

739 1

## DOCUMENT PROTECTED BY

-----

ч

## PRIVACY ACT

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4 ATLANTA FEDERAL CENTER 61 FORSYTH STREET, SW ATLANTA, GEORGIA 30303-3104

June 13, 2003

4WD-FFB

Mr Eugene Brayon

Dear Mr. Brayon:

I apologize for the length of time it has taken me to reply to the questions raised in your letter of July 25, 2002 to Mr Clyde Hunt at the Memphis Depot Because it was addressed to Mr Hunt, it was not readily apparent to me that you had directed questions specifically to the U S Environmental Protection Agency (EPA) In reviewing the letter, which I have attached here, I see that I am remiss in that assumption, and attempt here to correct my oversight

Your questions were prompted by viewing the Bill Moyers Now program "Kids and Chemicals-Facts of Law". I will attempt to address your questions to the best of my ability, in light of my 16 years with EPA. My answers will be based on professional judgement and knowledge of policies, procedures, and guidance followed by the Superfund program. I will defer some questions to replies from the Agency for Toxic Substances and Disease Registry (ATSDR), from whom you also request input.

You asked why we are not analyzing for chemicals in people's blood and urine, rather than looking for them in the environmental media (soil, sediment, ground water) on and around the Depot In reply, it is important to note that people, including children, can be exposed to contamination from multiple sources in the course of their daily lives, and that total exposure would be what is measured in the blood and urine. If we collected these data, we would not be able to separate the total exposures to the individual from exposure that may have occurred due to chemicals at the site. The purpose of the remedial investigation and risk assessment at the Depot is to determine whether chemicals from the Depot are causing, or have the potential to cause, an unacceptable increase in the risk of toxic or carcinogenic effects on human health or the environment, including children. As presented to you in several meetings of the Restoration Advisory Board (RAB), the risk assessment process developed by the EPA is the tool we use across the Nation to estimate these increased risks. The process is inherently conservative (health-protective) due to conservative assumptions in virtually all of its steps

The Moyers program stated that only 43% of the 3000 high volume production chemicals have been tested for toxic effects, and only 10% tested for children's health effects. You asked what is being done about this While I cannot speak to the accuracy of the numbers you present, I



can state that EPA has several programs that evaluate new chemicals, but not all classes of chemicals are covered. The Toxic Substances and Control Act (TSCA) is the primary Federal statute regulating the use of certain chemicals and substances, including asbestos, PCBs, radon and lead. The <u>Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)</u> regulates the sale and use of pesticides in the United States For risk assessment purposes at Superfund sites such as the Memphis Depot, EPA maintains a database called the Integrated Risk Information System (IRIS), which contains the most current consensus among toxicologists about health effects and dose-response relationships for a large number of chemicals commonly found at Superfund sites. The risk assessment process also includes methods for deriving health-protective cleanup levels when specific chemicals are not found in IRIS. Admittedly, this still leaves a lot of chemicals not fully evaluated for health effects EPA tries to address the worst first in all aspects of implementing its programs of environmental protection.

Another statement ascribed to the Now program is that, "...prior to 1996, all environmental agencies were based on the entire population consisting of health young adults [sic]. EPA is since then learning how children come in contact in order to comply with the law." I can state from my own experience that EPA has always considered sensitive sub-populations in its risk assessments, including children and the elderly When evaluating a residential risk scenario, the assessment divides the life of the "receptor" or hypothetical resident, into three stages over a 30-year period a child age 1-6, an adolescent from through approximately age 16, and the remainder as an adult. Exposure to carcinogens is averaged over a lifetime. We do this because a receptor displays different behaviors at different times of his/her life, which may result in exposure to different types and levels of chemicals.

Your letter goes on, "We have a lot of information on thresholds but Dr. Needleman cannot say there is a low level and poses the question about combinations of chemicals at low levels. What is EPA's current position on this?" In risk assessment, the threshold concept generally applies to evaluation of carcinogens. EPA's position has always been that there is no threshold of exposure below which cancer would not occur. That is one reason why the Safe Drinking Water Act (SDWA), for example, establishes Maximum Contaminant Level Goals (MCLGs) at zero. Practically speaking, we cannot truly analyze to a zero level, so we default to the detection limits of very sensitive analytical methods developed or approved by EPA MCLGs, however, are not enforceable under the SDWA, and EPA promulgates MCLs as enforceable drinking water standards These are non-zero standards which are still considered healthprotective, and with which all public drinking water supplies must comply. The point here is that EPA does incorporate the concept of thresholds in its program decisions, but must, by law, also consider costs associated with achieving the lowest possible concentrations

With respect to combinations of chemicals, it has been EPA policy since at least 1991, and EPA practice before then, to assume that carcinogenic chemicals have a cumulative effect Therefore, during the final steps in a risk assessment, we calculate risks due to individual carcinogens and then sum them to arrive at a total excess lifetime cancer risk (ELCR) that takes into account exposure from all reasonable pathways, such as ingestion of ground water from drinking, inhalation from showering, absorption from water through the skin, ingestion of soil and sediment, absorption of chemicals from soil through the skin, etc.

739 4

"Dr. Steingraber believes the developing fetus may not have a safe threshold level at certain key windows of vulnerability. No woman has uncontaminated breast milk on this planet, according to Dr. Steingraber. Scientists have found PCB, dioxins, and methyl mercury in the breast milk. Has EPA and other responsible government agencies taken the fetus and time of vulnerability into consideration?" This is a difficult question for me to answer in the context of the Memphis Depot Superfund site, because is goes to issues discussed earlier about people being exposed to more than one source of contamination. For example, dioxins are a product of incomplete combustion, and are found everywhere due to emissions from combustion engine exhausts, power plants, and other sources of air pollution. For more information on this is suggest you view the website of EPA's Office of Children's Health Protection at http://yosemite.epa.gov/ochp/ochpweb.nsf/homepage.

At the close of your letter you request an update from EPA on a report you saw at www.scorecard.org. Scorecard.org is a non-governmental website that provides environmental information of various types and vintages. In the case of the Memphis Depot, the information you cite in your letter is derived from the scoring package that EPA used to put the Depot on the National Priorities List (NPL) in 1992. At that time in the life of a Superfund site, the available data are generally preliminary and sparse EPA's Hazard Ranking System compensates for this lack by incorporating conservative assumptions about the site and the nature of any release, as well as the potentially affected population and environment. Since 1992 we have completed detailed investigations and have a better understanding about the nature and extent of contamination, the potential risks from exposure to site-related chemicals, and have selected or proposed (in the case of Dunn Field) remedial actions to address the contamination. Scorecard.org contains a link to EPA's NPL Book, which presents a snapshot summary of the site. The summary was last updated in 2002 I can state this with certainty because I wrote it. Since then we have made additional progress toward cleanup, and we expect the final Record of Decision (ROD) for the Depot to be executed this fall. Many of the issues you highlight from the Scorecard information are updated in the Proposed Plan for Dunn Field, including the potential threats to ground water and drinking water, and plans to clean it up

Thank you for the interest you have shown, both in environmental protection in general and in the Memphis Depot cleanup through your participation in the RAB. I hope you find these answers to be informative and complete.

Sincerely yours,

Malian?

Wn. Turpin Ballard, CHMM Remedial Project Manager Federal Facilities Branch

Attachment

Cc. Memphis Depot RAB



## **EUGENE BRAYON**

July 25, 2002

Mr. Clyde Hunt Jr.:

I have been informed that the transcriber is having difficulty in understanding the report I gave during the last meeting. In light of that fact I am sending this written statement citing the notes that I used

My notes were taken from the Now TV series of Bill Moyers entitled "Kids and Chemicals-Facts of Law" which aired on 5/10/02 I am asking you to make copies for the RAB members that may want a copy

This report is important to me because it brings out some new information and approaches that I have not heard from the EPA representative and environmentalist at our RAB meetings I also feel that the BRAC members are all in a mode of finishing the job and moving on I am not intending this report to sensationalize the state of our environment but to inform the RAB members and my Rozelle neighbors of the results reported by M.D.'s, PHD's and other professional investigators that were involved in this report in light of what exist in Dunn field, the old paint shop and the fishing ponds for example.

Kids and Chemicals is a report on the search for everyday chemicals that may be harming our kids. Since it emphasizes kids the report is different from most of the reports of this type.

"There is an increase in the evidence of childhood cancer. Home and garden pesticides are showing up in their urine. Women have termite poisons and toilet deodorizers, flame retardants in their breast milk. Asthma is on the increase and is the leading cause of admissions. 75,000 synthetic chemicals and metals are used in the USA. They kill insects, weeds, used on clothes, carpets, unclog drains, create produce and lawns. Most of these chemicals have never been tested for there toxic effects on children. Scientists are concerned that increases in childhood illnesses like asthma, cancer, learning disabilities (5% to 10%), attention deficit disorder, dyslexia, autism are related to what kids eat, drink and breath

In Fallon, Nevada, Dr. Mary Guinan is using a new approach in her study. She is looking for environmental toxins in the body disregarding the exposure. Concentrate on how many toxins have been absorbed into the human body. This has not been done before."

ATSDR/CDC should up date the RAB on their approach to investigating toxin exposure in light of the Fallon, Nevada investigation.

"Blood and urine samples were brought to the CDC labs in Atlanta They are being analyzed for minute traces of chemical suspects pesticides, metals, solvents and PCB's which is a chemical that has been banded years ago Dr. Jackson looked at 125-130 different chemicals in blood and unne rather than what is in the air, water and food, a procedure which is more difficult and expensive to accomplish."

739

6

Why aren't we doing the same thing?

"Of the 3000 high production volume chemicals used in the USA only 43% have been minimally tested. Only 10% have been thoroughly tested to examine their potential effects on children's health and development."

/ Is this true? If so what is being done about it?

"Dr. Landrigan stated that prior to 1996 all environmental agencies were based on the consisting of healthy young adults EPA since then is learning how children come in contact in order to comply with the law.

No one said children are different. They are heavily exposed lb for lb. Eat more food. Drink more water. Breath more air. Play on the ground. Live low. Put hands in their mouths.

Animal studies lead scientists to believe that even minute exposure to certain pesticides can harm the developing brain and diminish intelligence. Dr. Needleman says he cannot say there is a safe level. A critical question is, "what does combinations of the chemicals at low levels, actually do to children?"

We have had a lot of information on thresholds but Dr. Needleman cannot say there is a low level and poses the question about combinations of chemicals at low levels. What is EPA's current position on this?

"In New York 500 expectant Mothers put on back packs in there 3" trimester designed to trap the chemicals they breath.

Dr. Perera advocates that the fetus is sensitive to a variety of low levels of toxins since it does not have the same defense mechanisms of adults. Exposure to even relatively small amount and the timing during fetal development can cause serious problems.

Dr. Steingraber believes the developing fetus may not have a safe threshold level at certain key windows of vulnerability. No woman has uncontaminated breast milk on this planet according to Dr. Steingraber. Scientists have found PCB's, dioxins and, methyl mercury in the breast milk."

Has EPA and other responsible government agencies taken the fetus and time of vulnerability into consideration?

"Studies done in urban areas apply to suburban and rural areas. Rural areas are not unique in this regard at all in fact it's pervasive."

The entire report may be seen by going to www.pbs.org and then to Now.

The <u>www.scorecard.org</u> has given a scathing report on the Memphis Defense Depot as a super fund site. I request that EPA give us an update on the data included in the report and/or does it still apply? The following is an example of what is being reported for public consumption. "The depot has conducted numerous operations dealing with hazardous substances. A total of 75 waste disposal areas and other areas of concern have been identified at the facility, most of them in Dunn Field. Among the wastes disposed of, according to the Department of Defense (DOD), are oil, grease, paints and paint thinners, methyl bromide, and pesticides More. Were wells shut down due to contamination NO. Are drinking water well potentially threatened? Yes Population

served by the threatened wells' >100,000. Aquifer discharges into' A drinking water aquifer. Population served by water wells in the aquifer: >100,000.

I have asked EPA, ATSDR, COC and any other applicable agency to comment on six questions. They should be clear enough to identify

٠.

An Drayour Eugene Brayon

ч.

739

