether the atomic bomb with its tremendous destructive power was appropriate from the viewpoint of military effect and was really necessary at that time. It is indeed a fact to be regretted that the atomic bombing of the cities of Hiroshima and Nagasaki took away the lives of tens of thousand of citizens, and that among those who have survived are those whose lives are still imperiled owing to its radioactive effects even now after eighteen years. In this sense it is not too much to say that the sufferings brought about by the atomic bomb are greater than those caused by poisons and poisonous gases; indeed the act of dropping this bomb may be regarded as contrary to the fundamental principle of the law of war which prohibits the causing of unnecessary suffering.
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> Id. at 1695.

15. 1949 Geneva Conventions and the Attempt to Protect Civilians

World War II saw unprecedented numbers of civilian casualties. As compared to roughly ten combatants killed to every civilian in World War I, roughly equal numbers of combatants and civilians were killed in World War II. The Geneva Conventions adopted prior to 1949 had been concerned with combatants only. After World War II, the ICRC took definitive action to attempt to codify the customary rules protecting the civilian population in wartime, including with respect to indiscriminate weapons.

The death of multitudes of civilians during World War I had led the ICRC to take action to persuade states to adopt treaty rules to protect civilians from the effects of bombardment, taking in to account the rapid development of new methods of warfare. The Tenth, Eleventh and Twelfth International Conferences

of the Red Cross in the 1920's had adopted resolutions inviting the ICRC to take such action. International Committee of the Red Cross, Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949 Article 52 at 630-637 (ICRC 1987).

The 1929 Diplomatic Conference of Geneva which resulted in the Convention on the treatment of prisoners of war limited itself to recommending that studies should be made with a view to concluding a convention of the protection of civilians in enemy territory and in enemy occupied territory. The ICRC set up a commission of experts who prepared a draft convention to this effect and it was adopted by the Fifteenth International Conference of the Red Cross in Tokyo in 1934. It was to have been discussed at the Diplomatic Conference convened by the Swiss government in 1940, but this was postponed due to the outbreak of World War II. Id.

In the wake of the disastrous effects upon civilians of that war, the proposals contained in the Tokyo draft convention were reconsidered at the 1949 Diplomatic Conference of Geneva. These discussions led to the adoption of the Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War ("Geneva Convention") on August 12, 1949. Id.

Articles 53 and 55 of the Geneva Convention reflected the experience of occupied Europe during the war:

Article 53

> Any destruction by the Occupying Power of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities, or to social or cooperative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations.
>
> Article 55
>
> To the fullest extent of the means available to it the Occupying Power has the duty of ensuring the food and medical supplies of the population;; it should, in particular, bring in the necessary foodstuffs, medical stores and other articles if the resources of the occupied territory are inadequate. . .

Articles 146 and 147 of the Geneva Convention require the state parties to enact legislation to prosecute "grave breaches" of certain provisions of the Convention in their national courts, including "extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly" if committed against protected persons or property.

In its continuing efforts to persuade governments to take measures to protect civilians in time of war, the Board of Governors of the ICRC requested that it prepare a draft treaty with a view to "protect civilian populations efficiently from the dangers of atomic, chemical and bacteriological warfare" to be submitted at the Nineteenth Conference of the Red Cross in New Delhi in 1957. In 1956, the ICRC, with the help of experts, drew up Draft Rules for the Limitation of the Dangers incurred by the Civilian Population in Time of War. Chapter IV of the Draft Rules provided as follows:

CHAPTER IV: WEAPONS WITH UNCONTROLLABLE EFFECTS

Prohibited methods of warfare

> Art. 14. Without prejudice to the present or future prohibition of certain specific weapons, the use is prohibited of weapons whose harmful effects—resulting in particular from the dissemination of incendiary, chemical, bacteriological, radioactive or other agents—could spread to an unforeseen degree or escape, either in space or in time, from the control of those who employ them, thus endangering the civilian population. This prohibition also applies to delayed-action weapons, the dangerous effects of which are liable to be felt by the civilian population.

The Draft Rules also contained a provision (Art. 19) requiring parties to the treaty, if any, "to search for and bring to trial any person having committed, or ordered to be committed" violations of the rules. A resolution at the 1957 conference encouraged the ICRC to submit the Draft Rules together with amendments proposed at the conference to governments, but little if any interest was shown in it. However, many of the provision of the Draft Rules resembled provisions that would eventually become part of the 1977 Protocols additional to the Geneva Conventions drafted by the ICRC.[11] Id.

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[11] The Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol 1), adopted on June 8, 1977 by the Diplomatic Conference at Geneva contained the following provisions:

Article 54. Protection of objects indispensable to the survival of the civilian population

1. Starvation of civilians as a method of warfare is prohibited.

2. It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive. . .

E. ACCEPTANCE OF A CUSTOMARY PROHIBITION OF CHEMICAL AND BIOLOGICAL WEAPONS AND USE OF CHEMICAL HERBICIDES

1. Evidence of *Opinio Juris*

As was discussed earlier, customary rules consist of the conduct or practice of states accompanied by a belief that the practice is required by law, which belief is also referred to as *opinio juris*. Again, o*pinio juris* with respect to chemical and biological warfare can be evidenced in many ways: restraint from use, denial of use, international condemnation because of use, or use together with a claim of exception to the rules, such as retaliation. In the period during and subsequent to World War II, the ban on chemical and biological weapons entered into the customary international law.

Conclusive evidence of *opinio juris* in respect of chemical and biological warfare was the actual restraint by most of the belligerents from use of such weapons during World War II. As has been discussed, several of the major powers had pledged to observe the Geneva Protocol at the outbreak of the war, and had kept their commitment. Even though the U.S. initially declined Britain's

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Article 55. Protection of the natural environment

1. Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.

2. Attacks against the natural environment by way of reprisals are prohibited.

It is obvious that these provisions reflect the experience of the war in Vietnam.

invitation to join in the pledge, the U.S. also restrained from chemical warfare. The condemnation (and prosecution) of Japan and its soldiers for their use of chemical/biological weapons in China and the condemnation of Italy for its use of such weapons in Ethiopia also provides evidence of *opinio juris*.

The restraint on the part of the U.S. from engaging in chemical warfare cannot be seen as a mere tactical decision: the U.S. had the capacity to mass produce chemical weapons (while the Germans probably did not), there was an opportunity to use them, they would have provided a military advantage in a long war in which there were heavy casualties, the battlefields were far from home, and there was evidence that Japan was already using them.

Instead of using chemical/biological weapons during World War II, the President of the United States officially declared that such weapons had been "outlawed by the general opinion of civilized mankind" and categorically stated that the U.S. would not use such weapons—including "noxious" chemicals--unless they were used first by the enemy. All of this provides conclusive proof of *opinio juris* on the part of the U.S. One of type of chemical/biological weapon that was contemplated but rejected by the U.S. was chemical herbicide for use in destroying Japanese combatant food supplies.

During the Korean War, the United States was accused of using biological weapons by North Korea and the Soviet Union. The Soviet Union introduced a draft resolution in the United Nations General Assembly calling upon all nations to ratify and to observe the principals of the 1925 Geneva Protocol. The U.S.

vehemently denied the allegations of biological warfare, without making any attempt to define the Protocol or indicate whether it was bound by the prohibitions in the Protocol. III SIPRI at 57.

However, the U.S. did invite the UN to investigate the allegations, but the invitation was not pursued by others. This U.S. reaction to the allegations of biological warfare provides evidence of *opinio juris* with respect to the principles of the Geneva Protocol, i.e., a general ban on chemical and biological warfare. The fact that the U.S. considered the allegations serious enough to warrant investigation, regardless of the fact that it was not a party to the Geneva Protocol and technically was not bound by it, indicates an acceptance that its principles have become part of the customary international law. III SIPRI at 109.

By 1962, the view that the employment of "toxic chemical agents," "to the extent that these weapons are used either directly upon the noncombatant population or in such circumstances as to cause unnecessary suffering. . . must be considered unlawful" had found its way into the U.S Army Pamphlet on international law and the U.S. Navy manual. U.S. Army Pamphlet at 44.

2. British Use of Herbicides in Malaysia

The first military use of herbicide appears to have been by the British, in an armed campaign against insurgents in Malaya starting in the late 1940s. Although the British used chemical herbicides in war, this use was limited in scale, and care was exercised in the choice of herbicides and the targets of the spraying.

The British used 2,4,5-T, most likely sprayed by helicopters or ground sprayers, but this use was insignificant. Buckingham at 4. The source of the 2,4,5-T was probably commercial herbicide that had been stored in Malaya for use in preventing the spread of infectious disease affecting rubber plantations. The initial use of herbicide by the British in Malaya has been described as follows:

> The thinning of jungle cover along communication routes by the use of defoliants became a standard method for reducing the hazard of attack from hidden ambushes. The object was to increase visibility in mixed vegetation rather than to give uniform defoliation. . . Using sprays of the n-butyl ester of 2,4,5-T most trees were not completely defoliated, but refoliation was delayed long enough to make the operation effective.
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> I SIPRI.at 163.

In 1953 and 1954, the British increased their use of herbicide in Malaya, using helicopters and, only occasionally, fixed-wing aircraft to destroy food crops in isolated gardens cultivated by the insurgents. The spraying program, however, was only a small part of a larger operation to restrict supplies of food to the insurgents. The general technique was to locate and mark the insurgent garden plots, then to use fighter planes to strafe the area to eliminate any ground resistance. Then helicopters would descend over the plots and spray the herbicide. Buckingham at 4.

At first, the British used sodium arsenite, but the danger it posed to the indigenous population was politically unacceptable. The most effective spray was a mixture of trioxene and dieselene which destroyed crops and rendered soil

temporarily sterile. The lack of sufficient aircraft, together with the difficulty in distinguishing between garden plots of the insurgents as opposed to the general population resulted in the herbicide operations being held in abeyance after 1954. Buckingham at 5.

In view of the foregoing, and especially taking into account the British position during World War II and its earlier statement in 1930 accepting a broad interpretation of the Geneva Protocol, Britain's use of herbicide must be regarded as a violation of customary international law, rather than an impediment to formation of a customary rule. However, Britain's use of herbicide in Malaya was not widely reported, and did not attract much attention at the time. III SIPRI at 67. Furthermore, the British herbicide operation was relatively limited in scale and those responsible for it appeared to exercise some degree of judgment when it came to the types of chemicals used, the delivery method and the targets of the operation--at least as compared to use that the U.S. would eventually make of herbicides in Vietnam.

3. United Nations Resolutions on 1925 Geneva Protocol

Indisputable evidence of *opinio juris* with respect to chemical and biological warfare was precipitated as a result of the use of herbicides by the United States in the war in Vietnam, the very herbicides that are at issue in this action. This evidence is provided by United Nations General Assembly

resolutions which were adopted almost unanimously, including the vote of the United States.

As alleged in the Amended Complaint, the U.S. herbicide operations commenced in 1961. From the time that news of the operations was revealed, they sparked controversy, criticism and comment from the news media, politicians and scientists both within and without the United States. The U.S. was accused in many different quarters of engaging in prohibited chemical warfare. The criticism was also aimed at the U.S. use of tear gas in Vietnam.

In March 1965, in response to reports and criticism of the use of tear gas, the U.S. representative to the United Nations sent this note to the UN Security Council:

> Poisonous gases, the use of which would rightfully concern the conscience of humanity, have not been used in Vietnam, nor is there any intention of employing them. The materials which were employed in Vietnam are commonly used by police forces in riot control in many parts of the world and are commonly accepted as appropriate for such purposes. They are non-toxic and of course are not prohibited by the Geneva Convention [sic] of 1925, nor by any other understandings on this subject.
>
> III SIPRI at 57.

Note how, in contrast to the biological warfare allegations leveled at the U.S. during the Korean War, this time, the U.S. felt it necessary to define the scope of the Geneva Protocol in explaining why the use of tear gas was not covered by it. Implicit in the need to define the scope of the Protocol and explain

why the U.S. had not violated the Protocol is an understanding that the United States was bound by the prohibitions in the Protocol.

Note also, that the U.S. attempt to define the scope of the prohibition was in conflict with the earlier position taken by the U.S. in 1922 at the Washington Conference and taken by the British and French (and others) in 1930, that tear gas and other non-toxic chemicals were included in the ban.

The dispute regarding tear gas and herbicides formally reached the United Nations in November of 1966, when the representative of Hungary submitted a draft resolution to the First Committee of the UN General Assembly which was meant to condemn the U.S. use of chemical weapons in Vietnam. III SIPRI at 55. The relevant provisions read as follows:

> The General Assembly. . .
>
> 1. *Demands* strict and absolute compliance by all States with the principles and norms established by the Geneva Protocol of 17 June 1925, which prohibits the use of chemical and bacteriological weapons;
> 2. *Condemns* any actions aimed at the use of chemical and bacteriological weapons;
> 3. *Declares* that the use of chemical and bacteriological weapons for the purpose of destroying human beings and the means of their existence constitutes an international crime.
>
> III SIPRI at 56.

The United States objected to the attempt of the proposed language to define the scope of the prohibition memorialized in the Protocol, particularly the reference to "chemical weapons" and "means of existence." The US

representative to the UN argued that the use of herbicides in Vietnam did not violate the Protocol. Id.

It is important that the U.S. felt the need to argue before the United Nations that the use of chemical herbicides did not fall within the prohibition of the Geneva Protocol. Since the U.S. was not a party to that treaty, if its prohibitions had not entered into customary international law, then why would there be a need for the U.S. to argue the scope of the Protocol or that there was no violation? Furthermore, this course of action also indicates an understanding by the U.S. that the scope of the customary rule is co-extensive with the scope of the Protocol—the implicit argument being "if chemical herbicides are not covered by the Protocol then they are not covered by the customary rule."

It is also telling that, due to sensitivity over allegations of chemical warfare, U.S. aircraft were outfitted with South Vietnamese (RVN) insignia while performing crop destruction missions. As alleged in the Amended Complaint:

> 56. U.S. government policy initially emphasized that the U.S. military was merely assisting the RVN government in the herbicide program. A 1962 pact assigned the ownership of the herbicides to the RVN government once they were delivered, and RVN soldiers handled the loading and transportation of the herbicides. The plans for herbicide use were coordinated by the US Embassy to the RVN, the U.S. Military Assistance Command of Vietnam and a subdivision of the Saigon General Staff (of the RVN government) codenamed "Committee 202."
>
> 57. The USAF aircraft used to spray the herbicides were C-123 aircraft which were camouflaged and equipped with removable identification insignia. When performing crop destruction missions, the aircraft bore RVN insignia, the USAF flight crews wore civilian clothing and were accompanied by a

> RVN army crew member, pursuant to a U.S. Department of Defense concept codenamed "Farmgate."

Jeanne Mager Stellman, Steven D. Stellman, Richard Christian, Tracy Weber and Carrie Tomasallo, The Extent and Patterns of Usage of Agent Orange and other Herbicides in Vietnam, 422 Nature 681 (2003) (citing Collins, C.V. Herbicide Operations in Southeast Asia July 1961-June 1967. Report No. DTEC 67-0020 (HQ PACAF, Directorate, Tactical Evaluation, CHECO Division, APO San Francisco, 11 October 1967)).

This is clearly evidence of guilt on the part of an offending nation which makes it highly unlikely that the offender thought its actions were in compliance with international law. It can scarcely be argued that actions such as those set forth above can prevent the formation of a rule of customary international law.

After negotiations in the General Assembly, the draft resolution was revised, and the final text of resolution 2162 B (XXI), adopted by the UN General Assembly on December 5, 1966, is as follows:

> *The General Assembly*,
>
> *Guided* by the principles of the Charter of the United Nations and of international law,
>
> *Considering* that weapons of mass destruction constitute a danger to all mankind and are incompatible with the accepted norms of civilization,
>
> *Affirming* that the strict observance of the rules of international law on the conduct of warfare is in the interest of maintaining these standards of civilization,

> *Recalling* that the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare of 17 June 1925 has been signed and adopted and is recognized by many States,
>
> *Noting* that the Conference of the Eighteen-Nation Committee on Disarmament has the task of seeking an agreement on the cessation of the development and production of chemical and bacteriological weapons and other weapons of mass destruction, and on the elimination of all such weapons from national arsenals, as called for in the draft proposals on general and complete disarmament now before the Conference,
>
> *1. Calls* for strict observance by all States of the principles and objectives of the Protocol for the Prohibitions of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare signed at Geneva on 17 June 1925, and condemns all actions contrary to those objectives;
>
> *2. Invites* all States to accede to the Geneva Protocol of 17 June 1925.

III SIPRI at 121.

Resolution 2162 B was adopted by a vote of 91 in favor (including the United States and Japan, which at that time had not ratified the Protocol), none in opposition, and four abstentions. Although this resolution does not attempt to define the scope of the Protocol, the massive vote in favor of it "expresses the recognition and the acceptance that the legal obligation embodied in the Protocol is binding," not only on parties to the treaty, but on all nations, as customary international law. Id.

Note the language in paragraph 1 calling for "strict observance by all States of the principles and objectives of the Protocol" and condemning "all actions contrary to those objectives." Although paragraph 2 invites those States

that have not yet done so to become parties to the Protocol, this serves the international interest in clarifying and formalizing the obligations of states by a written instrument, the same function performed by the Declaration of St. Petersburg and the 1899 and 1907 Hague Conventions. III SIPRI at 122. It is clear that the intent of paragraph 1 is to declare the international agreement that the provisions of the Geneva Protocol have already passed into customary international law and to remind individual nations to respect those provisions.

This point is borne out by the comments of the U.S. representative to the UN, explaining the U.S. vote:

> What we can do here today, however, if we are genuinely concerned over the dangers of chemical and bacteriological warfare, if we are anxious to maintain international law and the standards of civilized conduct, is to obtain from every country represented in this room, whether or not a party to the Geneva Protocol, formal public expression of intent to observe strictly the objectives and the principles of the Geneva Protocol.
>
> III SIPRI at 125.

He then stated that the resolution was a firm engagement and should reflect the opinion of the UN organization as a whole. A similar position was taken by Assistant Secretary of State William B. Macomber a year later, who wrote that the "basic rule" of the Protocol "has been so widely accepted over a long period of time that it is now considered to firm part of the customary international law." In 1967 the US Ambassador to the UN stated that "The United States position on this matter [poison gas] is quire clear and corresponds to

the stated policy of almost all other governments throughout the world. . . The use of poison gases is clearly contrary to international law." III SIPRI at 125.

It is unimportant whether a resolution of the UN General Assembly can be said to have binding effect in and of itself, as a legislative enactment might have, an issue that the defendants' expert pursues in his Opinion. The value of a resolution such as 2162 B is in providing indisputable evidence of universal *opinio juris*, such that it is confirmed that when nations refrain from using chemical or biological weapons, it is effectively out of an understanding that such conduct is illegal, and not for some other reason.

It is also important to note that Resolution 2162 B did not create the customary rule; it recognized the existence of the rule and reminded member nations of their obligations under the rule. The existence of that rule had already been recognized by statements issued by nations since after World War I. The engagement by the US in Operation Ranch Hand at the time thus cannot be cited as evidence that no customary rule was created.

Considering the nature and toxicity of the chemicals used, known to defendants but not to the world in general, Operation Ranch Hand was a violation of that customary rule. As the UN General Assembly is not a court of law, the fact that no investigation was performed into the particular chemicals being used in Vietnam at the time and no pronouncement was made on the legality of their use is unimportant. The purpose of the resolution was to confirm the general

content of customary international law with respect to chemical and biological warfare.

Resolution 2162 B was followed by a string of General Assembly resolutions confirming its principles. A resolution adopted on December 20, 1968, by 107 votes to none with two abstentions stated that the General Assembly "Reiterates its call for strict observance by all States of the principles and objectives of the [1925 Geneva Protocol] , and invites all States to accede to that Protocol." This was reaffirmed in very similar words in Resolution 2603 B (XXIV) adopted on December 16, 1969 by the General Assembly, by a vote of 120 to none with one abstention. III SIPRI at 166-171.

Three more similar resolutions were adopted by the General Assembly, until December 1971. Interestingly, Resolution 2677 (XXV), adopted on December 9, 1970 (after public concern over the toxicity to humans and teratogenicity of Agent Orange resulted in the suspension of Operation Ranch Hand), called upon states to observe the provisions of the Hague Conventions of 1899 and 1907 and the Geneva Conventions of 1949, in addition to the Geneva Protocol. Id. Consider this fact in evaluating the defendants' argument that, since the UN General Assembly never referred to the Hague Regulations during their criticism of Ranch Hand, those Regulations cannot be deemed to apply.

However, one of the subsequent resolutions adopted by the General Assembly did more than just reaffirm the language of 2162 B. Also adopted on December 16, 1969 was General Assembly Resolution 2603 A (XXIV), which

provided:

> *The General Assembly*,
>
> *Considering* that chemical and biological methods of warfare have always been viewed with horror and have been justly condemned by the international community,
>
> *Considering* that these methods of warfare are inherently reprehensible, because their effects are often uncontrollable and unpredictable and may be injurious without distinction to combatants and non-combatants and because any use would entail a serious risk of escalation,
>
> *Recalling* that successive international instruments have prohibited or sought to prevent the use of such methods of warfare,
>
> *Noting* specifically in this regard:
>
> a. That the majority of States then in existence adhered to the Protocol of the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925,
>
> b. That since then further States have become Parties to that Protocol,
>
> c. That yet other States have declared that they will abide by its principles and objectives,
>
> d. That these principles and objectives have commanded broad respect in the practice of States,
>
> e. That the General Assembly, without any dissenting vote, has called for the strict observance by all States of the principles and objectives of the Geneva Protocol,
>
> *Recognizing* therefore, in the light of all the above circumstances, that the Geneva Protocol embodies the generally recognized rules of international law prohibiting the use in international armed conflicts of all biological and chemical methods of warfare, regardless of any technical developments,

> *Mindful* of the report of the Group of Experts, appointed by the Secretary-General of the United Nations under General Assembly resolution 2454 A (XXIII) of 20 December 1968, and entitled Chemical and Bacteriological (Biological) Weapons and the Effects of Their Possible Use,
>
> *Considering* that this report and the foreword to it by the Secretary-General add further urgency for an affirmation of these rules and for dispelling for the future, any uncertainty as to their scope and, by such affirmation, assure the effectiveness of the rules and enable all States to demonstrate their determination to comply with them,
>
> *Declares* as contrary to the generally recognized rules of international law, as embodied in the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, the use in international armed conflicts of:
>
> (a) Any chemical agents of warfare—chemical substances, whether gaseous, liquid or solid—which might be employed because of their direct toxic effects on man, animals or plants;
>
> (b) Any biological agents of warfare—living organisms, whatever their nature, or infective material derived from them—which are intended to cause disease or death in man, animals or plants, and which depend for their effects on their ability to multiply in the person, animal or plant attacked.

This resolution was adopted by a vote of 80 in favor, 3 against, with 36 abstentions. The United States, Australia (who also had troops fighting in Vietnam) and Portugal voted against it. Id.

Many commentators have taken the position that Resolution 2603 A was intended to stand alone as a positive declaration of customary international law, not merely as evidence of *opinio juris*. The wording of the resolution lends support to this view; its language is forceful and it defines the scope of the

customary prohibition on chemical and biological warfare in great detail. This possibility also appears to be acknowledged in the "Opinion" of one of defendants' experts, who cites 1969 as the time that General Assembly resolutions may have taken on a normative character. See Reisman Opinion at 44.

Once again, this distinction is irrelevant for the purposes at hand. What is indisputable is that Resolution 2603 A evidences the opinion of a great majority of nations that the use in war of chemicals of any kind because of their toxicity to plants was a violation of customary international law at the time. Whether the source of the rule is the Geneva Protocol, the Hague Regulations, the Declaration of St. Petersburg, the Brussels Declaration, the Hague Declaration, the Treaty of Versailles, the Treaty of Washington or the Resolution itself, is of no moment.

4. Use of Chemical Herbicides in Vietnam, in Hindsight

In 1969, the results of a study of the toxicity of certain herbicides and pesticides which indicated that 2,4,5-T and 2,4-D could cause malformed offspring and stillbirths in mice were leaked to the public. On April 15, 1970, the U.S. Department of Defense suspended military use of 2,4,5-T, including Agent Orange, "pending a more thorough evaluation of the situation." The use of other herbicides in Vietnam, for defoliation and crop destruction, continued until January 1971, when the last Ranch Hand mission took place. See Amended Complaint, paragraph 77; Buckingham at 157-175

On March 22, 1971, just after Operation Ranch Hand had been terminated, and as a postscript to the controversy surrounding it , Senator Fulbright, chairman

of the U.S. Senate Committee on Foreign Relations, requested a legal opinion on the applicability of the Hague Regulations of 1907 to the U.S. use of herbicides in Vietnam. J. Fred Buzzhardt, General Counsel for the Department of Defense, provided an opinion letter on the subject. See Letter from J. Fred Buzzhardt, General Counsel for the Department of Defense to J.W. Fulbright, Chairman, Senate Comm. on Foreign Relations, April 5, 1971, reprinted at 10 I.L.M. 1300-1306, (**Exhibit 1** to Plaintiff's Appendix.)

Buzzhardt acknowledged the applicability of the Hague Article 23 prohibitions on poison (a), material causing unnecessary suffering (e) and unnecessary destruction (g) to an analysis of the legality of herbicide use in war, and cited to United States v. List, et al., one of the Nuremberg cases, as authority on military necessity. He set also forth paragraph 37 of the U.S. Army field manual from 1956 dealing with poison and chemical herbicides. He repeated the conclusion reached in the Cramer memo from 1945 that these provisions would not prohibit the use of herbicides to destroy crops, "provided that their use against crops does not cause such crops as food to be poisoned nor cause human beings to be poisoned by direct contact and, and such use must not cause unnecessary destruction of enemy property." He also concluded that chemicals that were "harmless to man" would not run afoul of these provisions, but that a determination had been made after a reasonable investigation that the crops were intended only for consumption by enemy combatants. Id.

In his letter, Buzzhardt went further and opined that "The Geneva Protocol of 1925 adds no prohibitions relating to either the use of chemical herbicides or to crop destruction to those described above." After a follow-up request from Senator Fulbright asking whether the Department of Defense had ever conducted a legal review of the legality of the "crop destruction program in Vietnam," Buzzhardt forwarded a copy of the Cramer Memorandum of 1945. He indicated that the Defense Department relied on the Cramer Memorandum since it had never been overruled or modified. Id.

The plaintiffs' central contention in this case, is that if the knowledge that the defendants had about dioxin and the other toxic substances that contaminated the herbicides that they supplied to the U.S. government were applied to the legal analysis in the Cramer Memorandum and Buzzhardt letter, Operation Ranch Hand and the catastrophe it has resulted in would not have happened. The government of the United States would not have suffered the blow to its international reputation and prestige; the defendants would have avoided years of litigation; the plaintiffs and members of the armed forces of all sides concerned, Americans, Vietnamese, Australians, Koreans, New Zealanders and others, would have been spared suffering, disease and death that has already spanned five decades and multiple generations.

On April 8, 1975, President Ford issued Executive Order 11850 which declared: "The United States renounces, as a matter of national policy, first use of herbicides in war except use, under regulations applicable to their domestic use,

for control of vegetation within U.S. bases and installations or around their immediate defensive perimeters. . .I have determined that the provisions and procedures prescribed by this Order are necessary to ensure proper implementation and observance of such national policy." See Amended Complaint at paragraph 80.

Concurrently with this Executive Order, in January 1975, the United States ratified the 1925 Geneva Protocol and formally became a party to the treaty. Senator Gaylord Nelson made it clear that the Senate tied its recommendation of ratification to the President's renunciation of first use of herbicides. In 1974, during subcommittee hearings of the House Committee on Foreign Affairs on the "U.S. position on the future status of herbicides and tear gas" with respect to the Protocol, in preparation for the vote on ratification, Senator Nelson, "a leading authority in the Senate on chemical warfare," had testified as follows about 2,4,5-T:

> If the U.S. government persists in excluding this kind of dangerous chemical from its interpretation of the Geneva Protocol, we can be certain that the world will place little credence in America's ratification of this treaty. How can we expect any other reaction from any other nations of the world? Chemical warfare agents are designed to be toxic. Certainly everything we have learned about 2,4,5-T indicates that it should be classified as a toxic agent and included within the scope of the protocol ban.
>
> Hearings before the Subcomm. on National Security Policy and Scientific Developments of the Committee on Foreign Affairs, Hous of Representatives, 93rd Cong., May 1, 1974 at 4.

III. ARGUMENT

A. DEFENDANTS SUPPLIED LARGE QUANTITIES OF TOXIC CHEMICALS KNOWING THAT THEY WOULD BE SPRAYED OVER VAST POPULATED AREAS DURING THE WAR IN VIETNAM, IN VIOLATION OF THE LAW OF NATIONS.

As has been described above, the customary prohibition on the use of poison in war which dated back to ancient times evolved into a prohibition of all weapons which cause unnecessary suffering or indiscriminately target civilians. These customary prohibitions were codified in Article 23 of the Hague Regulations and the 1949 Geneva Convention. With the advent of chemical and biological weapons, the customary prohibition again evolved to encompass those new weapons, and this prohibition was codified in the 1925 Geneva Protocol. Regardless of which of these aspects of the law of nations is applied, the widespread and indiscriminate use of toxic chemicals in war is a violation of that law.

As stated at the outset, the defendants did not just supply chemical herbicides for use in the war in Vietnam. They supplied chemical herbicides laced with toxic chemicals—chemicals like dioxin, hexachlorobenzene and arsenic, which cause injury, disease and death and which persist in the environment for years, visiting disease and death on generations to come. Whether or not plaintiffs would have a right of action before this Court for a technical violation of the customary prohibition, i.e. supplying of non-toxic herbicides, is immaterial. Plaintiffs bring claims for damages and injunctive relief

for a grave violation of international law: that the defendants supplied toxic chemicals for use in the war in Vietnam knowing that they would be used in a widespread and indiscriminate manner causing unnecessary suffering, injury and death to combatants and civilians alike in vast areas of Vietnam.

Whether the conduct of defendants is labeled a war crime, a crime against humanity, or genocide, the prohibition is of equal force. The labels used to describe the conduct depend on the victims of the offense. Where it is clear that the defendants knew that a substantial proportion of the civilian population of a nation would be harmed but did not care whether those harmed were enemy civilians or friendly civilians, because of their race, the conduct may be labeled a crime against humanity or genocide.

1. Supplying Toxic Chemicals Supplied for Widespread and Indiscriminate Use in War Violates a Norm of International Law Accepted by the Civilized World and Defined with a Specificity Comparable to the Features of the Offenses Recognized by the Supreme Court in Sosa v. Alvarez-Machain.

The Alien Tort Claims Act ("ATCA"), 28 U.S.C. § 1350, provides:

> The district courts shall have original jurisdiction of any civil action by an alien for a tort only, committed in violation of the law of nations or a treaty of the United States.

In its recent decision interpreting the ATCA, the Supreme Court held that the statute provides jurisdiction in United States courts for tort claims brought by foreign citizens based upon the present-day law of nations and resting on norms "of international character accepted by the civilized world and defined with a specificity comparable to the features of" offenses against the law of nations

which were indisputably recognized at the time of the statute's enactment in 1789: violation of safe conducts, infringement of the rights of ambassadors, and piracy. Sosa v. Alvarez-Machain, 124 S.Ct. 2739, 2761-2762 (2004).

The Congress that enacted the statute had intended to provide a tort remedy for violations of customary international law that were already recognized as crimes and which could provide the basis of a criminal prosecution. At the time the ATCA was enacted, Congress was exhorting state legislatures to enact criminal statutes providing for prosecution for such violations committed against foreign citizens which might threaten "serious consequences in international affairs." Id. at 2756. In his concurrence, Justice Breyer provides examples of the types of modern-day international law claims that would satisfy the standard set forth in the majority opinion: claims for torture, genocide, crimes against humanity and war crimes. Id. at 2783. For a more thorough discussion of the history and significance of the ATCA, the Court is respectfully directed to Opinion of George Fletcher submitted herewith.

The Second Circuit has held that genocide, war crimes and crimes against humanity are actionable under the ATCA. Kadic v. Karadzic, 70 F.3d 232 (2nd Cir. 1995). That court noted that the "applicability of this norm [genocide] to private individuals is also confirmed by the Genocide Convention Implementation Act of 1987, 18 U.S.C. § 1091 (1988), which criminalizes acts of genocide without regard to whether the offender is acting under color of law. . ." Id. at 242. This is notwithstanding the fact that "the genocide statute provides that it shall

"not be construed as creating any substantive or procedural right enforceable by law by any party in any proceeding." Id. "[T]he legislative decision not to create a new private remedy does not imply that a private remedy is not already available under the Alien Tort Act." Id.

In order to carry out the international obligations of the United States under the Geneva Conventions to provide criminal penalties for certain war crimes, Congress enacted the War Crimes Act of 1996, 18 U.S.C. § 2441. PL 104-192 (HR 3680) This statute provides for criminal penalties against United States national who commit "grave breaches" of the 1949 Geneva Convention or who violate certain provisions of the Hague Regulations of 1907, including Article 23. The fact that the War Crimes Act does not mention a private right of action is no more problematic here than it was for the plaintiffs in Kadic, where the genocide statute explicitly denies a private right of action.

It is clear, based upon the above and based upon the extensive history provided herein and in the plaintiffs' expert submissions, that the norms embodied in Hague Article 23, the 1925 Geneva Protocol and the 1949 Geneva Convention regarding the prohibition of poison, weapons that cause unnecessary suffering, chemical weapons, wanton destruction and targeting of civilians are norms "of international character accepted by the civilized world" and defined with sufficient specificity to satisfy the standard enunciated in Sosa. For a detailed discussion of the test set forth in Sosa, the Court is respectfully referred to the Opinion of Professor George P. Fletcher submitted herewith, particularly at 5-36.

The test for specificity is met under Sosa when an offense is the subject of a criminal statute, and when violators have been indicted, tried and sentenced for the offense by tribunals administering international law. As will be discussed herein, plaintiffs cite as precedent the Nuremberg industrialist cases involving supply of poison gas and participation in spoliation and plunder and the List case involving wanton devastation. The defendants in those cases were tried, found guilty, and some sentenced to death. It is also significant that the destruction of forests and farmland in occupied Poland and China during World War II were also indictable offenses in the aftermath of that war.

2. Corporations May be Held Liable Under the ATCA for Assisting in War Crimes or Other Serious Violations of the Law of Nations

Corporations may be held liable under international law pursuant to the ATCA, for participating in, or being accomplice to, gross human rights violations. Presbyterian Church of Sudan v. Talisman Energy, Inc., 244 F. Supp.2d 289, 319 (S.D.N.Y. 2003). "A private corporation is a juridicial person and has no per se immunity under U.S. domestic or international law." Id. (citing Jordan J. Paust, Human Rights Responsbilities of Private Corporations, 35 Vand. J. Transnat'l L. 801, 803 (2002). Corporations can and should be held civilly liable where the acts complained of were corporate acts, performed in furtherance of the corporation's business interests. The Court is respectfully referred to the Paust Opinion for a more detailed discussion of corporate liability under international law, particularly at 3-7.

There is no need for the defendants' offenses to be considered "state action" where they constitute war crimes, crimes against humanity or genocide. Kadic, supra, 70 F.3d at 243. To the extent that there is any requirement for state action on the part of the defendants, that requirement is easily met here. Defendants supplied the U.S. government and/or the government of South Vietnam with toxic chemicals for use in war.

3. Standard of Review for Motion to Dismiss

The defendants have moved to dismiss the plaintiff's international law claims under to the ATCA for lack of subject matter jurisdiction pursuant to Fed.R.Civ.Proc. 12 (b) (1), and failure to state a claim pursuant to Fed.R.Civ.Proc. 12 (b) (6). The Second Circuit, in Kadic, has already held that the ATCA provides Federal courts with subject matter jurisdiction for claims of war crimes and other violations of international humanitarian law. Kadic, supra, 70 F.3d at 243.

In reviewing a Rule 12 (b) (6) motion, this Court must accept the factual allegations of the complaint as true and must draw all reasonable inferences in favor of the plaintiffs; "'[t]he issue is not whether a plaintiff will ultimately prevail but whether the claimant is entitled to offer evidence to support the claims.'" Bernheim v. Litt, 79 F.3d 318, 321 (2nd Cir. 1996) (quoting Scheuer v. Rhodes, 416 U.S. 232, 236 (1974).

Furthermore, it is well settled that a complaint is deemed to include "documents that the plaintiffs either possessed or knew about and upon which

they relied in bringing the suit." Rothman v. Gregor, 220 F.3d 81, 88 (2nd Cir. 2000); Pujol v. Universal Fidelity Corp., 2004 U.S. Dist. LEXIS 10556, at *3 (E.D.N.Y. June 9, 2004)("On a motion to dismiss [a court may consider] documents either in [plaintiff's] possession or of which [plaintiff] had knowledge and relied on bringing suit.") Thus, when deciding a motion to dismiss pursuant to Rule 12(b)(6), the Court may consider documents attached to the complaint as exhibits or incorporated in it by reference. See Brass v. American Film Techs, Inc., 987 F.2d 142, 150 (2nd Cir. 1993); In re MSC Indus. Direct Co, Inc Sec Litig., 283 F.Supp. 2d 838, 845 (E.D.N.Y. 2003)(holding the "Court must confine its consideration to . . . documents appended to the complaint or incorporated in the complaint by reference").

4. The Facts Alleged by or Reasonably Inferable from the Amended Complaint State a Claim for Relief Under the ATCA and the Law of Nations.

Turning to the Amended Complaint in this case, the following facts have been alleged or could be reasonably inferred from the allegations (See Amended Complaint, paragraphs 50-117):

The defendants were asked by the U.S. government to supply chemical herbicides for use in the war in Vietnam. They entered into procurement contracts to supply the chemicals.

The chemicals produced involved different combinations of 2,4,5-T, 2,4-D, Picloram, Cacodylic Acid among other substances. These chemicals were also

used in other, commercial formulations of herbicides that defendants manufactured and sold domestically.

Chemicals containing 2,4,5-T, 2,4-D, Picloram, Cacodylic Acid are toxic, noxious and harmful to human health and to animals if ingested or if they otherwise come into contact, and the defendants were aware of this at the time.

Dioxin, hexachlorobenzene and arsenic, which are all extremely toxic to humans, are contaminants or by-products of 2,4,5-T, 2,4,-D, Picloram and Cacodylic Acid.

Typical warning labels that the defendants were required to place on their commercial products containing 2,4,5-T, 2,4-D, Picloram, Cacodylic Acid at that time were instructions to users not to contaminate any body of water, not to graze dairy animals in treated areas within seven days after application, not to contaminate feed or foodstuffs, that the product may cause “skin irritation,” that human beings should “avoid inhaling spray mist,” “that it should not be taken internally,” “that all human beings should avoid contact of the product “with the eyes, skin or clothing” and that in case of such contact should “get prompt medical attention.”

Samples of the warning labels required for domestic sale and use of the defendants' commercial products containing 2,4,5-T, 2,4-D, Picloram and Cacodylic Acid are annexed as **Exhibit 2** to Plaintiffs' Appendix.

In most cases, the chemicals supplied by the defendants were more concentrated and contained higher amounts of 2,4,5-T, 2,4-D, Picloram,

Cacodylic Acid than the commercial products which bore the aforesaid warning labels.

The contracts pursuant to which the defendants supplied these chemicals to the government instructed the defendants to not to place warning labels on the containers; only to label the containers with a color-coded three-inch band, in accordance with the type of chemical (orange, purple, blue, etc.).

In addition to the hazards described in the warning labels, defendants were aware of the presence of dioxin, a by-product and contaminant of 2,4,5-T, which has toxic effects on animals and humans in very low amounts. Some of the effects of these chemicals on humans, which were known to the defendants at the time are chloracne, a serious and incapacitating disease of the skin, porphyria cutanea tarda, which causes blistering of the skin and liver damage, neurological disorders, and in extreme cases, death.

The defendants knew that dioxin, 2,4,5-T, 2,4-D, Picloram and Cacodylic Acid can cause cancer and birth defects in humans and animals if ingested or if they otherwise come into contact.

The defendants knew that dioxin, 2,4,5-T, 2,4-D, Picloram, Cacodylic Acid are persistent and, once sprayed in an area, would remain in the environment for a long time, contaminating the environment and posing a health risk to humans and animals.

Defendants were aware that their own employees and employees of other defendants had sustained serious injury and disease as a result of occupational

exposure to the chemicals in question due to improper manufacturing techniques or factory incidents.

The presence of dioxin in the chemicals supplied to government by the defendants was not required by the procurement contracts. If anything, the presence of dioxin constituted a breach of those contracts or a defect in the chemicals supplied.

Defendants were aware that the chemicals which they supplied to the government for use in Vietnam contained dioxin in amounts which could cause injury, disease and death to animals and human beings who ingested or otherwise came into contact with the chemicals.

Defendants were aware that the chemicals supplied by other defendants, which were being mixed with their own chemicals supplied to the government for use in Vietnam, contained dioxin in amounts which could cause disease and death to animals and human beings who ingested or otherwise came into contact with the chemicals.

Defendants were at that time aware of methods of manufacture by which they could minimize the dioxin content, or filter out the dioxin. Defendants did not avail themselves of these measures, because they were interested in producing the chemicals as quickly as possible to maximize their output and profit.

Defendants kept the problem of dioxin contamination secret from the government and the public, because they were afraid that disclosure of this problem would result in adverse publicity and stricter government regulation of

their products, which would jeopardize the lucrative sales of their product, and result in loss of profit to them.

In the 1960's, herbicides were being increasingly used in commercial applications and their manufacture and supply represented a very profitable enterprise for the Defendants. The defendants feared that the government, if it learned of the scope of the problem with dioxin, might intervene in a way disastrous to the entire herbicide industry.

Defendants held meetings, corresponded and conferred with each other in an attempt to keep the dioxin issue secret, and to "self regulate" themselves so as not to attract adverse publicity or stricter government regulation.

Because of the nature of the chemicals and their contamination with dioxin, the defendants were aware that the chemicals which they supplied to the government for use in Vietnam were toxic, noxious and harmful to human, animal and plant life, and would adversely affect the health of human beings who ingested or otherwise came into contact with the chemicals.

During the relevant time period, the defendants were able to sell to the government as much of the chemicals as they were able to produce, from which they profited greatly.

More than 76 million litres of these chemicals were sprayed by U.S. aircraft alone from 1961-1971. More of these chemical were sprayed by helicopter and by hand, and more were sprayed after 1971 by RVN forces. The spraying covered vast areas of land in southern Vietnam. The targets included

food crops and populated areas, as well as jungles and forests. The targets included areas populated by both combatants and civilians.

The defendants manufactured and supplied to the government quantities of the chemicals in excess of the amounts sprayed and used in Vietnam.

The defendants were aware of the volume of herbicides they were supplying to the government for use in Vietnam.

The defendants were aware of the scope and volume of the spraying operations.

The defendants were aware that food crops and populated areas, as well as jungles and forests were being sprayed with their chemicals.

The defendants were aware that areas populated by both combatants and civilians were being sprayed with their chemicals.

The defendants were aware, from news reports and other means, of the controversy and publicity surrounding the spraying operations, including public protests, the statements of government officials, petitions of scientific organization and statements made by the United Nations.

In addition to the newspaper articles referred to in the Amended Complaint, plaintiffs make reference, as they are entitled to do on a motion to dismiss pursuant to Rule 12 (b) (6), to the newspaper articles attached as **Exhibits 3-11** to the Plaintiffs' Appendix, which provide an inference of general knowledge amongst the readership of The New York Times and The Washington Post of the

scope of the chemical warfare operations utilizing the defendants' chemicals during the war in Vietnam.

The defendants were aware at the time that the use of the chemicals they supplied to the government for use in Vietnam constituted a violation of international law and a war crime. The defendants were aware that the use of the chemicals they supplied to the government for use in Vietnam constituted chemical warfare, in violation of the laws and customs of war.

The defendants became aware that the chemicals they supplied were having adverse effects on humans, animals and the environment in Vietnam.

The defendants continued to supply these chemicals notwithstanding this knowledge and made no attempt to warn anyone about the hazards of the chemicals they had supplied.

The defendants took no action whatsoever to prevent the adverse effects of the chemicals they supplied on humans, animals and the environment in Vietnam.

The acts of defendants in respect of supplying the toxic chemicals were willful and wanton, in that defendants intentionally supplied the toxic chemicals, and/or they unreasonably created or risked causing harm, but were utterly indifferent to the consequences.

Among the reasons that defendants were utterly indifferent to the consequences of their actions was that they sought to profit from the sales of their chemicals, and because they believed that the victims of their chemicals would be Vietnamese, and not Americans.

As a result, the toxic chemicals supplied by the defendants contaminated the environment in vast regions of Vietnam, including the soil, rivers, lakes, ponds, streams, foodstuffs, water supplies, trees, plants, crops and other essentials of life. During the war, plaintiffs, combatants and civilians were also directly sprayed with the chemicals.

As a result of the foregoing, the plaintiffs, both combatants and civilians, were poisoned by ingesting contaminated food and water, or by direct contact with the chemicals, or by other contact with the contaminated environment.

As a result of the foregoing, the plaintiffs, both combatants and civilians, suffered unnecessarily and sustained superfluous injury from the poisonous effects of the toxic chemicals supplied by defendants.

As a result of the foregoing, the plaintiffs, both combatants and civilians, were the victims of chemical warfare through the use of poisonous or other gases, liquids, materials or devices.

As a result of the foregoing, wanton destruction and devastation of towns, cities and the natural environment was inflicted on vast regions of Vietnam, and the civilian population was disproportionately affected. There was no military necessity for this kind of devastation.

As a result of the foregoing, the environment in regions of Vietnam is still contaminated and it continues to poison, to cause adverse health effects and to cause unnecessary suffering of the inhabitants of these regions to this day.

The victims of poisoning, suffering and harm from the effects of defendants chemicals were both combatant and civilian, from all regions of Vietnam.

The plaintiffs have suffered disease, death, grave injury, loss of consortium and other damage as a result.

5. International Law Precedent

Plaintiffs rely upon the precedent set by the Trial of Bruno Tesch and Two Others (the Zyklon B Case) and United States v. Krauch, et al. (The Farben Case) for the proposition that commercial transactions by civilians who are not government officials can form the basis of liability for the law of nations for those who assist or are accessories to their commission. Plaintiffs note that, although the defendants in Krauch were ultimately acquitted after a trial on the merits, the charges against them were deemed sufficient to warrant a trial, and serious enough to expose them to the death penalty, if convicted. The Nuremberg Charter also provided for accomplice liability.

It is no more important to this case that the chemicals supplied by the defendants and laced with dioxin are also herbicides than it was in the Krauch and Tesch cases that the poison gas called Zyklon B was also a pesticide. Clearly, there is a difference the degree of culpability of the persons using the chemicals; the SS officials intended to slaughter multitudes of human beings with the use of Zyklon B, and there is simply no comparison between them and the Ranch Hand personnel in this case. However, would the degree of culpability of Tesch and

Krauch defendants have been any less if the concentration camp guards thought they were delousing people but the defendants knew that the chemicals they supplied would cause them serious harm? We think not. If anything, the culpability of the defendants in that case would have been greater.

In the Zyklon B Cases, as in United States v. Krupp, et al. and United States v. Flick, et al., although the defendants were individuals, they were indicted, prosecuted and ultimately convicted for actions they took as owners, officers and managers of corporations. Indeed, the defendants in Tesch and Krupp were the sole owners of their companies, and it was in this role that they were tried. In addition to criminal penalties, the tribunal ordered forfeiture of all of Krupp's real and personal property to go towards restitution.

Since the charges were criminal, naturally the individual owners and managers of the culpable corporations were tried. But civil liability can be imposed, for the same acts, against both corporation and individuals. Indeed the IMT at Nuremberg contemplated and imposed organizational criminal liability, albeit for much more heinous conduct. Membership alone in a criminal organization like the S.S. was a crime in itself. In any event, there certainly is no legal impediment to bringing civil actions against corporations for violations of the law of nations in United States courts. See Paust Opinion at 3-7.

In their briefs, the defendants mistakenly focus their attention on the actions of the United States government and its armed forces. The plaintiffs have not brought suit against the United States government, they have brought suit

against the defendants, for culpable conduct committed by the defendants. Defendants culpable conduct in question was the supply of toxic chemicals knowing they would be used in war in such a way that they would poison and cause indiscriminate harm to and unnecessary suffering of civilians and combatants alike in Vietnam.

Although the plaintiffs contend that the use of herbicides during the war in Vietnam violated the law of nations, they do not bring suit under the ATCA for a technical violation of law. They bring suit under the ATCA for the supply of toxic chemicals—toxic to humans—which caused them to sustain disease and death. They bring suit because the conduct of the defendants as to them was willful and wanton. They bring suit because the defendants' willful and wanton conduct was motivated by the following sentiment, as stated by Dr. James R. Clary, a former scientist with the chemical weapons division of the U.S. Air Force, who was instrumental in designing the specifications for the Agent Orange delivery system:

> When we (military scientists) initiated the herbicide program in the 1960's, we were aware of the potential for damage due to dioxin contamination in the herbicide. We were even aware that the 'military' formulation had a higher dioxin concentration that the 'civilian' version due to the lower cost and speed of manufacture. However, because the material was to be used on the 'enemy,' none of us were overly concerned. We never considered a scenario in which our own personnel would become contaminated with the herbicide.

See Report to Secretary of the Department of Veterans Affairs on the Association Between Adverse Health Effects and Exposure to Agent Orange, As

Reported by Special Assistant Admiral E.R. Zumwalt, Jr., May 5, 1990. at 6. (**Exhibit 12** to Plaintiff's Appendix)

B. NEITHER THE MILITARY NECESSITY DEFENSE NOR THE GOVERNMENT CONTRACTOR DEFENSE APPLY TO PLAINTIFFS' CLAIMS.

Defendants claim that military necessity justified their actions, and that these international law claims should be barred by a doctrine of domestic law, the government contractor defense. The are wrong on both counts.

1. The Government Contractor Defense Does not Apply to War Crimes

Since the time that Peter von Heigenbach was convicted by an international tribunal in 1474, the defense of superior orders has been rejected by courts trying war crimes. This principle was enshrined at the Peace Conference after World War I: "We desire to say that civil and military authorities cannot be relieved from responsibility by the mere fact that a higher authority might have been convicted of the same offence." It was established in the Nuremberg Charter, which provided: "The fact that the Defendant acted pursuant to order of his Government or of a superior shall not free him from responsibility, but may be considered in mitigation of punishment. . ."

This principle was uniformly applied at the Nuremberg trials, as well as the principle that "[t]he fact that internal law does not impose a penalty for an act which constitutes a crime under international law does not relieve the person who committed the act from responsibility under international law." See International

Law Commission, Principles of International law Recognized n the Charter of the Nurnberg Tribunal and in the Judgment of the Tribunal, Principle II ("The fact that internal law does not impose a penalty for an act which constitutes a crime under international law does not relieve the person who committed the act from responsibility under international law").

The defendants in this case have not invoked the necessity defense on this motion. The necessity defense is an affirmative defense, and the burden of proof would be upon the defendants. However, Unites States v. Krupp, et al. still provides guidance here. In Krupp, the tribunal rejected the necessity defense where the culpable conduct of the defendants was *not required* by the governments' directives, and in fact violated them. In that case, the government set high production quotas which supposedly necessitated the use of slave labor it provided. But the government directives required the employers to feed the workers adequately, and the defendants knowingly underfed them. The defendants could not argue that their culpable conduct was compelled by government orders.

Likewise, the government contracts that defendants entered into by no means required contamination of the product with dioxin—in fact, dioxin contamination constituted a breach of the contracts and in fact caused the government to commit a serious violation of international law. The defendants cannot claim they were required by government contract to provide dioxin-contaminated herbicides. The dioxin contamination in defendants' product resulted from their effort to mass produce the herbicides as quickly and as inexpensively as possible, without regard for mitigation of the contaminant or safety of the product, in order to increase their profitability. At the

same time, defendants consciously disregarded the risk to which they exposed the victims of the herbicidal campaign.

Neither can defendants claim that the fear of losing control of their plants pursuant to the Defense Production Act of 1950 justified their culpable conduct. The fear of loss of property or profit can rarely if ever justify violations of the laws and customs of war. United States v. Krupp. The defendants did not hesitate to violate the government contracts by allowing contamination in their product, in the pursuit of maximizing their profitability, so any invocation of fear of government action is suspect.

2. TheDefendants' Acts in Supplying Herbicides Laced With Dioxin and Other Toxic Chemicals Were Not Justified By Military Necessity

The element of dioxin contamination also figures into the analysis of defendants' military necessity defense. The plaintiffs rely upon United States v. List, et al. on the issue of military necessity and its reference to the Lieber Code. Military necessity never justifies violations of positive rules—such as Hague Article 23's prohibition of the use of poison. If the standard for military necessity was not too subjective to prosecute and sentence the defendants in List for being principals or accessories to wanton devastation, then the standard is not too subjective to form the basis of a civil action for damages.

The defendants' claim that military necessity shields their conduct misses the mark on two counts. Defendants claim that the use of their chemical herbicides was necessary to protect United States troops from attack in the jungles and forests of Vietnam. To the extent that such a claim can be sustained, it would only be true for herbicides that are not toxic to human beings, just as Cramer and Buzzhardt indicated in their legal opinions. Can military necessity shield the use of a non-toxic herbicide to

prevent ambushes? Perhaps. Can military necessity shield the use of herbicides laced with toxic chemicals like dioxin? Never.

The indiscriminate nature and sheer destructiveness of use of toxic chemicals such as dioxin could never be justified in the name of battlefield efficiency. This is as true for the U.S. soldiers fighting in the jungles of Vietnam as it was for the German soldiers fighting in the mountains of Greece: the destruction of entire towns or regions cannot be justified to guarantee the safety of combatants. Although the defendants may take issue with the plaintiffs' reference to laws and cases regarding offenses committed by occupying powers, the role of the United States and Republic of (South) Vietnam (RVN) in that war of insurgency was much more similar to an occupying power than to a conventional belligerent. Agent Orange was not sprayed in North Vietnam, it was sprayed in the south, which was the province of U.S. and RVN bases and patrols, who were attacked by insurgents.

But once again, the defendants miss the mark by focusing on the conduct of the government or its armed forces, not their own. It is the defendants who knowingly supplied the toxic chemicals that plague the plaintiffs, their families, neighbors and guests to this day. The defendants knew full well of the consequences of the large scale spraying, while those who sprayed it did not. It is the defendants that must make restitution for what they have done. And here, there is one point on which plaintiff and defendants agree: Thirty years is long enough to wait.

IV. CONCLUSION

For all of the foregoing reasons, the plaintiffs respectfully request that the Court deny the defendants' motion to dismiss the plaintiffs' claims for failure to state a claim upon which relief can be granted and for lack of subject matter jurisdiction in its entirety.

Respectfully submitted,

/S/

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