

ATTACHMENT G

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: OCT 25 1983

SUBJECT: Proposed Revisions of Region V Site Selections, Appendix E,
with Explanation

FROM: W. L. Redmon
Permit Section



TO: Howard Zar
Environmental Scientist

Attached are copies of our 10/13/83 proposed revisions of the Region V site selections in the National Dioxin Study Plan with comments. They are based on our internal discussions and the input from staff biologists in each State. In general, we have tried to limit revisions, but we have replaced some stations that have been sampled in the past year or two (and for which comparable data have already been generated). We also moved a few stations to nearby sites more suited for screening the areas involved or for which tissue samples have been collected and are already available.

APPENDIX E

State

Sampling Location

Illinois

1. Mississippi River @ Thebes, IL (NASQAN)
River Mile (RM) 44
2. Illinois River @ Florence
State Station at lower end
3. Big Muddy River @ 5mi E. of Grand Tower
Rattlesnake Ferry Riffle is a good collection
site in State network
4. Illinois River @ Marseilles (NASQAN)
5. Rock River @ Joslin (NASQAN)
6. Kaskaskia River @ Vandalia
State site
7. Des Plaines River @ Lockport
Downstream end of Chicago drainage area

Indiana

1. Wabash River at Darwin's Ferry
State Core Station, RM 190
2. Wabash River @ Black Rock
State Core Station 2mi. below LaFayette, RM 298
3. Ohio River @ Uniontown, KY (RM 846)
Historic fish tissue site below Evansville
4. Ohio River @ West Point, KY (RM 629)
Historic fish tissue site below Louisville
5. White River @ Petersburg
Historic fish tissue site
6. Mississinewa River @ Mathews
Typical rural site without known toxicant
sources upstream

Michigan

All sites chosen from State Study Plan; tissue samples
collected; historic data available.

1. Kalamazoo River @ Lake Allegan
2. St. Claire River @ Marysville
3. Clinton River @ Mt. Clemens
4. Shawasee River @ Chesaning

5. Flint River @ Flint
6. River Raisin @ Monroe
7. Pine River @ Alma
8. Huron River @ Flatrock
9. Muskegon Lake (same as Site 22; Appendix L?)
10. Muskegon River @ Rogers Dam
11. AuSable River @ Mio

Minnesota

1. Mississippi River @ LaCrosse
State sampling station; fish have been collected
2. Rainy River @ International Falls
State station
3. Minnesota River @ Mankato
4. Cannon River @ Cannon Lake
"Clean" site

Ohio

1. Ohio River @ Marietta (RM 170)
Known dioxin site at Marietta; chemical
Industry area.
2. Ohio River @ East Liverpool (RM 40)
Industrialized area; historic sample site
3. Ohio River @ Gallipolis (RM 279.2)
Below Kanawka River
4. Ohio River @ Portsmouth (RM357)
Downstream of industrialized area
5. Muskingum River @ Zanesville
Historic Sampling area with chemical
industry.
6. Scioto River @ Circleville
7. Great Miami River @ Carlisle
8. Tuscarawas River @ Dover
Historic Sampling area with chemical
industry
9. Middle Branch, Little Beaver Creek @ Salem
Downstream of abandoned chemical plant.

Wisconsin

1. Wisconsin River @ Rhinelander
Downstream samples had dioxin and furans
2. Fox River @ Waukesha
Good urbanized area with no apparent sources.
3. St. Croix River @ St. Croix Falls (NASQAN)
very clean area, past sampling for pesticides, PCB's, etc. shows nothing present.
this should be an excellent "pristine" site
4. Black River @ Black River Falls
same as (3) except slightly more productive waters (nutrients)

LABORATORY SUPPORT FOR REGION V DIOXIN STUDY AND
REGION V DIOXIN TASK FORCE ISSUE

ISSUE:

We are close to finalizing the U.S. EPA Region V/Michigan DNR Dioxins/Furans and other contaminants study plan. At the present time we do not have a laboratory commitment for the Region V Dioxin study. The April 27, 1983 Memo from Edwin L. Johnson (signed by Mike Canton) only commits the Bay St. Louis, Mississippi to reviewing existing data and reviewing the Michigan State University data.

It is significant to note that the above mentioned memo does not commit Dr. Harless at RTP (Harless works for William Lacey and Michael Dellarco). In fact, Dellarco informed me on 5/4/83 that he had obtained agreement for both Harless and Dupuy to assist Region V in the completion of the existing Dow study only... he is supposed to be sending a memo to this effect.

The real immediate concern is to secure a formal written commitment to provide analytical laboratory support for the Region V Dioxins/Furans and other contaminants studies. This commitment is needed immediately or we may end up with a study design and no laboratory support.

RECOMMENDATION:

Request and obtain formal support from Edwin Johnson and William Lacey, to provide full analytical support to the Region V study with the Bay St. Louis and RTP laboratories (Dr.'s Dupuy and Harless). Request will require some reprogramming and contracting out some rather easily contractable work at the Mississippi laboratory. Sufficient capacity exists at both laboratories to start the Region V study, while the reprogramming is worked out... it is significant to note that the reprogramming should be funded and worked out at the Headquarter's level rather than at the Regional level.

Finally, it is important to know if we can get RTP and Mississippi laboratories support as soon as possible. If this support is not possible then, we must then start considering other alternatives such as staffing and equipping other U.S. EPA facilities, utilization of Argonne National Laboratory, staffing and equipping a CRL facility at Argonne, and contracting out.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 27 1983

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

TO: Valdas V. Adamkus
Regional Administrator

SUBJECT: Request for Laboratory and Technical Support
From Region V

This is in response to your April 1 request for laboratory and other kinds of technical support from OPP. As you may already know, Dr. Dupuy traveled to Michigan State University on April 11 to discuss the analytical methods and data developed in Dr. Zabik's laboratory and he plans to continue to provide consulting services to him, once the balance of data is available. If you should decide that the effort is no longer necessary, please let me know.

Because of Dr. Dupuy's responsibilities at the Environmental Chemistry Laboratory, his time away from the lab must be limited. I have asked him, however, to provide you with whatever time he can spare in order to assess the existing dioxin/furan data bases and to assist you in the design of a technically cost-effective study to define the extent of dioxins/furan contamination in the State of Michigan.

Within the next few months we will begin the FY 84 Program Planning cycle, and, at that time, we would like to give an explicit consideration to your need for assistance from Bay St. Louis. That should give you sufficient time to review the data bases, develop a plan and determine the specific kinds of support that you need for your dioxin program. That will also give me time to evaluate my own FY 84 laboratory requirements and figure out how to do some of the urine and blood analyses that we are committed to perform in relation to the HANES Hispanic health survey. I would like to point out, however, that if we are to do more than the barest dioxin work, we will need some significant help from you in the way of extramural contract dollars. If you want to discuss the resource question some more, please call Mike Conlon on 557-7092.

RECEIVED

APR 29 1983

EPA
OFFICE OF REGIONAL
ADMINISTRATION

COMP
AFRA
FMD
ESD

Note: There is not a commitment for FY '83 nor is it a definite commitment for FY '84. We have a problem currently with the Michigan Region II study.

10-2
In the interim, we are certainly pleased to be able to provide a limited amount of dioxin/furan analytical support at Bay St. Louis and Beltsville for emergency situations. Please give me a call on 557-7090 if you think more discussion is needed.

Mike Coulon

Edwin L. Johnson, Director
Office of Pesticide Programs (TS-768-C)

LABORATORY ISSUES

ISSUE #1:

The Agency has undergone a major shift to Contract laboratory usage. This procedure has resulted in less Federal staff positions being assigned to the Central Regional Laboratory (CRL). In addition, the threat of laboratory consolidation has reduced staff morale. The net result of all of the problems has been a loss of some key laboratory expertise. This expertise was unique in that the staff involved were of a high technical capability and in most cases they had several years of experience with the U.S. Environmental Protection Agency (EPA) in the laboratory. The loss of these crucial staff has decreased the CRL technical capability to be cost-effective in producing high quality data on routine as well as non-routine samples... we can still produce high quality data but much less and on fewer samples. Finally, on some difficult and non-routine samples types. We can no longer produce any data due to lack of expertise to address the analytical problems.

RECOMMENDATION:

All identified "Core" positions that become vacant must be filled via Nationwide recruitment. It is critically necessary to maintain the proper mix of expertise to address analysis quality and quantity and to maintain the capability to handle complex sample analyses. Finally, the balance between contracting out and in-house analyses favors contracting out to the extent that the cost-effectiveness of in-house laboratories is being threatened. The alarm here might not be justified, were it not for the fact that data quality continues to suffer more as the rate of contracting increases. Contracting out is so extensive that we are starting to notice conflicts of interest between the Contract laboratories and industries involved; in addition to contracting out the routine analyses, we are now starting to contract out the non-routine analyses; and we are contracting out highly visible enforcement samples (these last two items are inherently not contractable according to the Congressional A-76 document). There is a need to consider shifting some of these non-routine analyses and highly visible enforcement work back into in-house along with the necessary support resources. This shift would assist in re-establishing the balance in in-house laboratory resources along with maintaining the expertise challenge to draw and maintain highly capable technical staff.

ISSUE #2:

The Region has an immediate need to commence a Region V/Michigan Dioxins/Furans and other toxicants studies. Due to the CRL location, like of a positive commitment to use other capable EPA laboratories, and like of an existing contract or a known capable Contract laboratory, Region V does not have an available laboratory for the pending Dioxins/Furans study. In addition to like of laboratory support, no specific support resources have been identified for FY '83 or FY '84. Finally, further frustration is added to this issue in that Headquarters is now talking about taking two years to start the National Dioxin study. In fact, ORD staff are still debating which method and how much quality control should be required.

RECOMMENDATION:

Due to the urgency of the matter, the following alternatives in order of priority are listed:

1. Submit another request to Headquarters requesting the use of the Pesticides Bay St. Louis, Mississippi and RTP laboratories for the entire Region V study. (CRL to coordinate the analytical effort.)
2. Consider having Argonne National Laboratory do the Region V study via the existing Region V/Argonne IAG.
3. Consider expanding the existing partial containment laboratory concept to a full containment laboratory concept at Argonne, purchase equipment, recruit staff and have U.S. EPA staff run the Region V study at Argonne. (This alternative would require interim assistance from an outside laboratory such as Argonne.)
4. Request Headquarters to purchase equipment and staff-up the NEIC and Las Vegas laboratories to do the Region V study as well as the National study.
5. If an adequate laboratory(ies) can be found, use Contractor laboratory resources via the existing VIAR Contract to run the Region V study.

SPECIAL NOTE:

Region V potentially has a significant pervasive Dioxins/Furans problem. The immediate problem in Michigan is estimated to only be the "tip of the ice berg". Accordingly, in the short term we need the RTP and Mississippi laboratories for the expediency of the matter. In the long term (1-2 years), Region V needs to seriously consider purchasing the equipment (\$500,000-\$1,000,000) and hiring 4-5 technical staff to perform in-house analyses.

ISSUE #3:

Program staff are currently planning extensive environmental surveys without any formal planning process (in many cases), CRL input is being omitted or refused, and no input from the Quality Assurance Office (QAO) is being utilized. Planning of sophisticated environmental surveys relies on proper objectives setting, proper station selection, proper parameter selection, statistically valid quality control audits, sample preservations, split samples, proper custody and sample handling procedures, analytical support, and data analysis/reporting. The CRL and the QAO (more times than not) are the only Regional entities with the expertise capability to properly design the QC and select the appropriate parameters and attendant analytical methods. When this input is omitted, our experience in the past indicates that entire expensive time consuming surveys can be lost due to incompleteness of the data or the CRL must spend exorbitant time trying to bail out the defective projects. Often times the bail out time exceeds the time that would have been spent in the first place.

RECOMMENDATION:

The Region needs to establish policy, that the Environmental Services Division (ESD) has specific technical responsibility in the design of environmental studies. The QAO has formal review and sign-off responsibility on all environmental data gathering studies. Due to the technical specificity of custody sample handling, parameter selection, and the analytical methodology involved, the CRL needs to participate in the survey planning process. Furthermore, there most likely is a resource discrepancy in this process... the programs insisting on performing services that should be done by the CRL and QAO probably should be allocating resources to the ESD to do this work. Accordingly, an appropriate resource reallocation should also be considered with this recommendation.

MAK 03 1504

2

Howard Zar
Environmental Scientist

Donald Sanning, Program Manager
Uncontrolled Hazardous Waste Sites, SHWRD-Merl

Thru: David Stringham, Deputy Director
Waste Management Division

Enclosed find a procurement and a Description of the Task Force
"Support to Region V Dioxin Study" for implementation under the TMS-3
contract, 68-03-3113. Questions in this matter should be referred to me
at 886-1491.

cc: G. Amendola, 5SEDO ✓

S. Buch, 5W

H. Zar, 5WQ

P. Redmon, WQP

Attachments

H. Zar/ww 3/7/84: 6-1491

Fenner _____

Description of Task

In implementing EPA's National Dioxin Strategy, Region V will undertake a series of investigations, data collection activities and analyses to determine the sources and levels of dioxin contamination, and the extent of exposure to the public and wildlife.

The National Strategy envisions a seven tiered approach to the dioxin problem, focusing on 2, 3, 7, 8 - tetrachlorodibenzo-p-dioxin (2, 3, 7, 8 TCDD), the most toxic of dioxin isomers. Integral to this strategy are the collection of information on various industrial sites and management of the data received. Data management efforts for the proposed effort are focused primarily in tiers 3 and 6 of the National Strategy, these being:

Tier 3 - Sites (and associated disposal sites) where 2, 4, 5, - TCP and its derivatives were formulated into pesticide products.

Tier 6 - Certain organic chemical and pesticide manufacturing facilities where improper quality control may result in the formation of 2, 3, 7, 8 - TCDD.

These data management/analyses activities are important preliminary steps, forming the basis for Regional decisions on site inspections and sampling activities. However, ongoing regional activities and investigations severely limit the resources available for this important undertaking. Region V is therefore requesting that contractor assistance be made available under the Research and Development Contract on Remedial Measures for Uncontrolled Hazardous Waste Sites.

It is essential that persons assisting in this effort work closely with Region V staff and be capable of performing quick response tasks. Specific activities to be undertaken by the contractor include:

- Meeting with Region V staff to clarify and confirm the scope of specific tasks
- Contacting other EPA staff to benefit from their experience in similar data collection effort
- Preparing mailings of the information requests to identified facilities assembling data resulting from such requests
- Developing a data management scheme sensitive to the ready interpretation of data received
- Undertaking necessary survey follow-up activities
- Analyzing and summarizing the data base under Regional Director, providing the necessary documentation for meetings

- knowledge gained in both the technical and logistical aspects of this effort will be shared with other interested EPA regions

We anticipate that Regional activities in support of the National Dioxin Strategy will continue through FY '85. To be successful in this effort it is essential that adequate personnel are available at the outset, laying a solid technical foundation for future EPA activities in

Meeting with Region V staff to clarify and confirm the scope of this highly sensitive area.

Activities will be specified in writing by the task manager. Outputs will be in the form of files, mailings, data summaries & documentation specified by the task manager.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: MAY 31 1983

SUBJECT: Region V Dioxin Research Needs

FROM: Valdas V. Adamkus
Regional Administrator

TO: Courtney Riordan
Assistant Administrator for Research
and Development (W913)

As you know, Region V is planning to conduct a major survey for dioxins and other toxic substances as part of a national study during FY'84 and FY'85. The regional effort includes analyses of native fish across the region and in the Great Lakes, and an intensive site study at the Dow Chemical-Midland Plant and surrounding areas in Midland, Michigan. This study will be conducted with the Michigan Department of Natural Resources.

In order to draw meaningful conclusions from this work, it is apparent that additional information and data beyond the scope of these studies must be made available in the near term. Specifically, the Agency needs to address the potential for widespread low-level release of PCDDs, PCDFs, and other toxic substances from a range of industrial, utility, and municipal operations. We are aware that a significant amount of work has been initiated in this area (e.g., sampling of coal-fired utilities, municipal incinerators, etc.). However, there does not appear to be any mechanism in place to assemble results from all of those studies, along with results from additional studies that may be necessary to adequately characterize such releases. We are requesting that this question be addressed as a national research project. Isomer-specific analyses of PCDDs should be included in ongoing and future studies to the maximum extent possible.

We believe the Agency should also fully evaluate Dow Chemical's hypothesis that dioxins are formed in virtually all combustion processes. This could be accomplished with several straightforward experiments that would include combustion of various materials under controlled conditions such that the feed materials, combustion gases, and residues could be properly analyzed. Again, isomer-specific analyses would be necessary.

Finally, aside from limited data for native fish, there is virtually no information regarding the distribution of dioxins within fish, i.e., concentration in fatty tissue or whole fish vs concentration in standard edible portions. Such information would be helpful in assessing the public health risks of consuming fish from waters with dioxin contamination

DOCUMENT 288