Dispersants Used in Oil Disaster Creating New Crisis

Toxic chemical components from crude may pose serious problems for fisheries

NEW ORLEANS, July 30 /PRNewswire/ -- A Statement from Attorneys Stuart Smith and Mike Stag, and Toxicologist Dr. William Sawyer:

"Most southeast Louisiana residents know by now that BP is using chemical dispersants in the Gulf to help make the oil go away. Unfortunately, dispersants do not 'make the oil go away' - quite the reverse, dispersants merely conceal a portion of the oil underwater.

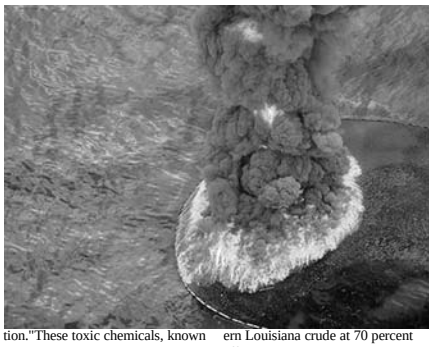
"Dispersants also leave behind a witch's brew of other potentially-dangerous chemicals after interacting with crude oil in water. Not only do these toxic components damage the environment, but they introduce potentially-serious human health and marine environmental problems.

"Louisianans can expect to experience long-term effects for some time, not only to their health, but also their ecosystem and way of life. And the real problems can't necessarily be seen.

"When you fly over the Macondo site where the Deepwater Horizon rig was located, the water looks like a gelatinous toxic soup thanks to this mix of dispersants and oil.

"Dispersants were meant to be used at the surface of oil spills. The millions of gallons of Corexit used at the Macondo wellhead site to prevent the oil spill from surfacing have caused as much as 70 percent of the spill to remain hidden from view.

"BP's use of dispersants deep underwater, and on such a large scale, represents the first time these chemicals have been used in this manner. Normally, dispersants are applied in small quantities at the surface and the chemical toxins of their use become sufficiently diluted over time so as to pose only minimal health risks. However, because of the volume of dispersants applied, the volume of oil involved, and because the dispersants were applied deep underwater, what remains afterward can be dangerous to human life and deadly with respect to marine reproduction."



These toxic chemicals, known carcinogens, are just lingering, invading marine life and the ecosystem of the Gulf. The long-term impact on wildlife and many residents' way of life hasn't been fully estimated. If the result of using these chemicals sterilizes our fisheries, what will it do to those of us who eat this seafood?

"Based upon a published efficacy study of Corexit 9500 on southern Louisiana crude at 70 percent efficacy, it is estimated that approximately 1/10th of a billion gallons of crude has been suspended underwater. However, what remains is not normal crude, but highly toxic fractions of what was once crude.

"Because these chemical concentrations are underwater, the insidious effects of their presence are not clearly visible to the naked eye, and the large scope of application and the vast geography of the Gulf make it exceedingly difficult to track.

"Only by conscientiously following through and professionally monitoring and analyzing the effects of these toxic chemicals can we accurately assess the true impacts of BP's introduction and potential misuse of dispersants into what was a short time ago a pristine marine environment."

Much of the deepwater findings referred to by Mr. Smith are based on official NOAA testing data and the results of independent testing. To insure that laboratory findings were both accurate and impartial, Mr. Smith hired well-known experts to gather data and study the air and water quality of the area. This effort, spearheaded by Chief Toxicologist Dr. William Sawyer, has produced some alarming facts:

* To date, BP has applied nearly 2 million gallons of Corexit(TM) EC9500A Dispersant.

* There is substantial evidence of severe toxicological consequences, both in the shallow waters off Louisiana and in the offshore plumes farther out in the Gulf. Of particular concern are chemicals called "polynuclear aromatic hydrocarbons" (PAHs) and the C19-C36 water insoluble hydrocarbons. These chemicals are appearing at toxic levels under the surface as a result of the application of deepwater chemical dispersants.

* PAHs and this normally water-insoluble set of hydrocarbons have known destructive effects on marine reproduction, particularly on egg-laying species as well as embryo-larval stages within the estuaries.

* Documented measurements of some of these chemicals are in great excess of established and risk-based lethal levels. The current PAH levels are capable of "sterilizing" our fisheries and estuary reproduction zones.

* The chemical toxins (PAHs) suspended in these concentrations pose potential human health concerns due to bioaccumulation in edible species.

Shell Offers to Sell Five Niger Delta Oil Leases

Royal Dutch Shell has offered to sell five oil leases in Nigeria's Niger Delta to domestic energy companies, according to a local newspaper. Shell is in talks with several Nigerian oil companies, including Midwestern Oil & Gas, Niger Delta Petroleum Resources, and Setplat Petroleum, for the sale of oil leases OML 26, 30, 34, 40 and 42 in the Niger Delta, according to a report in ThisDay newspaper on Thursday, quoting unidentified sources.

The leases, some of which contain reserves of up to 2 billion barrels, are valued at between $150 million and $2 billion, according to ThisDay. A deal could be completed within weeks, the newspaper said. A Shell spokesman in Nigeria declined to comment, saying the company does not respond to speculative reports.

Shell has said it is open to selling more of its assets in Nigeria's Niger Delta, where its oil and gas production has been hit by years of militant attacks.Any sale would need to be approved by state oil firm NNPC, which is the majority shareholder of the oil blocks, however. 'It is premature for Shell to talk about any asset sales without consulting and getting approval from the Nigerian government and NNPC. Let the buyer beware,' an NNPC spokesman said.

Nigeria has yet to approve a previous Shell sale of three Nigerian oil licences to a consortium consisting of two local firms and France's Maurel & Prom. Shell in January agreed to sell oil mining leases OML 4, 38 and 41 located in the northwestern part of the Niger Delta. The leases include 30 wells with a production capacity of around 50,000 barrels of oil equivalent per day

Iraq Needs Gas Infrastructure Investment Before Bid Round

Iraq must invest in natural gas processing and transport infrastructure before awarding contracts for three major gas fields, company executives said here on the sideline of a two-day Oil Ministry roadshow.

"The export term of the licensing auction is confusing," a company executive told Dow Jones Newswires.

Iraqi oil officials believe they are enticing companies by allowing them to export half of the produced gas, while participating firms view this as a "negative condition."

The huge amount of gas expected to be produced from these fields, estimated at 900 million cubic feet a day, may prove a major obstacle for the successful companies as Iraq lacks the infrastructure to treat, process, store, transport and export gas.

"We don't know which market we would export the gas to," another company executive said.

The three fields on offer are Akkas in Anbar province, which the Oil Ministry puts at 5.6 trillion-cubic feet; Mansouriya in Diyala with 4.5 trillion-cubic-feet of reserves; and Siba in Basra with 1.13 trillion-cubic-feet

reserves.Iraq currently produces only 1.65 billion cubic feet a day, of which some 700 million cubic feet is flared and the rest goes to meet domestic consumption.

Gas from Akkas can be exported through Syria, which is only 40 kilometers away, but Iraq hasn't built yet the infrastructure to facilitate this.

Siba is near Kuwait, which is currently importing more costly gas from global companies. Privately-held Kuwait Energy has been pre-qualified by the Iraqi Oil Ministry to take part in the bidding round, and many expect it to be interested in Siba.

Mansouriya would be used to meet local consumption, according to people familiar with the situation.

United States Oil Consumption and Reserves:

A matter of exponential growth and finite resources

It is a well known fact that the United States has been importing Oil since the 1970's because the home oil production cannot meet the rising demand. According to 2009 yearly average, the U.S. Crude Oil consumption is around 21 million barrels a day and home production is only around 5 million. Why are things escalating so fast? Why are resources running out at such speed? We will try to answer these questions on this article. There is no simple answer but it is all pretty much related to one single concept: exponential growth.

Within the last two centuries, advances in human technology has made the civilization completely Oil, Gas & Coal dependant, which are mainly used as fuel for diverse purposes. What makes Oil different is the immense variety of products that can be derived from it. A "brief" list of some of these products: Gasoline, Diesel, Fuel oil, Propane, Ethane, Kerosene, Liquid petroleum gas, Lubricants , other alkanes, Heating oil, asphalt, bitumen, Plastic, bags, toys, candles (paraffin), clothing (polyester, nylon), cosmetics, petroleum jelly, perfume, dish-washing liquids, ink, bubble gums, car tires, etc, etc etc.

So it is obvious that the modern industry is completely dependant on Oil.

However, the amount and size of Oil Reserves on the U.S. is - or was- enormous. It is in fact the third producing country after Saudi Arabia and Russia. So once again, why it is running out so fast? Answer is exponential growth in both population and oil-dependant technologies.

Exponential Growth:

According to Wikipedia, Exponential Growth occurs when the growth rate of a mathematical function is proportional to the function's current value. Lets put this in simpler terms: Exponential Growth is used to describe anything growing steadily, for example, 5% per year - as described by Professor Albert Bartlett.

The most common thing when one reads or hear that something is growing around 5% per year is to imagine that it is just a little more per year. But what is hardly ever understood is the escalating process that such percentage growth means.

Here is an example: say we have a certain population of 1000 persons with a 5% growth rate. Since the 5% of 1000 is 50, one may first think it just means 50 more persons per year, but really it is not that simple. Let's see what really happens year by year:

* On the first year there will be 1050 persons (1000 + 1000 * 0.05) 50 persons more

* On the second year, the 5% has to be calculated with the 1050 persons there are now, not the original 1000 so: 1050 + 1050 * 0.05 = 1102.5 = 1103 (since half a person makes no sense). 53 persons more

* And the third year: 1103 + (1103 * 0.05) = 1 158.15 = 1159. 56 persons more

* Fourth year: 1159 + (1159 * 0.05) = 1216.95 = 1217. 58 persons more

And so on. So in around 15 years the population would be doubled to 2000 and in about 47 years the population would be 10 times larger. That's 100000 persons!

You can see how the growth escalates from year to year. This is the key to understanding exponential growth, which can be used to describe both population and technology growth within the last 150 years.

U.S. Population

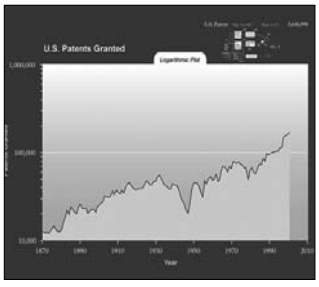
From 1960 to 2008 the U.S. Population growth rate has varied from 1.7% to 0.9% per year (Google Public data), with an an average of around 1.1% per year. Once again, this seems like just a little addition, but following the above described logic procedure, a 1.1% growth rate means a double of population in just around 63 years, that is 2023. According to U.S. Census the population on 1960 was roughly 180 million. Currently on 2010, there are roughly 310 million people on the U.S. So it seems the calculation is quite exact since it assumed there would be 360 million persons on 2023. You can imagine that at current growth rate population will keep escalating. We'll give you a hint: in 2063 population would triple the original 1960 figure at 540 million persons, and going a little further population would be 10 times larger on 2171, that is 1 billion 800 million.

Oil-dependant Technology

A similar Exponential Growth can be seen on technological advances. Since the 1850's the number of patents, technological inventions and scientific breakthroughs have been also increasing exponentially. And all these inventions are all pretty much based on electricity, fuel, plastic and oil derived products. It is very logical since most inventions/discoveries are built on the base of things and concepts previously invented & discovered.

The following is a graphic representation of the amount of U.S. granted patents over the decades.

U.S. Patents Granted



Round up?

1. We have an exponential population growth along with an exponential growth of devices that rely on Oil to function.

2. Oil is a finite resource. So even if new reserves are discovered which double the amount that we have already used. the exponential growth on demand will make it last just a few more years.

The conclusion is that the current situation will not be able to be sustained for much longer. It is certain that no more than 60 or 70 years at the most. We now understand why. The question remaining is: What will happen to prevent the collapse in society that this would imply?

Stopping the population growth seems almost impossible, unless some big catastrophe happens. Lets hope that will not be the solution.

A more positive and possible solution is stop relying so much on Oil. Interesting advances have been made on renewable energy sources but nothing really significant so far.This last question remains, currently, unanswered.