**Going Green – What Does It Mean?**

As we experience an increase in natural disasters, people having been wondering about the cause of this increase. We have heard that it is the greenhouse effect or global warming or the depletion of the ozone layer. Most Americans have heard these phrases and yet many still do not understand what they mean. If we do not understand what they are how are we to reason in our own minds if there is anything that we as individuals can do about them to help stop this insane weather situations? Today I am going to explain these phrases to you so that you can determine if they are important enough to your livelihood to try to do something to help prevent them from getting worse. I’m also going to inform you of possible solutions that others have suggested might help alleviate this dire situation.

The greenhouse effect is described in this article that appeared in National

Geographic magazine, written by Otto Mortimer as this: a process in which heat produced by humans, such as running motor equipment, factory equipment, forest fires, and heating of homes, rises into the air, bounces off of the clouds and is sent back down to the surface of the earth. This process repeats itself over and over in a never-ending cycle. A portion of the heat is released into the outer atmosphere but a lot of it is just cycled back towards the earth’s surface, where we live.

The greenhouse cycling effect has been occurring for centuries, and as technology has brought about an increase in heat-generating equipment, this has caused the temperature at the earth’s surface to steadily increase. Therefore, the result of this is that the air at the surface of the earth is getting hotter and hotter this increase in temperature is called global warming.

Another issue that goes hand-in-hand with these is the ozone layer issue. The ozone layer is a thick, protective barrier high in the atmosphere. It keeps the most harmful rays of the sun from reaching earth. This barrier is made of a certain substance. This substance can be altered by different chemicals that are floating around in the air. Several years ago, it was discovered that certain chemicals were reacting to the ozone layer material and causing it to dissolve. If enough chemicals react to the ozone in the same place it could wear a hole through the ozone layer and once the hole is made, the harmful rays of the sun can come through and cause many problems for all life-forms on earth. According to a world-renown scientist, Rudolph Mezmer, in his article entitled, It’s Still Growing, he claims that The existing hole in the ozone layer above Antarctica was approximately 9 million square miles wide. After today’s measurements we now estimate this size to be 11 million square miles.

The existence of this hole caused world-wide speculation of what might happen to agreement was reached by these representatives which is now called the Montreal Protocol. In this agreement, countries agreed to phase out the use of chemicals that erode the ozone layer. Some manufacturers like those who use plastic foam blowers were upset by this agreement because they did not have an alternative chemical as a substitute. Then when an alternative was discovered, it was less cost-effective. Another culprit of these harmful chemicals is something very common, one you either use or witness being used, on a daily basis. This chemical is used in common asthma inhalers. Experiments have been done to try to find an alternative that works as effectively for this medical purpose, but to date, none has been found.

Another chemical that erodes the ozone layer is found in common fire extinguishers. Since the Montreal Protocol was enacted, there has been a substitute found for fire extinguishers. However, there are still older extinguishers that are being used and are releasing the harmful chemicals. Physicist, John Montgomery, claims that the levels of ozone layer erosion chemicals have steadily decreased since the enacting of the Montreal Protocol. The chart below was published in Time magazine to declare that the Montreal Protocol was a success:



A chart comparing the level of ozone depleting chemicals in the atmosphere both before the Montreal Protocol was enacted and several years after it was enacted. Published in the Feb. 14, 2007 issue of Time Magazine, in an article titled The Success of the Montreal Protocol by Medalin Sykowski.

A chemical that has a very strong erosion effect on the ozone layer is called CFC. This chemical has been replaced with HFC. These are less harmful to the ozone layer, but they keep the heat in the air from escaping past the outer atmosphere, which basically means that they cause an increase in the global warming effect. So, another alternative needs to be found to replace the HFC chemicals.

Another common chemical is used in refrigerators and air conditioners. The chemical used for automobile air conditioners is called R-12 and the chemical used in the air conditioners of residential houses (that’s where you live) is called R-22. They don’t have the dangerous CFC but they have a different chemical that causes erosion of the ozone layer. According to Mr. Farwell, In 1995, production of R-12 ceased. It is our intention to phase out the production of R-22 by the year 2020. However, the alternatives for both of these chemicals are being criticized for their effect on the increase of global warming.

Let us not forget about carbon dioxide. We as humans breathe in oxygen and breathe out carbon dioxide. Carbon dioxide is also released when we burn gasoline, methane or propane. The carbon dioxide in the air reacts to heat. Without going into the full scientific explanation of how the molecules change and move, which might be confusing, I’ll put it in simple terms by saying that the carbon dioxide helps retain heat close to the earth’s surface which increases the global warming effect. This is where consideration of trees and plants come in to the picture. Trees and plants take in carbon dioxide and release oxygen. We need lots of trees and plants to help remove the carbon dioxide from the air. Since paper is made from trees, we should recycle paper products whenever possible.

Unfortunately, there isn’t any natural filter or man-made filter that can rid the atmosphere of the CFCs or HCFCs that we have already released. We just have to wait until they have reacted to other chemicals and depleted themselves on their own.

The earth needs time to be able to heal the hole in the ozone layer. We as the earth’s inhabitants need to take measures to help heal that hole and prevent any more from occurring. We need to pay close attention to the products we use and educate ourselves on the chemicals used in these products. We need to practice paper recycling habits. Hopefully, with the whole world working together, we can prevent further global warming and prevent further depletion of the ozone layer.

Maria Martinez

Mr. Instructor

Principles of IT

April 27, 2009

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As we experience an increase in natural disasters, people having been wondering about the cause of this increase. We have heard that it is the greenhouse effect or global warming or the depletion of the ozone layer. Most Americans have heard these phrases and yet many still do not understand what they mean. If we do not understand what they are how are we to reason in our own minds if there is anything that we as individuals can do about them to help stop this insane weather situations? Today I am going to explain these phrases to you so that you can determine if they are important enough to your livelihood to try to do something to help prevent them from getting worse. I’m also going to inform you of possible solutions that others have suggested might help alleviate this dire situation.

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The greenhouse cycling effect has been occurring for centuries, and as technology has brought about an increase in heat-generating equipment, this has caused the temperature at the earth’s surface to steadily increase. Therefore, the result of this is that the air at the surface of the earth is getting hotter and hotter this increase in temperature is called global warming.

Another issue that goes hand-in-hand with these is the ozone layer issue. The ozone layer is a thick, protective barrier high in the atmosphere. It keeps the most harmful rays of the sun from reaching earth. This barrier is made of a certain substance. This substance can be altered by different chemicals that are floating around in the air. Several years ago, it was discovered that certain chemicals were reacting to the ozone layer material and causing it to dissolve. If enough chemicals react to the ozone in the same place it could wear a hole through the ozone layer and once the hole is made, the harmful rays of the sun can come through and cause many problems for all life-forms on earth. According to a world-renown scientist, Rudolph Mezmer, in his article entitled, “It’s Still Growing”, he claims that “The existing hole in the ozone layer above Antarctica was approximately 9 million square miles wide. After today’s measurements we now estimate this size to be 11 million square miles” (4).

The existence of this hole caused world-wide speculation of what might happen to the inhabitants of this planet if the entire ozone layer dissolved. Scientists identified the chemicals that were doing the most harm to the ozone material. Then representatives from all over the world met to discuss this topic. An agreement was reached by these representatives which is now called the Montreal Protocol. In this agreement, countries agreed to “phase out the use of chemicals that erode the ozone layer” (Lemur 15). Some manufacturers like those who use plastic foam blowers were upset by this agreement because they did not have an alternative chemical as a substitute. Then when an alternative was discovered, it was less cost-effective.

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Fig. 1. A chart comparing the level of ozone depleting chemicals in the atmosphere both before the Montreal Protocol was enacted and several years after it was enacted. Published in the Feb. 14, 2007 issue of *Time* Magazine, in an article titled “The Success of the Montreal Protocol” by Medalin Sykowski.

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