UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

NOV 13 2009

Ms. Michelle Roberts
Advocates for Environmental Human Rights
1730 M Street, NW Suite 412
Washington, DC 20036

Ms. Wilma Subra
The Subra Company
P.O. Box 9813
New Iberia, LA 70562

Mr. Edgar Mouton,
Mossville Environmental Action Now
3608 E. Burton St.
Sulphur, LA 70663-1910

Dear Ms. Roberts, Ms. Subra, and Mr. Mouton:

Several months ago, we received the report "*Industrial Sources of Dioxin Poisoning in Mossville, Louisiana: A Report based on the Government's Own Data*" *By Wilma Subra*, (Subra Report). We reviewed the report and have established an ongoing dialogue with Ms. Subra and others interested in the Mossville Community. With this letter, I am enclosing a 9-page attachment that addresses the recommendations from Ms. Subra's report.

We are also providing summary information on the work that the Environmental Protection Agency (EPA) has conducted in the Mossville area to demonstrate the level of commitment and attention we have given to the human health and environmental conditions. Over the past 10 years, EPA has performed numerous investigations at abandoned hazardous waste sites, made decisions on cleanup actions, addressed industrial non-compliance, and monitored ozone and other air toxics. The EPA has also supported efforts initiated to assess human health concerns. For example, in 1997, the Region 6 EPA and a community group from Calcasieu Parish, Louisiana requested that the Agency for Toxic Substances and Disease Registry (ATSDR) evaluate dioxin levels reported in 11 human blood samples. ATSDR issued a health consultation concluding that blood serum dioxin levels were elevated in many of the blood samples and recommended identification of the dioxin exposure source(s). The community verbalized general concerns regarding exposure to hazardous chemicals from area industries, particularly possible ethylene dichloride contamination in ground water supplies. Additional examples of EPA activities and the resulting improvements in the environmental condition and the benefits to the community are included in the enclosure.

In addition to the ATSDR studies, EPA conducted extensive air sampling in 2001 and 2002 in the Mossville and Calcasieu Parish areas for airborne dioxin as well as numerous other contaminants. Dioxin and related chemicals were sampled at various locations in the Calcasieu area and compared to the National Dioxin Air Monitoring Network. EPA's mobile laboratory called the Trace Atmospheric Gas Analyzer was used to conduct nighttime surveillance of airborne contaminant releases from local facilities as well as airborne contaminants present in residential neighborhoods in and around Mossville. EPA hosted numerous community meetings and sought involvement from local community groups.

In the summer of 1998, Region 6 established its Calcasieu Parish Multimedia Team. The team met on a regular basis to facilitate improved inter-divisional coordination and to develop multimedia strategies to respond to Calcasieu Parish issues. Region 6 identified specific geographical areas in Louisiana including Calcasieu Parish for a focused compliance and enforcement initiative. The goals of the initiative included the following:

1. Enhance community access to environmental information;
2. Double the Local Emergency Planning Committee response capabilities;
3. Reduce hazardous waste generated by 50%;
4. Make material progress in restoring impaired stream segments to designated usage;
5. Reduce air toxics emissions by 25%;
6. Significantly expand ambient air and stack monitoring capabilities; and
7. Implement effective Environmental Management Systems at all major facilities.

EPA recognizes that all of the goals have not been met yet, and we are committed to further work in the Calcasieu Parish and in Mossville. As part of our continued efforts, we have several activities planned over the next few months. We are planning a workshop for the Calcasieu Parish and the Environmental Justice community leaders in January 2010 to discuss emergency notification and community preparedness. Also in January 2010, we plan to hold a community meeting to discuss the specifics of implementing a preliminary assessment and site investigation for Mossville. We will be coordinating with the ATSDR as it further evaluates health concerns in the Mossville area. Further, we anticipate beginning a removal action in Bayou Verdine in spring 2010 to address sediment contamination in the lower reaches.

We view this response as part of an ongoing dialogue and hope this information is useful to you. Should you have any questions concerning the attached information, feel free to contact Deborah Ponder at 214.665.7461.

Sincerely yours,

Samuel Coleman, P.E Director Superfund Division	Carl Edlund Director Multimedia Planning and Permitting	Jeannine Hale Director Office of Environmental Justice and Tribal

Enclosure

cc: George Pettigrew, ATSDR

EPA Response to
"Industrial Sources of Dioxin Poisoning in Mossville, Louisiana: A Report based on the Government's Own Data"
By
Wilma Subra

The following information is provided to address the report "*Industrial Sources of Dioxin Poisoning in Mossville, Louisiana: A Report based on the Government's Own Data" By Wilma Subra*, (Subra Report) that has been presented and referenced on a number of occasions, including the National Environmental Justice Advisory Committee meeting in 2009. This information is intended to inform and advise the reader of specific Environmental Protection Agency (EPA) policies, activities and accomplishments that are not addressed in the Subra Report. Responses by the Agency for Toxic Substances and Disease Registry (ATSDR) are being developed concurrently and will be provided at a later date.

The issues from the Subra Report have been briefly summarized, and a specific response provided for each issue. As a result of specific requests from the community, EPA has committed to a number of additional actions not previously discussed. Each of the issues is addressed in more detail in the responses to issues. These include:

- Performing a Preliminary Assessment and Site Inspection (PA/SI) to determine if future Superfund action is appropriate
- Emergency sampling of drinking water
- Providing the community with a comprehensive list of EPA activities that are completed or ongoing
- Keeping the lines of communication open between EPA and the community

ISSUE: Is there a direct link to the types of dioxin found in Mossville residents' blood and the types of dioxin released by Georgia Gulf?

RESPONSE: The "Industrial Sources of Dioxin Poisoning in Mossville, Louisiana: A Report based on the Government's Own Data" by Wilma Subra suggests an association between the types of dioxins found in Mossville residents' blood and the dioxins released by Georgia Gulf. It is difficult to identify a single source of a chemical from these types of associations. In this case, the association of residents' blood to a single source is made even more difficult due to the fact that these same types of dioxins are typically found in people living throughout the United States. The ATSDR found that the type and distribution of dioxins in Mossville residents' blood is similar to other residents in the Calcasieu area as well as the residents of Lafayette and from blood samples collected across the U.S. However, EPA Region 6 is working with the EPA Office of Research and Development to provide a scientific evaluation of the linkage suggested in the report.

ISSUE: The Subra report claims that dioxins in soils, indoor dust and attic dust exceed EPA cleanup goals by 2 to 230 times.

RESPONSE: The EPA has a soil screening level, but it does not have a cleanup goal for dioxins in soil. The screening level for dioxin in residential soil is 4.5 parts per trillion (ppt). Screening levels are based upon conservative assumptions. EPA uses screening levels to determine where further investigation may be warranted and these levels, in general, are not directly used as cleanup levels. After considering site-specific factors and the EPA excess lifetime cancer risk range of one in ten thousand to one in a million, a dioxin cleanup of 1,000 ppt is typically used for dioxin-contaminated, residential soils. In Mossville, the average concentration of dioxin-contaminated, residential soils is 4.16 ppt. This is below the EPA screening level of 4.5 ppt and substantially below the cleanup level of 1,000 ppt typically used by EPA. Use of the soil screening level to evaluate dust is inappropriate due to differences in the intensity, frequency and duration of exposure. Indoor dust screening levels would be different than screening levels for soil. The EPA does not have established screening levels for indoor dusts. Exposure to attic dust is particularly different than exposure to soil.

ISSUE: The Subra report recommends that the government should relocate Mossville residents.

RESPONSE: EPA is currently conducting a Preliminary Assessment of the Mossville area to evaluate the risks and to determine if future Superfund action is warranted. The first step of this process will include the review and compilation of all existing data, including the data collected in the Mossville area during the Remedial Investigation/Feasibility Study of the Calcasieu Estuary, and other data collected by ATSDR, the state and the community. Following the Preliminary Assessment, EPA will conduct a Site Inspection of the Mossville area. The primary purpose of the Site Inspection will be to determine if hazardous substances are present and if any of these hazardous substances are being released into the environment. Following the Site Inspection, EPA will evaluate the site for potential National Priorities List (NPL) inclusion. To be eligible for the National Priorities List a site must have a site score of greater than 28.5 using the Hazard Ranking System (HRS). The HRS is the principal mechanism EPA uses to place uncontrolled waste sites on the NPL. EPA in conjunction with the State of Louisiana will determine if the site meets the requirements for NPL proposal. During this process EPA will work with the community to address its concerns and will hold public availability sessions.

If a site is proposed to the NPL, the first step of the clean-up process is to conduct a Remedial Investigation (RI) to characterize the nature and extent of site contamination. As part of the RI, a baseline risk assessment is performed to estimate the current and potential risks to human health and the environment posed by conditions at the site. If the baseline risk assessment indicates that there is no unacceptable risk to human health or the environment, then remedial action would generally not be warranted. If there are current or potential risks that need to be addressed, a Feasibility Study (FS) is conducted.

The FS evaluates a range of potential treatment and containment options. Relocation may be included in these options if warranted by site conditions. The FS includes an analysis of each alternative based on regulatory criteria and identifies the best option. This preferred option is

presented to the public for comment in a proposed plan, which summarizes why EPA considers this option to be most favorable. Following receipt and evaluation of public comments on the proposed plan, EPA makes a final decision and documents the selected remedy in a Record of Decision (ROD).

EPA is committed to working together with the citizens of Mossville. However, permanent relocation is only an option for NPL sites when evaluated through the remedy selection process and it has been determined to be the best overall remedy for the site.

Community meetings are planned in connection with the PA/SI work that EPA will be doing over the next couple of years. The PA is targeted for early 2010; EPA will share the report and seek community input upon its completion. There will be annual updates to compile EPA's activities in the Mossville area for the foreseeable future.

ISSUE: The Subra report recommends that the government provide the citizens of Mossville with long-term medical monitoring.

RESPONSE: In 1980, Congress created the ATSDR to implement the health-related sections of laws that protect the public from hazardous wastes and environmental spills of hazardous substances. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), commonly known as the "Superfund" Act, provided the Congressional mandate to remove or clean up abandoned and inactive hazardous waste sites and to provide federal assistance in toxic emergencies. As the lead Agency within the Public Health Service for implementing the health-related provisions of CERCLA, ATSDR is charged under the Superfund Act to assess the presence and nature of health hazards at specific Superfund sites, to help prevent or reduce further exposure and the illnesses that result from such exposures, and to expand the knowledge base about health effects from exposure to hazardous substances. In 1984, amendments to the Resource Conservation and Recovery Act of 1976 (RCRA), which provides for the management of legitimate hazardous waste storage or destruction facilities, authorized ATSDR to conduct public health assessments at these sites, when requested by the EPA, states, or individuals. ATSDR was also authorized to assist EPA in determining which substances should be regulated and the levels at which substances may pose a threat to human health. With the passage of the Superfund Amendments and Reauthorization Act of 1986, ATSDR received additional responsibilities in environmental public health. This act broadened ATSDR's responsibilities in the areas of public health assessments, establishment and maintenance of toxicological databases, information dissemination, and medical education.

Because EPA does not perform medical monitoring or perform health assessments, EPA is requesting that the ATSDR address the concerns of the citizens of Mossville. We have asked them to provide assistance directly to the community.

ISSUE: Mossville Health Concerns

RESPONSE: EPA is working in partnership with ATSDR to address the health concerns of the citizens of Mossville. ATSDR is sharing all previous investigations conducted by their agency for evaluation during the PA/SI process. As mentioned above, EPA may recommend that ATSDR consider collection and analysis of biological samples in conjunction with the EPA's PA/SI process.

In May 2006, ATSDR released its studies of blood dioxin levels in Calcasieu Parish and Mossville. The parish-wide study showed that Calcasieu residents have blood dioxin levels similar to those found in people nationally. The Mossville follow-up dioxin exposure investigation showed that older participants had elevated blood dioxin levels compared to the U.S. population; however, these higher levels are likely due to exposures in the past. Data indicates that current residential exposures are equivalent to the national average.

In mid-August 2009, Region 6 Superfund responded to community concerns about the safety of their drinking water by sampling "at the tap" in five locations in the community. One drinking water sample was taken at the local recreation center, another sample came from a local church and three samples were taken from residential drinking water taps. The drinking water sampling tested for fecal coliform (presence/absence), Volatile Organic Compounds, metals, pesticides and residual chlorine. On September 2, 2009, response letters with the sampling results included were sent to the residents whose drinking water was sampled. The residents were informed that the results for the above listed contaminants sampled for in the drinking water were all determined to be below detection levels. The concentrations of other chemicals in the drinking water samples showed no elevations above any Drinking Water Maximum Contaminant levels. Therefore, EPA concluded that the drinking water from the Mossville community did not pose a health risk to the residents.

ISSUE: Superfund Estuary Evaluation

RESPONSE: In 1999, EPA began an estuary-wide Superfund investigation that included Bayou Verdine and Bayou d'Inde, which are close to the Mossville area. EPA found elevated levels of dioxin in sediment and fish tissue in Bayou d'Inde and provided this information to ATSDR for use in their analysis. Bayou Verdine is approximately five miles long and flows between the cities of Mossville and Westlake, through the Conoco-Phillips refinery, and ultimately to the Calcasieu River. The upper reaches of the Bayou Verdine were intensely sampled due to the proximity of Mossville. Most of the upper reaches did not contain elevated levels of chemicals of concern.

Bayou Verdine – A time critical action memorandum was signed by EPA in June 2002 for a removal action in Bayou Verdine at the confluence of the West Ditch on the Conoco-Phillips refinery. The action addressed high levels of ethylene dichloride in the sediments and was completed in 2004.

In addition for Bayou Verdine, a non-time critical action memorandum was signed by EPA in July 2003 to address sediment contamination in the lower reaches. The proposed action

was principally based on an ecological impact. The Department of Justice (DOJ) and EPA are working with the responsible party to implement the non-time critical action. EPA regional staff is working to finalize the draft statement of work with the Louisiana Department of Environmental Quality (LDEQ), DOJ, ConocoPhillips Company and Sasol North America Inc. The targets areas within and along Bayou Verdine have or may have the potential to contribute to human health risk or ecological risk or injury. Work consists of preconstruction activities, development of a Removal Action Work Plan which includes design and specifications involve dredging and/or excavation of contaminated sediments and source control; dredged or excavated material management in the Trousdale Road Ponds and post-removal action work involving sediment sampling. Anticipated approval of the Statement of Work is early 2010.

Bayou d'Inde – The Bayou is located further to the south and adjacent to the estuary and is more heavily contaminated. The Superfund investigation found elevated levels of chemicals including dioxin in sediments and fish tissues. LDEQ is addressing the contamination through state authorities. The state is working to finalize the draft copy of the Corrective Action Study with EPA, National Oceanic and Atmospheric Administration, and the Bayou d'Inde Group. The draft Corrective Action Study evaluates remediation alternatives for addressing risks posed to ecological and human receptors as a result of exposure to sediment-based contaminants identified in five areas of concern which include: Bayou d'Inde, Bayou Verdine, CITGO Lagoon and Indian Marais Bayou, Clooney Island Loop, and Coon Island Loop. Anticipated approval of Corrective Action Study is October 2009.

Gulf State Utilities/North Ryan Street - Quarterly surface and ground water sampling continues by Entergy Services Inc. as per requirements set forth by the EPA Administrative Order for implementation of the 2005 Record of Decision. EPA, along with LDEQ, reviews yearly ground water monitoring reports and has begun the first five-year review for the site. The five year review is an EPA federal requirement that evaluates both the short and long term environmental and human health protectiveness of any hazardous waste left on site. The estimated completion for the five-year review is September 2010.

City Storage - In February and March of 2006, an emergency removal action was conducted at the location of City Storage in Sulfur. LDEQ notified EPA of a rental self storage unit containing abandoned, deteriorating cylinders of dangerous compressed gases and liquids. Over 550 cylinders were assessed and transported off site for disposal. Chemicals of concern included: arsine, bromine trifluoride, chlorine, cyanogen, hydrogen chloride, hydrogen cyanide, methyl chloride, nitric acid, phosgene, and others.

Rogers Enterprise - A removal action was completed at the Rogers Enterprises Site in Lake Charles in July of 2000. The time critical removal action addressed removal and off-site disposal of hazardous substances, pollutants, and contaminants at this former used/waste oil reclamation facility.

ISSUE: Government continues to allow industries to increase the amount of toxic pollution, including dioxin, in Lake Charles.

RESPONSE: The response to this issue has been divided into several sub areas to better address the concern.

Environmental Accomplishments Resulting from EPA's Work in the Mossville Area

ENFORCEMENT

The Enforcement Program works closely with LDEQ to provide comprehensive oversight for industrial sources. There are currently 91 facilities in Calcasieu Parish identified as major sources by EPA. Of these major sources, 14 currently have significant compliance issues that are being addressed by either EPA or LDEQ. Through inspections and other compliance analysis tools, EPA determines if potential violations exist. These violations and supporting evidence are then addressed either through administrative compliance and/or penalty orders, or referred to the Department of Justice. Through these enforcement actions, EPA can seek injunctive relief and penalties against the facility. As a result of Federal enforcement in the past ten years, EPA has issued 9 Consent Decrees and 85 administrative actions in Calcasieu Parish. These actions resulted in a total of $10 million in penalties and $438 million in injunctive relief. Information on the compliance profile for all industrial sources in Calcasieu Parish can be obtained through the Enforcement and Compliance History On-line (ECHO) at http:/www.epa-echo.gov/echo/.

WATER

Since August 1996, LDEQ has been the primary authority in issuing wastewater permits to municipalities and industrial facilities. EPA however, maintains an oversight role that includes, but not limited to, the review of National Pollutant Discharge Elimination System (NPDES) permits that are issued by LDEQ, to ensure protection of aquatic life and human health.

Based on national databases collected by EPA Region 6, there are approximately 14 industrial facilities (within a 2.5 mile radius) of Mossville that have or had NPDES permits. Of those 14, six facilities are now inactive, three are considered to be minor discharges, and five are major industrial facilities. All of the major facilities have NPDES permits that EPA reviewed and had no objections. Based on water quality screening and analysis (no reasonable potential to impact aquatic life and human health), monitoring and reporting requirements for dioxin were not established. In addition, four of the five include permit conditions for benzene (based on industrial category and not water quality).

In accordance with the Memorandum of Agreement between EPA Region 6 and LDEQ, EPA continues to review NPDES permits issued by LDEQ to ensure consistency with federal regulations, to maintain water quality, and to protect human health.

AIR

National air pollutant standard monitoring: EPA has established national, health based, ambient air standards for criteria pollutants. LDEQ has operated an ozone monitoring network at three sites in the Lake Charles area: Vinton, Carlyss, and Westlake. All results are made public via the EPA national Air Quality System data base. Trends show that while Lake Charles previously exceeded the national air standards for ozone, cleanup of air emissions at industrial sources in the area have resulted in significant improvements. Lake Charles met the one hour ozone standard of 124 parts per billion (ppb), and the 8-hour standard of 84 ppb, beginning in 2002.

Toxic air pollutant monitoring: In addition to the national ambient air quality standard pollutant standards, LDEQ has established state-wide air toxic standards for approximately 100 different air pollutants. Beginning in the early 1990s, LDEQ has operated samplers for hazardous air pollutants. LDEQ has a network of 21 monitors capable of monitoring for approximately 100 air toxics set up throughout the state. Based on 2008 and 2009 air toxic data from the Lighthouse Lane and Westlake sites in the Lake Charles area, there have been no exceedances of Louisiana's state ambient air toxics annual standards for any of the approximately 60 toxic air pollutants monitored. The public can request air toxics monitoring data and air toxics monitoring reports from LDEQ.

Special Toxic Air Pollution Study: There were intense community concerns in 1998 and 1999 about toxic air pollution in the Lake Charles community. Because of these concerns, The Calcasieu Parish Air Monitoring Study was conducted in 2001 and 2002. The Lake Area Industry Alliance provided approximately $1.5 million for the study at five air toxic monitoring sites in the area. The five sites were located in Vinton, Mossville, Westlake, Bayou D'Inde and Lighthouse Lane. Thousands of air quality measurements were analyzed during the study. There were only two incidences that exceeded state regulatory standards or ATSDR minimal health risk screening levels. One was related to a self-reported incident experienced by a company and steps were taken to address the situation. The Lighthouse Lane site failed to meet the Louisiana annual ambient air standard for the pollutant "vinyl chloride" which is one of the 107 pollutants measured. The significant contributions to this exceedance occurred on two days. The source of the vinyl chloride emissions was reported to LDEQ and corrected. The second high sample was a single day exceedance at one site of the LDEQ 8-hr air quality standard for carbon disulfide.

HAZARDOUS WASTE

Hazardous Air Pollutant Combustion Permits The level of hazardous air pollutants [including dioxin] that facilities are allowed to emit from combustion processes is contained in permits issued pursuant to the Clean Air Act and the Resource Conservation and Recovery Act. The LDEQ is responsible for issuing these permits with support and oversight from the EPA. Currently there are four hazardous waste combustion units at two facilities in the Mossville area. PPG Industries has three combustion units and Oxychem has one. The permits require testing of dioxin compounds. Prior to the testing, the facilities submitted the

test burn plans to LDEQ and EPA Region 6. The plans were reviewed and approved by these agencies. Before testing commenced, the facilities were required to issue a public notice and make all documents associated with the approved test plan available in public places. The PPG facility completed comprehensive performance test for its incinerators units 1 and 2 in September 2004, and met the dioxin standards for hazardous waste combustors. Similarly, the halogen acid furnace unit also demonstrated the required compliance with the emission standards for dioxin during the performance test conducted in April 2007. The test plan for Oxychem is currently under review by EPA and LDEQ.

LOCAL EMERGECY PLANNING COMMITTEE

Under State law, each Parish within Louisiana has one Local Emergency Planning Committee (LEPC). We have approximately 520 LEPCs within Region 6. Since the inception of LEPCs in 1988, Calcasieu Parish and its LEPC have been recognized as one of the most forward thinking and active LEPCs within the State and within Region 6. Calcasieu Parish hosted an EPA Region 6 LEPC Conference a few years ago. The Calcasieu Parish LEPC has a webpage at http://www.cppj.net/index.aspx?page=505 which is devoted to LEPC activities. Mr. Mason Lindsay, Chair of the Calcasieu LEPC, can be contacted by email at mlindsay@safetycouncilswla.org for additional information.

The LEPC has four Standing Committees that welcome input from citizens on projects or activities that could be accomplished within the community. The LEPC meets on a regular basis in Lake Charles as follows:

1. Full Committee meets every other even month on the third Tuesday at 10:00 at 911 Hodges Street Lake Charles, Louisiana.
2. Executive Board meets every other odd month on the third Tuesday at 10:00 at 911 Hodges Street Lake Charles, Louisiana.

Standing Committees for the Local Emergency Planning Committee:

1. Right-to-Know Committee - This Committee shall be responsible for the formulation of all policies and procedures concerning the public's Right-to-Know program; the formulation of all chemical release reporting procedures; the establishment of trade secret protection procedures; and the formulation of all record keeping and information dissemination procedures for the LEPC.
2. Public Education and Information Committee - This Committee shall be responsible for the development of a public alert and notification program; public relations with affected communities and the public at large; all publicity of the LEPC; development of public education and information program.
3. Hazardous Material Facilities Liaison Committee - This Committee shall be responsible for procedures for identification and communication with affected facilities. This Committee shall work with the Emergency Response and Resources Committee and with affected facilities to develop and test a hazardous substance emergency response plan for the planning district as required by law.
4. Emergency Response and Resources Committee - This Committee will work with the Hazardous Facilities Liaison Committee and with existing emergency response organizations in jurisdictions within the planning district to develop and test a

hazardous substance emergency response plan for the planning district as required by law. This Committee shall review existing Federal, State, and local plans for the purpose of coordination with the LEPC planning program.