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Geoelectric Energy

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ABSTRACT

Purpose: Geoelectric is a new source of electrical energy of the earths crust, which is naturally produced by means of decay radiations of natural radioactive elements in the earth crust. Artificial geoelectric is also produced by means of nuclear waste decay radiations in deep repositories.

In this paper information about Geoelectric Energy, the method of producing electrical Energy from residual radiation, changes of organic waste to artificial petrol & gas by means of this radiation and Using organic wastes for safe protection of deep repositories and some other matters will be discussed.

Results: At SMIRT 15 Conference (Paper No.K1-A7-IR), Information about Kiana Theory, which is about a scientific method of earthquake prediction was introduced by the authors of this paper. Kiana Theory information is about electrical, radioactive, magnetic and sonic fields. Secondly at SMIRT 16 Conference (Paper No. W-1957) Best utilization of nuclear breeze was introduced. After introducing some information of electrical, radioactive and sonic fields of this theory, we introduce another information of the same field that is a new source of energy, which is called "Geoelectric Energy".

The relation between geoelectric energy and the earthquake occurrences near nuclear waste repository site, the method of safe protection of deep repositories and the method of preventing earthquake occurrence in such deep repositories sites are also explained here.

Also, plant cells mutations by means of decay radiations and their relation with Bovine Spongy form Encephalopathy (BSE), cruet zfeldt-jadob disease (CJD), HIV and so on. Finally, we introduce suitable sites for installing the geoelectric power generating stations is discussed.

Conclusion: Geoelectric Energy is a free and clean electrical energy, which is available due to decay radiation of natural uranium in the earths crust or residue radiation in deep repositories.

The natural total amount of geoelectric energy in the world is equal to 4.5×10^{18}GW. The natural total amount in the world per year is equal to 1×10^{9} GW. Its availability in the earth surface per hour is about 1.14×10^{5} GW. So, the study of this new energy is very important and it is introduced for the first time in the world to explain our findings.

KEY WORDS: Geoelectric energy, geothermal energy, geoelectric power generator, natural radioactive, waste radiation, nuclear waste, organic waste, Encephalopathy (BSE), cruet zfeldt-jadob disease (CJD), HIV, Kiana theory, deep repository, plant cellulose, animals Glutamine, complex Hydrocarbon, periodic earthquake, earthquake precursor, ultrasonic waves, magnetic effect, Sallifield repository, UFO.

INTRODUCTION

The main subject which, of this paper is about producing electrical energy from earths crust, which is called geoelectric energy.

Producing of Geoelectric energy is available in two ways:
A- From rocks and crystals of the earth crusts.
B- From nuclear wastes.

For better understanding of the subject, it is necessary to prove that the radiation of natural radioactive elements or radiation of waste decay in deep repositories is gradually attracted by surrounding rocks and crystals. This radiation

charges the rocks and crystals with electricity. This electricity may be discharged by means of a small shock and finally a huge vibration is generated which causes movement of rocks. If this vibration is large enough, an earthquake will occur in that area. This is called periodic earthquake and will continue to occur by charge and discharges during the half-life of radioactive elements in that area. The half-life of radioactive elements is been completed in 4.5 billion years.

There are two types of energy sources in the earths crust. They are Geothermal and Geoelectric energy respectively. The amount of geothermal energy in the world is equal to $2x10^7$MWh and the amount of geoelectric energy is equal to $1.14x10^8$MWh. Therefore, the Geoelectric energy is 5.7 times more than geothermal energy. This geoelectric energy is spread all over the earths crust, and is more concentrated in wet rocks located in the earthquake belt zones.

Therefore, it can be judged that the earthquake prone areas, which were born in the third or fourth era of geo-periods, are the best zones for installing the geoelectric power generators. Geoelectric energy is more densely present in the areas, which are younger, and their rocks have more crystals. Hence, the areas, which were born in the third and fourth geo-periods, are not at all suitable for burying the nuclear wastes. If wastes are buried in these areas, hazardous earthquakes may occur within a period of 12 to 50 years. However, in areas, which have been born in the second or further geo-period eras, their rocks are often destroyed and have fewer crystals so they cannot save any electrical charge. In such old field areas the half-life of the radioactive elements have normally been finished and their natural radiation is less. Therefore, the amount of electrical charge in these rocks is less. The rocks of these lands are often porous and have less crystals and cannot save enough electric charges. So why are crystals being destroyed in very old rocks? During the very long periods, the bonds of water crystallization molecules in the rock crystals are destroyed by means of decay radiation, which in turn make them porous or powder like and are destroyed. According to this reason, the effect of radioactive radiation on the concrete may be high especially on deep repository structure in long or maybe short periods. When a concrete structure is attacked by earthquake, it is collapsed due to mechanical vibration of its beam and columns. It also absorbs electromagnetic waves and nuclear radiation in addition to the mechanical waves. If all these occur simultaneously, the destructive effect would be higher. The author is intended to carry out a more detail research about this subject and. It will be submitted in the next conference.

Producing Electrical Energy from Waste Radiation:

By using solar cells, the radiation of nuclear waste can be converted into electrical energy. Actually in the nuclear batteries, this kind of energy is produced by the same method. Therefore, if some of these converters are installed in the deep repositories, the energy of decay radiations will be converted to usable electrical energy. This energy is very productive and extraordinary economical.

Safe Protection of Deep Repositories:

In The SMIRT 16 Conference, the method of safe protection of deep repositories was introduced. This is available by using organic solid wastes and complex hydrocarbons (like used vehicle tires). This is because Gamma radiation can quickly degrade the heavy and complex molecules of organic waste and hydrocarbons into light ones; on the other hand, Beta particles are able to compound the light molecules into heavy and complex molecules. However, when Alpha particles, which possess very high energy, strike the crystals of rocks in the surrounding fields of the repository structure, a part of their energy is saved in them due to the semi conductivity property of crystals, which function as capacitors. Finally, this energy is discharged by means of a small shock, which cause vibrations and hence shakes the rocks of the area. If this movement is large enough, an earthquake will occur.

The radiochemistry formulas of three new samples of organic materials reactions' under the effects of decay radiation and leakage water in deep repositories are presented as follows:

A- Sample for plant cellulose:

$$nC_6H_{12}O_6 + H_2O \underset{\text{Catalyst (beta particles)}}{\overset{\text{Catalyst (gamma radiations)}}{\rightleftharpoons}} 3nCH_4\uparrow + 3nCO_2\uparrow + H_2O \qquad (1)$$

B- Sample for animals Glutamine:

$$CO_2CH_4N(CH_2)_2CONH_2 + 4H_2O \underset{\text{Catalyst (beta particles)}}{\overset{\text{Catalyst (gamma radiations)}}{\rightleftharpoons}} 5CH_4\uparrow + 5CO_2\uparrow + 4H_2\uparrow + N_2\uparrow \qquad (2)$$

C- Sample for complex Hydrocarbon:

$$C_n H_{(2n+2)} + 2nH_2O \underset{\text{Catalyst (beta particles)}}{\overset{\text{Catalyst (gamma radiations)}}{\rightleftharpoons}} nCH_4 \uparrow + nCO_2 \uparrow + 2(n+1)\, H_2 \uparrow \qquad (3)$$

These liquids and gases, which are produced in deep repositories, are usable as fuel and gas. At the same time the walls of repository structure absorb a part of this produced fuel. This isolates the repository wall against the electrical charges of Alpha particles, which prevent earthquake occurrence in the area.

Suitable Sites for Burying Nuclear Wastes:

The best areas for burying nuclear waste are as follows:

- Clay lands
- The lands which possess less crystals
- The lands that are old enough (born in 1st and 2nd geo-period era) and the amount of clay are high in that area.

The rocky lands are the worst places for burying the nuclear waste. This is because the decay radiation in the rocky lands cause occurrences of hazardous earthquakes according to the above mentioned reasons.

Suitable Sites for Installing Geoelectric Power Generators

All lands, which were born in the third or fourth of geo-periods and lands which are full of rocks, are the best sites for installing the natural geoelectric power generators.

Decay Radiation Effects In The Living Environments:

If the nuclear waste is buried in the lands, which are rocky and crystallized, or young, (born in 1st and 2nd geo-period) their radiation is spread in that areas and are attracted by the bodies of plants or animals. When these plants are consumed by animals or humans who live around these sites, it causes mutation in their body cells and irremediable diseases like cancer, BSE, CJD and HIV will occur in their bodies.

Society Mistake:

For the first time UK and North Korea scientists practically understood that the plants organic materials are useful for protection of waste radiation, but the authors of this paper discovered why they are useful and explained it scientifically in SMIRT 16, why organic materials, which are used for safe protection of deep repositories produce bulk gases. These gases protect the repository building against the periodic earthquakes and also prevent the effect of radiation in the underground water flow. However, the society thought the opposite, that the bulk gases are able to explode the repository itself and then affect the underground water flow.

Unfortunately, this wrong opinion caused the UK scientists not to use organic protection in deep repositories in Sallifield and then the cruet zfeldt-jadob disease (CJD) was seen in the area for the first time.

Hazardous Periodic Earthquakes:

The earths energy release, each year by earthquakes is about 1×10^{18} J/year. This energy is produced by the decay of natural radioactive elements, which causes periodic earthquakes. Some of these earthquakes are hazardous.

For the first time, the authors introduced that the source of earthquakes is electricity in SMIRT 15 Conference. Electrical formulas for scientific earthquake prediction will be introduced in SMIRT 18 Conference, and here we invite other researchers to take this subject into serious consideration.

Ultrasonic Waves:

Nearly three days before the occurrence of hazardous earthquakes, the ultrasonic waves are spread in the area. If their power is more than 1KW and their wave frequency are more than 40kHz, they cause death of fish or any other living body in the water. Examples of this are Kobe Earthquake (1995, Japan), Roodbar Earthquake (1990, Iran). Thousands of fish died by ultrasonic waves, which were generated before these earthquakes. Nobody knew why. The common idea was that these fish died due to water pollution, which was wrong. In 1979, a severe earthquake attacked Tabas in the North of Iran. A pelican, which was the city symbol in Golshen garden pool, died some days before this earthquake due to the ultrasonic waves. The same phenomenon occurred in the Kocaeli Earthquake (1999, Turkey). Some dead fish was reported.

Magnetic Effects:

Magnetic effect is one of the effects of decay radiations, and this case will be discussed at SMIRT 18 conference. This case is valuable and worth thinking about.

The UFOS Phenomena

Unidentified flying objects (UFOs) are a kind of earthquake precursors. UFOs are produced by means of the charging of air molecules caused by decay radiation. UFOs are seen where earthquakes are plentifully occurred and decay radiation is high.

The UFOs are simply the charge of air bag by electromagnetic field and appears as light. It is very similar to a fluorescent lamp. The air in the atmosphere is not uniform, neutral gases exist like a bulb form, and before earthquakes they are charged in the same area. The bulbs, which are less than 1m3, are generally charged by this radiation. The much bigger bulbs, which cause turbulence to the aircrafts, cannot be charged.

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