

**EAST LYME WATER & SEWER COMMISSION
REGULAR MEETING
Tuesday, JANUARY, 28th, 2014
MINUTES**

FILED IN EAST LYME
CONNECTICUT
Feb 3, 2014 AT 11:00 AM/PM
Dusley A. Beasly
EAST LYME TOWN CLERK

The East Lyme Water & Sewer Commission held a Regular Meeting on Tuesday, January 28, 2014 at the East Lyme Town Hall, 108 Pennsylvania Avenue, Niantic, CT. Chairman Formica called the Regular Meeting to order at 7 PM.

PRESENT: Acting Chairman Mark Nickerson, Steve DiGiovanna, Dave Murphy, Joe Mingo, Carol Russell, Roger Spencer, Dave Zoller

ALSO PRESENT: Brad Kargl, Municipal Utility Engineer
Joe Bragaw, Public Works Director
Attorney Edward O'Connell, Town Counsel
Attorney Mark Zamarka, Town Counsel
Anna Johnson, Finance Director
Dave Kenney Interconnection Project Manager

ABSENT: Paul Formica, Dave Bond

1. Call to Order

Acting Chairman Nickerson called the Regular Meeting of the East Lyme Water & Sewer Commission to order at 7:16 PM immediately following the previously scheduled Special Meeting and led the assembly in the Pledge.

2. Approval of Minutes

▪ **Regular Meeting Minutes – December 10, 2013**

Mr. Nickerson called for a motion or any discussion or corrections to the Regular Meeting Minutes of December 10, 2013.

****MOTION (1)**

Mr. DiGiovanna moved to approve the Regular Meeting Minutes of December 10, 2013 as presented.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

3. Delegations

Mr. Nickerson called for anyone who wished to speak under Delegations.

There were no delegations.

4. Gateway Development Project Update

Mr. Kargl reported that Gateway has submitted permits for two buildings and that he wanted to see how they would like to proceed with the connection charges; sewer and water assessment fees etc. He said that he has met with Attorney O'Connell for suggestions and that he would outline them here. On the water side they have to look at the first water assessment in the 1960's on the original water main. On the water assessment – under the original pricing they pay for the 10" connection line which would be \$4500 less any assessment that may have been paid in years past. There are also connection charges per the water ordinances and the developer will make a tap to bring in the line with no cost to be incurred by us. He believes that a water benefit charge may apply. They will build a line out to 10

buildings in the back which would then fall under the connection charge – with the potential for a 2" line being \$2100 times 10. Each apartment is to have its own meter so there would be 280 meters and 280 bills. Each of the units would have a permit fee. On the sewer side there would be a supplemental assessment for the 280 units based on a formula which could come to around \$560,000 as the project gets built out. This would also be a system that is owned and operated by the developer.

Ms. Russell asked who owns the water meters.

Mr. Kargl said that we own the meters and charge a \$70 deposit for each residential meter.

Mr. Mingo noted that what they are paying will not cover the cost of the infrastructure.

Mr. Kargl said that there are also inspection fees and added that this is only an overview at this time with nothing set in stone. He just wanted to brief them on this project.

5. Rules & Regulations

Mr. Kargl said that Attorney Zamarka was here to update them this evening.

Attorney Zamarka recalled that he had presented the amended draft of the sewer use and sewage disposal regulations to them and that there are open items on Page 8. Specifically Section 4.9 regarding the Duration of sewer treatment and conveyance capacity grant. Under Item b – for new construction or development they have come up with three possible scenarios and they would need to make a decision on which one they want to utilize. They also need to determine the time frame for the applications and documents following the grant of capacity.

Mr. Kargl noted that they had received correspondence from Ledge Light Health District on allowing a sewer line within 25' of a well and that they should review that and plan on incorporating it into the regulations as appropriate.

After some discussion the members decided that Option 2 with the initial 2 years and an extension of 3 years for a total of 5 years was reasonable and appropriate.

****MOTION (2)**

Mr. Mingo moved to adopt Option 2 in Section 4.9, paragraph b.

Mr. DiGiovanna seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

After much discussion on application procedures and time frames, the members decided that 6 months was appropriate to file the application following the grant of capacity.

****MOTION (3)**

Mr. DiGiovanna moved in Section 4.9, paragraph b to allow 6 months following the grant of capacity in which to file all applications and documents necessary to receive all applicable land use permits ...

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

Attorney Zamarka said that this would need to be put to a Public Hearing and that he would also need to incorporate the document from Ledge Light as well as make the updates that they had just made a determination on.

****MOTION (4)**

Mr. Murphy moved to authorize the Chairman, at his discretion and relying on staff to make the corrections to the first draft amendment, to schedule the Amended Sewer Use and Sewage Disposal Regulation Public Hearing.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

6. Water & Sewer Billing Adjustment Requests

Mr. Kargl said that there were none at this time.

7. Approval of Bills – from Attachment B

Mr. Nickerson called for a motion on the Regional Interconnection bills.

****MOTION (5)**

Mr. DiGiovanna moved to approve payment of the following Regional Interconnection bill: Haluch Construction, Pay Appl. #6 in the amount of \$13,772.79.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

****MOTION (6)**

Mr. DiGiovanna moved to approve payment of the following Regional Interconnection bill: Mid Atlantic Storage Systems, Pay Appl. #4 in the amount of \$54,820.70.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

****MOTION (7)**

Mr. DiGiovanna moved to approve payment of the following Regional Interconnection bills: D'Amato Construction, Pay Appl. #4 in the amount of \$1,156,401.75 and D'Amato Construction, Pay Appl. #5 in the amount of \$147,373.50.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

****MOTION (8)**

Mr. DiGiovanna moved to approve payment of the following Regional Interconnection bills: Tighe & Bond, Inv. #122013310 in the amount of \$58,122.96 and Tighe & Bond, Inv. #012014411 in the amount of \$47,316.21.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

****MOTION (9)**

Mr. DiGiovanna moved to approve payment of the following Regional Interconnection bill: B & W Paving, Inv. #5683-1 in the amount of \$23,014.34.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

****MOTION (10)**

Mr. DiGiovanna moved to approve payment of the following Sewer Pump Station Upgrade bills: Tighe & Bond, Inv. #112013211 in the amount of \$621.50 and Tighe & Bond, Inv. #012014412 in the amount of \$392.00.

Mr. Zoller seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

8. Budget Report – Finance Director

Mr. Nickerson called on Ms. Johnson for her report.

Ms. Johnson said that they had a copy of her report and noted that they did billing in November for water and sewer which shows the increase in the rates. She said that there are tiny differences with regard to the amounts expended which is due to the timing of when they pay bills to new London. The cash position is basically the same as last year.

Ms. Russell asked the scheduling for the individual audits for them.

Ms. Johnson said that the financial reports were completed and filed for the end of last year.

Ms. Russell asked if they could have a copy.
Ms. Johnson said that she would get it to them.

9. Niantic Pump Station Electrical Upgrades – Tighe & Bond Report

Mr. Kargl said that the report is not quite ready at this time and that he would hope to have it before them at their February meeting.

10. Water Project Updates

▪ Regional Interconnection

Dave Kenney reported that the pipeline was declared substantially complete on 12/23/2013 which is ahead of schedule. They will come back during the good weather to do the seeding and other cosmetic work. The tank has been slow going due to the cold weather and they have started assessing liquidated damages per diem. They received a request for a winter shutdown and he said that he would contact them as there is no provision in the contract for a winter shutdown and the request had just been received.

Mr. Kargl noted that the concern with the schedule is that there is an agreement with New London on sending water however; the project would not be complete with this recent issue.

Mr. Murphy asked how many gallons of water they would have needed this past summer to cover any of the shorts that they had.

Mr. Kargl said that it would have been perhaps 1M gallons.

Mr. Kenney said that the pump stations are anchored and they are waiting for CL&P to put power to them – which they are supposed to do later this week or next week. Once they have power they are probably about two weeks away from testing. He noted that they have added work to the pump contractor in the form of 65 pressure relief valves to some 65 residential homes in that area to regulate the pressure. These would be installed in the homes after the meter.

Mr. Kargl asked for direction on the liquidated damages.

After discussion the Commissioners suggested that he bring back the information (as the shutdown request was new) to them at their meeting in February.

▪ Well 1A Pump Replacement

Mr. Kargl noted that he had provided them with a spreadsheet listing the capital projects, budget and what is left upon completion of the projects. He said that the operating budget had \$35,000 in it to surge two wells this year. They pulled a pump out to surge and one pump is completely worn. Church gave him a quote of \$17,760 to put in a new pump and he gave them the go ahead on it. He suggested that they review the sheet that he has provided and decide where they might want to pull money from on the capital side to cover the cost.

▪ Manwaring/Shore Road Water Main

Mr. Kargl said that they did expand this project to include Terrace and Barrett so that they would have a much better connection. He said that the bids will go out in February and they expect it to come in under the budgeted amount.

11. Communications

▪ See Communications Log

Ms. Russell noted that they have a copy of the SE CT Water Authority Chairman's report from the January 16, 2014 meeting to the Representative Advisory Board.

12. Chairman's Report

Mr. Nickerson said that he did not have a report this evening.

13. Fluoride Update

Ms. Russell noted that they have a copy of correspondence from Ralph Malcom on the health problems associated with the use of fluoride in drinking water. She said that she feels that they as a Board should make a determination on the use of fluoride in light of this information and the request from Mr. Malcom that they review it and respond.

Mr. Kargl said that what is attached is the MSMD sheet (dated 2010).

Mr. Zoller said that he does not feel compelled to answer something that he is not qualified to answer and that this is the responsibility of the local/State/Federal Public Health authorities and further that it is not under the purview of this Commission to respond to this.

Mr. Mingo said that he agreed with Mr. Zoller and that he also does not think it is in their realm to get involved in this.

Mr. Kargl said that Ms. Russell is getting involved with the State and others on this and is having them review policies.

Ms. Russell said that it may be time for her to follow up on her requests to see if there is an update. She reported that LLHD has an intern looking into the fluoride issue and that she received questions back that have been shared with Mr. Kargl. She said that her position is that there should be a moratorium until more studies have been done as more information is coming out from various areas. She noted her letter dated 1/28/14 to her fellow Commissioners with a letter attached from Dr. Phyllis Mullenix, PhD to the School Health Advisory Committee of the Lee County School Board in Fort Myers, Florida dated 6/17/99 that she will forward to the Public Health Department and also urged them to read. (Copy attached)

14. Staff Updates

▪ Water Department Monthly Reports

Mr. Kargl noted the 17% increase in water usage for December 2013; attributing it to leaks, hydrant flushing; and filling the regional interconnection line three times for testing. He said that they also hired a leak detection service as part of their maintenance program and the company found a water main break on Carriage Hill Drive that accounted for about 3-4M gallons of water. These items could account for around 4.6M gallons which would lower that percentage substantially.

▪ Sewer Department Monthly Reports

Mr. Kargl said that they will put a blurb in the May bills about the lockbox for old/unused drugs at the Police Station and that they should not be put or dumped into the sewerage system.

15. ADJOURNMENT

Mr. Nickerson called for a motion to adjourn.

****MOTION (11)**

Mr. DiGiovanna moved to adjourn the January 28, 2014 Regular Meeting of the East Lyme Water & Sewer Commission at 9:10 PM.

Mr. Murphy seconded the motion.

Vote: 7 – 0 – 0. Motion passed.

Respectfully submitted,

Karen Zmitruk,
Recording Secretary

January 28, 2014

To: My Fellow East Lyme Water & Sewer Commission Members

Fr: Carol Russell

Re: Additional Background Data on Water Fluoridation and Neurotoxicity

Enclosed for your information is a letter dated June 17, 1999 from Phyllis J. Mullenix, PhD to the School Health Advisory Committee of the Lee County School Board in Fort Myers, Florida. The letter is in response to their request for her professional opinion on the advantages and disadvantages of water fluoridation as it relates to children's health.

The letter is a sobering analysis of the potential neurotoxic risks to children from water fluoridation. Dr. Mullenix cites the growing body of scientific evidence linking fluoride exposure to brain impact and cautions –

As you discuss the benefits and risks of water fluoridation, it is imperative that the impact on total body burden of fluoride be considered. Total body burden experienced by children today is different from that of fifty years ago when fluoride was promoted as "a safe and effective" means to protect against tooth decay. Children today are exposed to fluoride from their fruit juices, sodas, vegetables sprayed with pesticides, fluorinated pharmaceuticals, dietary supplements, toothpastes, dental sealants, and from the air especially near certain industries. In addition, many children are exposed to conditions that will interact with fluoride exposure and magnify harmful effects (i.e., exposure to lead, aluminum, cholinesterase-inhibiting pesticides, nutritional deficiencies, increased water consumption with exercise). Overall, fluoride exposures today are out of control, well beyond the dose touted as optimum for caries prevention.

Dr. Mullenix concludes the evidence against the safety of water fluoridation policy keeps growing and asks: "Do you have the time to wait while your children are at risk?"

EAST LYME WATER & SEWER COMMISSION
JAN 28 2014
AGENDA # <u>13</u>

Attachment WES 1/28/14

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Phyllis J. Mullenix, Ph.D.
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Andover, Massachusetts 01810-3347
Tele. (978) 475-9196
FAX (978) 749-9447

June 17, 1999
Dr. Irwin Kash
School Health Advisory Committee
1555 Matthew Drive
Fort Myers, Florida 33907
Re: Lee County School Board's request for information on drinking water fluoridation

Dear Dr. Kash:

The Lee County School Board and its Health Advisory Committee are to be commended for investigating the effects of fluoride ingestion. When the subject is controversial, as is fluoride or fluoridation, status quo may be easier but it is not scientific. Your decision to analyze data on both sides of the issue is a great example to set for the students. The following information describes my enlightenment of the subject, and it is offered in the hope it will aid your understanding of the advantages and disadvantages of water fluoridation.

Prior to 1982, my knowledge of fluoride was limited to television commercials saying it was good for my teeth. My expertise was not fluoride but the detection of neurotoxicity, which brought me to the Department of Psychiatry at Boston's Children's Hospital and Neuropathology at the Harvard Medical School. It was there that I met Dr. Jack Hein, Director of the Forsyth Dental Center and the scientist responsible for putting monofluorophosphate (MFP) into toothpaste. Dr. Hein was a student of Dr. Harold Hodge, the chief pharmacologist on the Manhattan Project who conducted the world renowned studies on fluoride (1) and started water fluoridation. Dr. Hein invited me to Forsyth to study the neurotoxic potential of materials that dentists use, starting with fluoride, and we set up the first toxicology department in any dental research institution in the world. I was made Head of the department, and Dr. Hodge moved to Boston and became a member of my department where he stayed until his death in 1990. Another Manhattan Project scientist and fluoride researcher, Dr. Ben Amdur, also joined the department.

My investigations of the neurotoxicity of fluoride started in 1987. Using a new computer pattern recognition system capable of a sensitivity and objectivity other behavioral measures did not possess, we studied an animal model first developed for the study of dental fluorosis. Frankly, we expected to find nothing. The results from the first experiment we thought must be wrong, so we kept repeating the study with more animals, different doses, sexes, ages and methods of administration. Like quicksand, every effort we made sank us further into the realization that brain function was impacted by fluoride. Scientific integrity dictated that we publish our results (2,3), but employed at a dental research institution made us weak in the knees to do so.

In our 1995 paper (2), we reported that brain function was vulnerable to fluoride, that the effects on behavior depended on the age at exposure and that fluoride accumulated in brain tissues. Rats exposed as adults displayed behavior-specific changes typical of cognitive deficits, whereas rats exposed prenatally had dispersed behaviors typical of

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hyperactivity. Brain histology was not examined, but the behavioral changes were consistent with those seen when hippocampal development is interrupted and memory problems emerge. Overall, we concluded that the rat study nagged potential for motor dysfunction, IQ deficits and/or learning disabilities in humans.

Criticisms of our study by dentists say that our results in rats are not relevant to humans because the doses we used were too high (75-125 ppm NaF in drinking water). These criticisms are without merit because our doses in rats produce a level of fluoride in the plasma equivalent to that found in humans drinking 5-10 ppm fluoride in water, or humans receiving some treatments for osteoporosis. This plasma level is exceeded ten times over one hour after children receive topical applications of some dental fluoride gels. Thus, humans are being exposed to levels of fluoride that we know alters behavior in rats. Perhaps dentists see no problem with this fact, but scientists involved with toxicity risk assessment will view it differently. The fluoride levels in the drinking water of our rats

were not high, they were taken from the well known animal model developed for the study of dental fluorosis, a model used repeatedly by dental researchers for several years.

Other criticisms of equal absurdity have been expressed by dentists about our study. However, they are not important to dwell upon now because that first study was but one piece of an emerging picture. Soon after our study was published, we learned of two epidemiology studies from China showing IQ deficits in children over-exposed to fluoride via drinking water or soot from burning coal (4,5). Another epidemiological study I helped initiate in Boston found no association between behavior problems and dental fluorosis, but the lack of funds restricted experimental design which, in turn, limited detection of an association even if it existed (6). It has been well documented that tooth enamel defects occur more often in brain damaged and low IQ groups of children, and in fact, obvious enamel defects may be used as markers of not so obvious neurological problems (7). Since fluoride causes tooth enamel defects in the developing child, fluoride belongs in the behavioral spotlight.

A search of the medical literature uncovered case reports spanning 60 years on neurological effects in humans exposed to fluoride (8). A common theme in these reports was that fluoride exposure impaired memory and concentration and that it caused lethargy, headache, depression and confusion. Depression is not something to ignore because suicide occurs more frequently than expected in populations of fluoride workers (9). Headlines in newspapers today are a steady reminder that children are not immune to depression. The literature also revealed a case report of a 12-year-old boy that had convulsions precipitated by fluoridated drinking water (10). Alone, the report was anecdotal evidence. Coupled with unpublished information about a public health problem in Wallingford, CT, however, it assumed greater significance. Children living there near a stainless steel plant started having unexplained seizures when the plant released too much hydrogen fluoride (11). When the releases stopped, so did the seizures.

More recently, another laboratory investigation found that chronic exposure to fluoride (1 ppm) in drinking water of rats compromised neuronal and cerebrovasculature integrity (blood brain barrier) and increased aluminum concentrations in brain tissues (12). Another study found that fluoride in drinking water of rats decreased membrane lipids important to proper brain function (13). Moreover, the latest studies have shown that fluoride accumulates in human and animal pineal glands where it impairs melatonin production (14,15), a finding critical when it is considered that melatonin is an agent that protects the central nervous system from radiation by scavenging free radicals (16). Finally, there is a recent study published which reports that silicofluorides in fluoridated drinking water increase levels of lead in children's blood, a risk factor that predicts higher crime rates, attention deficit disorder and learning disabilities (17).

□

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Unfortunately, the link between fluoride and the brain does not end with the above mentioned studies. In 1993 while studying the neurotoxicity associated with the treatments of childhood leukemia, we demonstrated that the fluorinated steroid dexamethasone disrupted behavior in rats to a greater degree than did its nonfluorinated counterpart prednisolone (18,19). This finding prompted a clinical study of children treated for leukemia, where it was found that the fluorinated steroid was more detrimental to IQ than the nonfluorinated steroid (20). Greater deficits in reading comprehension, arithmetic calculation and short-term working memory were specifically identified. In short, this finding has fueled a growing concern about the contribution of fluorinated pharmaceuticals to the total body burden of fluoride.

As you discuss the benefits and risks of water fluoridation, it is imperative that the impact on total body burden of fluoride be considered. Total body burden experienced by children today is different from that of fifty years ago when fluoridation was promoted as a "safe and effective" means to protect against tooth decay. Children today are exposed to fluoride from their fruit juices, sodas, vegetables sprayed with pesticides, fluorinated pharmaceuticals, dietary supplements, toothpastes, dental sealants, and from the air especially near certain industries. In addition, many children are exposed to conditions that will interact with fluoride exposure and magnify harmful effects (i.e., exposure to lead, aluminum, cholinesterase-inhibiting pesticides, nutritional deficiencies, increased water consumption with exercise). Overall, fluoride exposures today are out of control, well beyond the dose touted as optimum for caries prevention.

In summary, there are no advantages to water fluoridation today. The risks far exceed the hoped for benefit. Dr. Hodge during the Manhattan Project requested funds from Col. Stafford L. Warren to do animal experimentation to determine central nervous system effects of fluoride (21). He did so because he had clinical evidence that the fluoride component of uranium hexafluoride caused "mental confusion, drowsiness and lassitude" among the workmen. Yet, he never got to do those studies, and because this information was classified, he never discussed his findings with me. Perhaps, however, this explains why he was so intensely interested in my fluoride studies up to the time of his death.

Therefore, in good conscience, I can only discourage the notion of fluoridating water supplies. The evidence against the safety of this public health policy keeps mounting; it is too compelling to ignore. However, proving harm takes a long but predictable path: industry complains, studies are criticized, and scientists are trashed. Do you have the time to wait while your children are at risk? The decision is yours.

Sincerely,
Phyllis J. Mullenix
Phyllis J. Mullenix, Ph.D.
Research Associate, Dept. of Psychiatry
Children's Hospital. Boston, MA

C: The School District of Lee County (Board Member's Office)
Kenneth Case

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REFERENCES

- 1). U.S. Dept. of Energy, Pharmacology and Toxicology of Uranium Compounds, C. Voegtlin & H. C. Hodge, eds., Nat. Nuclear Energy Series, Manhattan Project Tech. Section, McGraw-Hill Book Co., NY, 1949.
- 2). Mullenix, P., Denbesten, P., Schunior, A., Kernan, W.J. Neurotoxicity of sodium fluoride in rats. *Neurotoxicol. Teratol.* 17:169-177, 1995.
- 3). Mullenix, P. J.: The computer pattern recognition system for study of spontaneous behavior of rats: A diagnostic tool for damage in the central nervous system? In: "Motor Activity and Movement Disorders. Research Issues and Applications." P. R. Sanberg, K. P. Ossenkopp and M. Kavaliers, eds., pp. 243-268, Humana Press, New Jersey, 1995.
- 4). Li, X. S., Zhi, J. L. and Gao, R. O. Effect of fluoride exposure on intelligence in children. *Fluoride* 28:189-192, 1995.
- 5). Zhao, L.B., Liang, G. H., Zhang, D. N. and Wu, X. R. Effect of a high fluoride water supply on children's intelligence. *Fluoride* 29:190-192, 1996.
- 6). Morgan, L., Allred, E., Tavares, M., Bellinger, D. and Needleman, H. Investigation of the possible associations between fluorosis, fluoride exposure, and childhood behavior problems. *Pediatr. Fluoride: a Dent.* 20:244-252, 1998.
- 7). Cohen, H. J. and Diner, H. The significance of developmental dental enamel defects in neurological diagnosis. *Pediatrics* 46:737-747, 1970.
- 8). Spittle, B. Psychopharmacology of Fluoride: a review. *Int. Clin. Psychopharm.* 9:79-82, 1994.
- 9). Grandjean, P., Olsen, H., Jensen, O.M., Juell, K. Cancer incidence and mortality in workers exposed to fluoride. *J. N. Cancer Inst.* 84:1903-1909, 1992.
- 10). Waldbott, G. L. Tetaniform convulsions precipitated by fluoridated drinking water. *Confinia Neurologica* 17:339-347, 1957.
- 11). Brown, D., personal communication, Connecticut Dept. of Public Health.
- 12). Varner, J. A., Jensen, K. F., Horvath, W. and Isaacson, R. L. Chronic administration of aluminum-fluoride or sodium-fluoride to rats in drinking water alterations in neuronal and cerebrovascular integrity. *Brain Res.* 784:284-298, 1998.
- 13). Guan, Z.-Z., Wang, Y.-N., Xiao, K.-Q., Dai, D.-Y., Chen, Y.-H., Liu, J.-L., Sindelar, P. and Dallner, G. Influence of chronic fluorosis on membrane lipids in rat brain. *Neurotoxicol. Teratol.* 20:537-542, 1998.
- 14). Luke, J. Effect of fluoride on the physiology of the pineal gland. *Caries Res.* 28:204, 1994.
- 15). Luke, J. Effects of fluoride on the physiology of the pineal gland in the Mongolian Gerbil *Meriones Unguiculatus*. *Fluoride* 31:824, 1998.
- 16). Mullenix, P. J.: Radiation protection in the developing central nervous system: Investigation of a biological approach. In: "Radioprotectors: Chemical, Biological and Clinical Perspective." E. A. Bump and K. Malaker, eds. CRC Press, Inc., Boca Raton, FL, 1997.
- 17). Masters, R. D. and Coplan, M. Water treatment with silicofluorides and lead toxicity. *Inter. J. Env. Studies*, in press.
- 18). Mullenix, P. J., Kernan, W. J., Schunior, A., Howes, A., Waber, D. P., Sallan, S. L. and Tarbell, N.J., Interactions of steroid, methotrexate and radiation determine neurotoxicity in an animal model to study therapy for childhood leukemia. *Pediatr. Res.* 35: 171-178, 1994.
- 19). Mullenix, P.J., Fluoride and the brain: hidden "halo" effects. XXII Conf. Intern. Soc. Fluoride Res., 1998.
- 20). Waber, D. P., Carpentieri, S. C., Klar, N., Silverman, L. B., Schwenn, M., Hurwitz, C. A., Mullenix, P. J. and Sallan, S.E., Cognitive sequelae in children treated for acute lymphoblastic leukemia with dexamethasone or prednisone. In press, 1999.
- 21). Declassified letter. April 29, 1944. "Subject: Request for animal experimentation to determine central nervous system effects," from John L. Perry, Captain, Med. Corps, P.O. Box 287, Crittenden Station, Rochester, 7, N. Y. to Col. Stafford L. Warren, U. S. Engineer Office, Oak Ridge, TN (Thru The Area Engineer, Madison Square Area, N. Y.)

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