**Grant Hudlow’s Landfill Recycling Process**

(The following was excerpted from Chapter Nine - The Role of Terror in David Yurth’s book “The Hồ Chi Minh Guerilla Warfare Handbook: A Strategic Guide For Innovation Management”. For purchase, which I highly recommend, search the online bookstores.)

In the first place, it is extremely difficult to sort out what is true and what is not when we talk about inventions that challenge the limits of science and technology. As a community, inventors seldom take the time or go to the trouble to find out whether or not the things they believe about science and physics are really valid. In my experience, this applies to both the practice of science and our assessments of the barriers to entry imposed by the public and private agendas which control access to the marketplace. Among those who have demonstrated a genuine willingness to exercise informed discipline in this arena, I have frequently encountered a surprising number who are willing to dispense with this rigor in favor of their personal religious beliefs. Any time I encounter an innovator who operates on the basis of the notion that his work is either divinely inspired or protected, I fold my tent and walk away. This context has always created catastrophic results in my experience. It is, in my opinion, another variety of self-inflicted delusion and terror.

We have much to fear in this arena. Former Vice-president Al Gore‘s motion picture An Inconvenient Truth provides a perfect example of the way terror and fear are being used to frame social and economic engineering with global agendas and scope. The notion on which the film is based is that Science [with a big ‘S‘] has come to a consensus that industrial emissions produced by human undertakings is so catastrophically altering the health of the planet that unless significant changes are imposed, all life on earth will be subjected to the irremediable danger of extinction.

The brand of science used to support his claims is clever. It is well presented. To ignorant people who are not familiar with the kinds of science used to support his claims, this motion picture appears to represent an irresistible manifesto.

That the agendas presented in the film have been well presented is further evidenced by the fact that the motion picture was awarded an Oscar by the Motion Picture Academy of Arts and Sciences and a Nobel Prize. The objective of the film is to drive public policy in a carefully defined direction. The method it employs is to use carefully selected pieces of scientific evidence to putatively inform the viewer in a way that motivates him to action by creating the prospect of horrific consequences. This is exactly what Hồ did for more than 20 years, and it is precisely what others are doing to drive the rest of us into one corral or another.

If we examine the problems enumerated in Gore‘s film, we discover that each of them is the product of a kind of human enterprise which has evolved in a way that maximizes profitability and market control without regard to long term social or economic consequences. If we take a single issue, any of them will do, and examine it while wearing our inventor‘s hat, we ask the following questions:

 Can the problem be solved using technology alone?

 Do we have a technology that will provide a reasonable alternative?

 Is the new technology more benign than the one it would replace?

 Is the new technology economically, technologically, commercially viable?

 If we could solve the root problem, should we?

 If we attempt to solve the problem, whose interests will be served? Who will support it? Who will welcome it? Can this support be leveraged to penetrate entry barriers? What can we do to amplify this support to commercialize the undertakings? What model do we use and how do we finance it?

 If we attempt to solve the problem, whose interests will be threatened? What will they do to prevent the technology from being successfully introduced to the marketplace? What strategies and tactics will they use to protect their own interests?

 What formula can we employ to inject our technologies into the marketplace in a way that allows it to eventually supplant current monopolistic practices?

I have seldom enjoyed the privilege of working with any inventor or group of innovators who have been willing to engage in this kind of analysis before jumping into the deep end with both feet. Fortunately I am now engaged as a partner in several undertakings where this rigor is the rule rather than the exception. As a community, we are learning how important it is to know what we‘re doing before we start pushing the implementation buttons. Nevertheless, let‘s take a quick look at the punch list to see how we might respond to one of Mr. Gore‘s most important agendas.

Global warming as a category of incipient disaster is asserted to be caused by industrial production and the release of what are called ‘greenhouse gases’. These include carbon dioxide, methane, automobile exhaust and the noxious mix of industrial chemicals known as ‘acid rain’. The release of fluorocarbons into the atmosphere is blamed as the cause of the deterioration of the ozone layer which surrounds the planet and protects us from the ravages of ultraviolet light in certain wavelengths. Taken together, this nasty soup produced by human populations is said to be responsible for raising the average temperature of the atmosphere, according to the scientists who endorse Mr. Gore‘s claims, and whose expertise is accepted as gospel in a variety of different dynamic scenarios. The fact that an equally large number of equally competent scientists happen to violently disagree with this diagnosis is not the issue here. What is at issue is the conversation about finding out how to deal with the element of terror that is part of the discussion.

Let‘s take one piece of this gigantic puzzle and zoom in on it with the lens of our analytical magnifying glass. It has been suggested that the majority of methane is being produced by livestock as a product of their digestive cycles. But no one appears to have considered the extraordinary amount of methane created by the municipal landfills which are full to overflowing around the world. Here are some factoids that will help to illuminate this subject.

 One acre of municipal landfill produces enough methane gas to drive a 500 KW electrical generator 24/7 for up to ten years. This means, among other things, that in any first tier city in America where landfills vary from 100‘s to 1000‘s of acres, enough methane gas is produced each day to provide up to 75% of the city‘s power requirements all day and all night.

 One acre of municipal landfill produces as much methane as 10,000 head of cattle. Taken in comparison to the ‘livestock as methane polluters‘ model, landfills produce methane in a volume that is at least one order of magnitude greater than all the livestock on the planet.

 Methane mined and compressed from landfill sources can be bottled to provide fuel for trucks and buses at a fraction of the cost of petroleum products derived from oil. When combusted, it releases a combination of gases which includes carbon dioxide, water vapor, and so on. If we target methane emissions produced by municipal landfills as a prime target for our technological remediation program, several important factors become immediately apparent.

 The technology needed to efficiently and effectively mine methane from land fills is not new. It has been in existence and has been used on a limited basis by some municipalities for as long as thirty years.

 Landfills constitute a constantly renewable source of energy – they continue to increase in volume and therefore continue to produce increasing volumes of methane as the human population continues to grow.

 Most landfills in the US are owned, operated and controlled by a small number of operators whose profits continue to rise as municipalities increasingly seek their services.

When we put our inventor hats on, lights begin to go on all over the place inside our heads. Here we have a renewable source of supply of a benign source of fuel. It is easy to collect, compress and use to drive all sorts of applications including municipal power production and transportation uses. The world is screaming for just such a resource – a source of benign, inexpensive, environmentally friendly, renewable source of non-polluting fuel. Could we develop a series of integrated technologies to take advantage of this source of supply while at the same time solving another enormously challenging problem? If we could, should we? And if we did, what would happen?

How many major cities around the world would welcome the use of enlightened technologies like this to solve this kind of global problem? At this point in the discussion, any inventor worth his salt would already be cruising down the aisle of his local hardware store buying up a grocery cart full of pieces and parts. The design for the perfect methane mining system would be dancing around in his head. Think of it! With his new design, it would be possible to produce methane as a fuel source for automobiles and trucks at a cost of less than $.50 a gallon – one tenth the price of gasoline and diesel fuel. The mental calculator would already have spun through the numbers – how many millions of gallons of fuel would be needed to power the cars in America or China or India or the EEU or Brazil [sorry, they already have an alternative fuel, thank you] or Mexico City? Think of the billions of dollars just sitting out there ready to be poured into this new way of saving the planet!

Before he knows it, his life has become devoted to saving the planet and making billions in the process. A real hero. The Nobel Peace Prize. The Congressional Medal of Freedom. David Letterman and the Tonight Show. A spot on Oprah. The cover of Time Magazine. The private jet. Access to the privileged bastions of power and wealth. A totally perfect win-win scenario begins to rise from his imagination. And so does his blood pressure and the unpaid balance on his credit cards.

What doesn‘t happen in this scenario is the pause before action that asks the other questions. If this technology has been available for more than 30 years, why isn‘t someone doing this already? If someone has already tried it and succeeded, why don‘t we know about it? If someone already tried to do this and failed, what did they do? How did they do it? Why didn‘t it work out? What went wrong? What could they have done differently?

In the real world, there is seldom a linear progression from problem recognition to problem solving. With municipal landfills, this is certainly the case. The management of America‘s landfills has largely become the domain of three or four publicly traded companies. It is a big business with big numbers and huge profits. In states where unions are permitted the workforce is almost exclusively unionized. The political relationship between municipalities and privately owned/publicly traded management companies has been the subject of intense scrutiny, Congressional legislation, Justice Department intervention and prosecutions, investigative journalism, television documentaries, and endless corruption for more than a century. It is part of the landscape referred to in Frank Norris‘ book The Octopus more than 100 years ago.

Municipalities are faced with a horrific problem when it comes to disposing of all the waste products generated by a sizable population. The capital equipment costs, HR challenges, technical problems and political and economic repercussions associated with collecting, transporting, storing and processing municipal wastes is significant. It constitutes a set of unsolvable problems which are prime grist for the political corruption mill. I do not mean to suggest that all municipalities and the contractors who supply landfill management services are corrupt. They aren‘t. But many are. In Salt Lake City recently, for example, the Salt Lake County Mayor was forced to resign in the wake of a political scandal which had a public and a private face.

The public face of the scandal was that the County Mayor had used official county resources to support the career development of her own daughter, on a preferential and unlawful basis. The real scandal, however, involved the discovery by the State Auditor‘s Office that the county mayor had entered into a preferential deal with the local landfill operator, one of the big publicly traded companies with a stranglehold on landfill management in the Salt Lake Valley. The County procured 88 new garbage trucks under its contract with the landfill manager.

Instead of putting the procurement contract out for bid as provided for in law and public policy, however, she instead exerted serious arm-twisting inside the county‘s administrative offices to force the award of the contract to a single dealer. The cost of the trucks the county paid for was discovered to be about $18,000 higher than the next best competitive bid would have been, with the added amount being kicked back under the table to officials in county government who participated in the scam, as well as officers of the local waste handler‘s union, key officials in the landfill management company, and the truck dealer himself.

None of this was aired on the 10:00 news by the local broadcasters, but the attorney general‘s office cooperated in a series of arrests and indictments following the Mayor‘s resignation which resulted in a temporary interruption of business as usual among county administrators and their landfill management company. The strange thing about this deal is that the contract for management of the landfill has not been offered to any of the current holder‘s competitors or opened for bidding. This is not easily understood, given the magnitude and pervasiveness of the corruption that appears to have been at play in this incident.

The point here is not to impugn the practices of Salt Lake County‘s ability to govern its affairs. What is evident in this instance is commonplace all over America. It is representative of a kind of endemic corruption that characterizes how we deal with problems of this kind. What it means for our erstwhile inventor is significant. At this point I can supply a specific example of a specific technology that has failed to generate any appreciable traction in the US precisely because of the corruption that pervades the landfill management arena.

In 1976 Dr. Grant Hudlow designed and deployed his first landfill recycling plant. In his design, Hudlow employed what has since become known as ‘non-linear chemistry‘ for the very first time. He learned his craft at the hands of the master, Linus Pauling; so his background, training, and credentials are certainly not arguable at this point. What Hudlow did is classic Thomas Edison integration. Grant procured a used, out-of-service glass-lined cast-iron petroleum cracking tower, transported it to a test site at a local municipal landfill, and tipped it over on its side.

Using an auger and some simple valves and temperature and pressure gauges, he shoved ten tons of unsorted, miscellaneous garbage in one end, heated the garbage up to a couple of hundred degrees, added some chemicals and catalysts at various stations while a big piston shoved it through the glass tube. By the time the process was completed, what came out the other end was nothing short of magic. From one set of valves he poured off non-sulfurous diesel fuel. From the next he extracted high octane gasoline. At the very end he collected a variety of phenols and creosols, which are the building blocks of almost all the plastics used in the world. The solid matter was incinerated to produce fly ash, which is a principal ingredient in all sorts of concrete and building block products.

In short, what Dr. Hudlow demonstrated was that municipal waste can be converted to usable, marketable, highly desirable products which significant commercial and economic value, while at the same time solving one of the most vexing of all our environmental issues. It‘s right near the top of Al Gore‘s inconvenient truths. Unfortunately, what Mr. Gore has failed to do, as have most of those who are militating for solutions to these problems, is shine a light on the real reason the problems are not being solved.

When Dr. Hudlow approached the city of Las Vegas with a proposal to implement his system to solve their burgeoning problem, he met two forms of resistance. The first took the form of bureaucratic obfuscation – everyone pointed at everyone else as being responsible for dealing with the problem. The second took the form of a series of personal visits by officers of the local unions whose interests were being served by the city‘s contract with municipal landfill manager Browning Ferris, a publicly traded corporation whose net worth is in the billions of dollars these days. When Grant balked at paying protection money to the local union stewards and refused to pay kickbacks to the landfill management officials in city government, his car was shot full of holes and his life was repeatedly threatened.

Grant is not a quitter, even when he would probably be better off if he were. Instead of tucking his tail between his legs and trying to deploy his technology somewhere else, he filed a complaint with the state court in Carson City. In order to do this, he had to find an attorney from out of state to represent him because not a single law firm in the state of Nevada would take his case. The local papers refused to print his story. Local radio and television ‗investigative journalists‘ refused to air any interviews with him about it. The AG‘s office in South Las Vegas received a copy of his complaint and promptly lost it. No action was ever taken against anyone in Las Vegas city government, the union officials, or the landfill management company.

This is a perfect example of a technology that works which was effectively prohibited from being used more than 30 years ago. The use of terror to prevent anyone who could do anything about it from acting in his interest, which would appear to also have been in the interest of the people of Las Vegas and so on, was so effective that he was forced to relocate to the remote garrison village of Pahrump, Nevada. Even there, where local security is as tight as it can ever reasonably be in a free country, his life has been threatened more than once by the same people whose interests were threatened by the emergence of his world-changing, problem-solving technology.

The question I am always asked when I tell this story is whether his system has ever been successfully deployed anywhere else. The answer is yes. Twice. In the Czech Republic, five of his systems have been in operation since the Berlin Wall came down. They are used continuously to recycle, reclaim, and remediate the extensive solid waste dumped there by the Russian government during its control of the USSR nation-states. The water in the Czech Republic is now drinkable, thanks to their use of this technology, in places where wells located next to Soviet era landfills could be set afire with a cigarette lighter.

The other country where his technology has been used successfully is in the Republic of South Africa. Two fully configured systems operate there, converting municipal waste to diesel fuel and high octane gasoline. In South Africa, up until the end of apartheid and the takeover of the government by the ANC, every drop of diesel fuel and gasoline consumed by cars and trucks was produced by Dr. Hudlow‘s landfill recycling system. Today, the system has been abandoned and new petroleum imports are being refined in plants built in China. The reach of the octopus is always longer than anyone can imagine and stronger than anyone has yet figured out how to thwart.

The questions posed by Mr. Gore‘s global warming initiative are all solvable. They have all been solvable for more than three generations, if the facts are examined clearly. But the problems persist and resistance to resolving them increases demonstrably with every telling of the tale. Our collective experience teaches us some important lessons about how this category of innovation must be pursued. Here are the lessons that are apparent to me, all of which have their basis in the use of terror as a weapon of assimilation and conquest:

 Terror is used as a weapon of commercial enterprise by those who are immune from prosecution or who control the administration of justice.

 Terror is only employed indiscriminately by idiots, morons, and gangsters.

 Terror is applied surgically by those who understand its value, appreciate the risks it incurs, and whose payoff is exponentially higher than the risks their use exposes them to.

 Terror has always been employed as a tool of war making because nothing drives human aversions to pain and suffering as effectively.

 Terror is used most often to drive off threats to existing territorial interests, followed in close second position by its use as a tool of assimilation.

 Terror has never been effectively mitigated by direct frontal assault, particularly when mounted by a party of inferior economic, political, or military strength.

 Terror constitutes a self-reinforcing behavior which is self-sustaining and operates continuously without regard to the primary initializing event.

I believe my assessment of the dynamics intrinsic to the use of terror as a tool of economic warfare is correct and equitable. The thing that makes it difficult to deal with is that its use is most often immune, deliberate, personal, and effective. To deal with it, we are obliged to find ways to avoid it, mitigate it, blunt it, re-direct it, or in some circumstances simply confront it. The most cogent explanation of the dynamics of terror in modern cultures is provided by writer Daniel Quinn in his series that begins with the watershed book Ishmael. [89] and ends with Providence: The Story of a Fifty-Year Quest [90].

Comment by Gary Vesperman:

I have written a 24-page compilation, dated December 12, 2000, of “raw data” about Dr. Grant Hudlow’s company Allied Science, Inc., and his landfill recycling process titled “Hudlow Waste Converter Raw Data”. I can forward it to anyone with an interest in it.

My compilation of “Energy Invention Suppression Cases” (linked at padrak.com/vesperman and commutefaster.com/vesperman.html) includes this story about Grant Hudlow:

## Grant Hudlow: Method of Converting Garbage and Tires to Gasoline, Etc

 During the early days of the Reagan Administration, much lip service was given and some money was budgeted to develop alternative sources of energy. Pahrump, Nevada resident Grant Hudlow, a former rocket scientist, was funded to investigate converting garbage, biomass, and tires to gasoline, low-grade heat, fertilizer, and saleable chemicals. His method began to look so promising that the oil companies and their allies in the Reagan Administration got scared and arranged to cut off his research funds. (Source: Gary Vesperman)