
RESPONSE AND TECHNICAL ASSESSMENT SUPPLEMENT 1

***In Response to: ATSDR Petitioned Health Consultation
Public Comment Release
Martin County Coal Slurry Release,
Inez, Martin County, Kentucky
EPA Facility ID: KYNOOO407233***

Prepared by:

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Martin County Project Phase II, Building Civic Capacity through
Community-based Environmental Decision-making
Funded through: Flex-E-Grant, Appalachian Regional Commission
Administered through: Eastern Kentucky University

SUPPLEMENT OVERVIEW

This supplement provides a summary of the ATSDR September 23rd public meeting in Inez, Kentucky. **By the end of the September 23rd meeting, ATSDR Regional Director, Bob Safay stated for the public record that ATSDR would be willing to review, “any new and verifiable” data in reevaluating its own initial public health assessment of the October 2000 slurry release.** The Martin County Project Team (MCPT) wishes to acknowledge ATSDR for its willingness to reconsider its original site assessment and its willingness to extend the public comment period on the Martin County slurry until October 14, 2003. To assist ATSDR in its own site reassessment and review, we have summarized the comments and recommendations of citizens as well as the comments and recommendations presented by our technical consulting team at the September 23rd public meeting. Based on our analysis of public meeting comments, these comments and recommendations seem to fall into four major areas of concern:

1. Characterization of the pollution release
2. Collection and analysis of public health data
3. Drinking water as a potential exposure path
4. Data collection and analysis methods

Public comments and recommendations set forth at the September 23rd meeting have been sorted within this supplement into the above four categories for ATSDR easier review and consideration. To further ATSDR assist in its review and reassessment of its initial public health assessment in Martin County, Kentucky, public and technical comments and recommendations are summarized in bullet and outline form.

1) Based on public comments put forward at the September 23rd public meeting, it was recommended that ATSDR...

FULLY CHARACTERIZE THE POLLUTION RELEASE

- **CERCLA 2000 AND PIKE COUNTY 1985:** During the September 23rd public meeting and comment period, it was brought to the attention of ATSDR that verifiable documentation had been provided to ATSDR by the Martin County project team in our recently submitted *Response and Technical Assessment*. It was heavily recommended that ATSDR consider this new and verifiable data in reviewing its own onsite assessment of the Martin County site.¹ At the September 23rd public meeting, it was encouraged that ATSDR pay specific attention to the

¹ Available online: MCPT. September 2003 Response and Technical Assessment is available online: http://www.anthropology.eku.edu/MCSPiRIT/mcpt_ATSDR_cvr.htm

verifiable documentation presented in *Appendix A* and *Appendix C1 and C2* of the *MCPT Response and Technical Assessment*.

1. **Appendix A:**² Verifiable documentation presented in Appendix A documents EPA Region 4's original site classification of the October 2000 slurry release as an "imminent and substantial hazard." Documentation reports loading concentrations of arsenic, chromium, copper, lead and zinc being released into area water systems at the following respective levels: 5,207 lbs., 6,060 lbs., 20,828 lbs., 10414 lbs. and 29,159 lbs.

Upon review of this verifiable documentation, ATSDR is compelled to scientifically and legally address how the original "imminent and substantial hazard" assessment under EPA Region 4's CERCLA authority does or does not apply in the ATSDR's later classification of the site as representing "no apparent public health hazard."

2. **Appendix C1 and C2:**³ Verifiable documentation presented in Appendix B of our Response and Technical Assessment documents a 1985 case of slurry contamination in Pike County, Kentucky. EPA Region 4 classified the case as an "imminent and substantial endangerment" under its RCRC authority and reported Arsenic, Barium, Cadmium, Chromium, Lead, Selenium and Silver exceeding screening values at a rate of 2,000 to 10,600 over screening (MCL) standards.⁴

Upon review of this verifiable data, ATSDR is compelled to speak scientifically and provide full scientific justification as to why or why not the Pike County case does or does not apply in understanding contaminant impacts of the massive slurry release on ground and surface water in Martin County, Kentucky. ATSDR is compelled to provide the public with sound scientific reasoning and verifiable empirical documentation, based on a systematic review of the ground water registry and ground water flow, as to the basis of its explanation.

- **TOXICOLOGICAL PROFILE:** Based on the September 23rd public meeting and the discussion that ensued, ATSDR is obligated to provide the public with the toxicological profiles for Magnetite and Acrylamide/ Polyacrylamide as these are two principal agents used coal preparation and treatment. During this September

² Available online: Original CERCLA complaint on file in Appendix A of the MCPT Response and Technical Assessment: Available online:
<http://www.anthropology.eku.edu/MCSPIRIT/PDF/AppendixA.pdf>

³ Available online: Pike County, Agreed Order on file in Appendix C1
http://www.anthropology.eku.edu/MCSPIRIT/PDF/Appendix_C1.pdf
and Appendix C2 http://www.anthropology.eku.edu/MCSPIRIT/PDF/Appendix_C2.pdf

⁴ See: Appendix C2, Available online:
http://www.anthropology.eku.edu/MCSPIRIT/PDF/Appendix_C2.pdf p. 3.

23rd transaction, ATSDR lead health assessor stated for the public record, that magnetite (Fe₃O₄) was assessed as Iron (Fe) in the public health impact analysis. A citizen representative then requested that ATSDR toxicologist, Danielle Devoney provide the public with the scientific justification (and full reference to the scientific literature) as to why Fe₃O₄ and Fe were considered toxicologically similar.

- **TOXICOLOGICAL PROFILE Continued:** During the September 23rd public meeting and comment period, the Martin County public recommended that ATSDR review and provide full reference to the most recent science and toxicology on arsenic and arsenic exposure beyond the 1985 citation referenced by ATSDR in its public health assessment.⁵

2) *Based on public comments put forward at the September 23rd public meeting, it was recommended that ATSDR...*

COLLECT AND ANALYZE PUBLIC HEALTH DATA

- **METAL SENSITIVITY:** ATSDR in its September 23rd public meeting referenced early incidences of reported skin rashes and skin irritations within the community after the October 2000 release. At the public meeting, ATSDR dismissed these early incidences as probable cases of “metal sensitivity.” The question was then posed by a representative of the public on how ATSDR reached its conclusions: Did ATSDR do any follow-up interviews to determine whether these purported individual cases of skin irritation were due, in fact, to persons being sensitive to metals? ATSDR stated at the September 23rd meeting that they had not conducted any follow-up investigations of earlier incidences and complaints. It was then pointed out to ATSDR that they then had no scientific basis for their stated public assertion of “metal sensitivity.” It was then recommended by a representative of the public that ATSDR do follow-up investigations and interviews with area citizens on past and current reported skin rashes and irritations as well as on other health incidences to empirically determine probable cause and explanation.
- **REPORTED CANCER CLUSTER:** At the September 23rd public meeting a Martin County citizen reported four verifiable cases of cancer in her small neighborhood community at the top of Coldwater Creek. The Coldwater area spoken of was one of the areas most heavily inundated by the massive sludge release of October 2000. Given four reported and verifiable cases of cancer

⁵ U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. 2003. Petitioned Health Consultation. Public Comment Release: Martin County Coal Slurry Release. Inez, Martin County, Kentucky. EPA FACILITY ID: KYN000407233. April 22. p.10.

among several families living at the top of Coldwater Creek, it is recommended that ATSDR systematically investigate this cancer cluster to determine its probable cause.

- **HEALTH STUDY:** If this requires that ATSDR actions in Martin County be reclassified than we recommend that ATSDR reclassify the nature of its actions and investigations in Martin County, Kentucky from that of a health assessment to a complete health study. It is recommended that ATSDR initiate a complete and systematic health investigation of the Martin County slurry release on area human health.

- **SENSITIVE AND VULNERABLE POPULATIONS:** Survey data reported by a citizen at the September 23rd public meeting shows only 9% of area families drinking from the public (city) water system and the other 91% of families reporting otherwise. According to the take-home survey, 78% of area families reported regularly purchasing bottled and distilled water.
 1. Other verifiable survey data provided by this area citizen showed that the purchase of bottled and distilled water represented a considerable added monthly cost to the typical family food bill. As explained during the public meeting by the area citizen, Martin County is a poor county.⁶
 2. Many in Martin County have already compromised diets due to low income and high unemployment. Additional water costs added to the family food bill will compromise family diet and nutrition further.
 3. In addition, due to already high and verifiable levels of poverty, unemployment and disability, many in Martin County already receive inadequate health and medical care.
 4. As a result of these verifiable survey and demographic facts, it is recommended that ATSDR address the extent to which various populations in Martin County are already over burdened by poor health, nutrition and disease.
 5. It is then recommended that ATSDR scientifically review how these additional risk factors might make certain subpopulations prone to lower levels of chemical toxicities than standard screening levels set for health populations.
 6. ATSDR has already stated its interest in sensitive and vulnerable populations. In its draft public health assessment, ATSDR dismissed current arsenic screening levels as an overestimation of risk due to studies based on nutrient deficient populations: “It is also possible that the protein and methionine –

⁶ Martin County, Kentucky classifies as a “distressed” county under Appalachian Regional Commission guidelines due to high levels of poverty and unemployment and low income levels. This verifiable documentation (FY2004) is available online through the ARC Website: <http://www.arc.gov/index.do?nodeId=1874>

- deficient population studied in Taiwan was more sensitive than typical U.S. populations, due to a compromised ability to detoxify...ingested arsenic...”⁷
7. Given ATSDR’s already stated concerns with chemically sensitive subgroups, we recommend that ATSDR address how poor health and nutrition might affect certain subpopulations in Martin County, making them more at risk to chemical toxicities at lower concentrations.
 8. This is an important public health issue considering that it is the poorest and most indigent families in Martin County that are relying most on public tap and ground water as their sole drinking water source.
 9. ATSDR is compelled to address this based on the 1994 Environmental Justice Executive Order.⁸
 10. In short, it is heavily recommended that ATSDR in its second draft PHA, scientifically address and empirically document how chemically sensitive and vulnerable subpopulations might be or might not be more at risk to chemical toxicities than healthy populations. This is central to protecting human health, given that it is the most economically distressed subpopulations of Martin County that are relying on the public water system as their drinking and cooking water source.

Based on the September 23rd public comment period, it was recommended that ATSDR...
SYSTEMATICALLY REVIEW THE DRINKING WATER SUPPLY AS A POTENTIAL PATHWAY OF EXPOSURE

- **ATSDR STATES:** In its draft public health assessment ATSDR dismissed the public drinking water system as a potential exposure pathway:
- “The community was particularly concerned about the potential for slurry materials from the coal slurry spill event to enter the local drinking water treatment reservoir and then be ingested by residents that use public water. After investigation, it seems that slurry materials did not directly enter the water treatment plants during the spill incident. According to Martin County Water District representatives, the permanent water intake on Tug Fork was closed for

⁷ U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. 2003. Petitioned Health Consultation. Public Comment Release: Martin County Coal Slurry Release. Inez, Martin County, Kentucky. EPA FACILITY ID: KYN000407233. April 22. p.10.

⁸ Under: *Agency Responsibilities*. “To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands (Section 1-101).” EO 1994 12898: FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS. Available online: <http://www.epa.gov/fedsite/eo12898.htm>

maintenance prior to the slurry release. The plant used a temporary water intake on the Middle Fork of Rockcastle Creek prior to and following the spill event. To the best of our knowledge, the Martin County Water District #1 did not take slurry materials into the water treatment system, preventing it from being a pathway of exposure for residents of Martin County.”⁹

- **PUBLIC CONCERNS CONTINUE:** At the ATSDR September 23rd public meeting, it was apparent that public concerns over the drinking water source continue. Survey results on current concerns were reported by an area citizen. Based on 78 take-home family surveys (response rate 52%), 87% of families ranked the quality of the drinking water as “poor” or “very poor.”
 1. These survey findings parallel earlier findings from the Martin County Project Team’s 2001 community impact survey. Our 2001 survey findings showed 80% of citizens rating the public water system as a “serious problem” in comparison to only 20% of Perry County (control community) residents.¹⁰
 2. Current survey data presented at the September 23rd public meeting shows local concerns over the integrity of the drinking water supply persisting overtime.
 3. Given current levels of public concern, it was recommended at the September 23rd public meeting, that ATSDR “collect more data” and it was stressed that ATSDR especially revisit and review the public water system as a potential exposure pathway.
 4. The following bullets provide more pointed recommendations on reviewing the public water system as a potential exposure path as expressed by area citizens present at the September 23rd public meeting.

- **VERIFIABLE DATE AND DATA ON THE SHIFT FROM THE TEMPORARY TO PERMANENT INTAKE:** The ATSDR states in its public health assessment that the Martin County Water District (MCWD) was not drawing from its original intake at the time of the spill and therefore, “did not take slurry materials into the water treatment system.”¹¹

⁹ U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. 2003. Petitioned Health Consultation. Public Comment Release: Martin County Coal Slurry Release. Inez, Martin County, Kentucky. EPA FACILITY ID: KYN000407233. April 22. p.8

¹⁰ These, and other verifiable survey percentages, are available online:
http://www.anthropology.eku.edu/MCSPiRiT/PDF/Survey_codebook_survey_report.pdf
The Martin County Project Team’s survey methodology and research designed is summarized on pages 7-12 of our July 2002 report to the Appalachian Regional Commission. Available online:
http://www.anthropology.eku.edu/MCSPiRiT/PDF/Final_Report.pdf

¹¹ U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. 2003. Petitioned Health Consultation. Public Comment Release: Martin County Coal Slurry Release. Inez, Martin County, Kentucky. EPA FACILITY ID: KYN000407233. April 22. p.8

1. However verifiable data shows the MCWD plant pulling from its permanent intake on the Tug River in early January 2001 (see Appendix A).¹²
 - NOTE: Area citizens at the September 23rd public meeting stated that the MCWD began pulling raw water from its permanent intake as early as December 2000. Verifiable documentation on this earlier date is presently being collected from the MCPT for submission to ATSDR.
 2. This changeover to the permanent was less than four months after the massive pollution release based on verifiable data presented, in full, in Appendix A of this supplement.¹³
 3. We recommend that ATSDR correct its original statement in its draft public health assessment due to the verifiable documentation presented in Appendix A that the MCWD began pulling from its permanent intake on the impacted Tug River in early January 2001, if not before.
 4. Given this verifiable documentation, ATSDR is now compelled to scientifically address in its second draft PHA how this does or does not influence ATSDR's initial assessment that the public water system does not represent a potential exposure pathway.
- **SPRING TURN-OVER AND RE-SUSPENSION:** A citizen at the September 23rd meeting asked that ATSDR scientifically address how spring turn-over and seasonal flooding and the subsequent re-suspension of slurry particulate matter does or does not affect the public water system at the intake and at the reservoir.
 - We recommend that ATSDR provide the public with its science in its second draft public health assessment (PHA).
 - ATSDR states in its PHA on the Martin County slurry release that “the increase of particles in the water during a blackwater event may result in slurry materials being taken into the water treatment plant. The Martin County Water District #1 treatment process removes the majority of suspended sediment and therefore any associated metals from drinking water, limiting exposures to sediment particles. Water quality is tested on a quarterly basis to ensure that the treatment plant is working correctly. This is not considered a completed pathway of exposure to slurry materials. *A properly operating water treatment plant would not allow exposures of significance.*”¹⁴ Verifiable documentation shows that the Martin County Water District was cited for any number of noncompliance violations in

¹² Documented on page 44 of the Martin County Project Team's July 2002 report, to the Appalachian Regional Commission, http://www.anthropology.eku.edu/MCSPIRIT/PDF/Final_Report.pdf

¹³ Appendix A presents verifiable documentation through a news report. Cletus Turner (December 27, 2000) EPA Ok'd Pumping from Tug. The Martin County Sun. p.2.

¹⁴ U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. 2003. Petitioned Health Consultation. Public Comment Release: Martin County Coal Slurry Release. Inez, Martin County, Kentucky. EPA FACILITY ID: KYN000407233. April 22. p.7.

December 2000. This verifiable documentation is included as Appendix B of this supplement.¹⁵

1. In addition, a verifiable review of the regulatory record, as reported in our July 2001 report, shows no follow-up record by the KY State DOW to assure compliance of standard operating procedures prior to MCWD pulling raw water from the permanent intake on the impacted Tug River by early January 2001.¹⁶
 2. Other verifiable data through the Kentucky Public Service Commission shows the Martin County Water District investigated for noncompliance and poor management through 2002 by the Kentucky Public Service Commission.¹⁷
 3. Other verifiable data spoken to by area citizens at the September 23rd public meeting, suggests that the MCWD is consistently out of compliance in submitting reporting records to the Kentucky State Drinking Water Branch.
 4. Our own verifiable review of MCWD records on file at the State Drinking Water Branch shows further verifiable gaps in water quality reporting by the MCWD as well as the private water treatment facility owned and operated by the Martin County Coal Corporation.¹⁸
 5. Based on a verifiable history of noncompliance and poor operating procedures, we recommend that ATSDR systematically review and revisit its page 7 statement, *“A properly operating water treatment plant would not allow exposures of significance.”*
 6. Based on the verifiable data and documentation provided here, ATSDR is now compelled to provide adequate scientific argument as to why or why not their original statement applies –or- does not apply in determining the adequacy of the MCWD treatment facility in handling heavy concentrations of metals, organic and inorganic compounds.
- **ADDITIONAL SAMPLING AND MONITORING:** Considering verifiable gaps in data reporting and agency monitoring methods, we recommend that ATSDR request additional sampling and monitoring on the impacted watershed in its further review and evaluation of this potential exposure path. At the

¹⁵ Source: KY Cabinet of Natural Resources and Environmental Protection. Department of Environmental Protection. (December 29 2000) *Letter to Niles Combo*, Martin County Water District from Vicki Ray, Drinking Water Branch Manager. Division of Water. Presented in full in Appendix B.

¹⁶ Documented on page 44 of the Martin County Project Team’s July 2002 report, to the Appalachian Regional Commission, http://www.anthropology.eku.edu/MCSPIRIT/PDF/Final_Report.pdf

¹⁷ View this verifiable documentation and Public Service Commission hearings on the Martin County Water District plant online: http://www.psc.state.ky.us/agencies/psc/webcast/AV_Index.htm

- Go to: 2002-00116 –
 - Martin County Water District Martin County Water District (April 25, 2002)
 - Martin County Water District (June 6, 2002)

¹⁸ See: Martin County Water District. KY State Division of Water, Drinking Water Branch & Martin County Coal Corporation. Water Treatment Facility. KY State Division of Water. Drinking Water Branch. Files available for viewing upon request: KY State Division of Water, Records Division: Contact Information: Kentucky Division of Water 14 Reilly Road Frankfort, KY 40601 (502) 564-3410

September 23rd public meeting, it was recommended that *state-of-the-art* water quality testing protocols be used by EPA Region 4 and that ATSDR request EPA Region 4 conduct a full library scan of raw and finished water sources.

1. We further recommend considering past verifiable documentation of agency and company collusion in environmental assessment and monitoring at the Martin County site which was spoken to in the MCPT Response and Technical Assessment and extensively documented in July 2002 Report to the ARC ¹⁹ that ATSDR recommend to EPA Region 4 that a citizen oversight committee be appointed to oversee water quality testing and assessment of the Martin County watershed.
 2. This is in accordance with our past recommendations to the ARC and the Office of the Governor, and past and recent recommendations by the Kentucky States Environmental Quality Commission. Both the KY EQC and the MCPT have consistently recommended increased citizen involvement in environmental recovery and monitoring in Martin County, Kentucky.²⁰
- **OTHER IMPACTED COMMUNITIES:** At the September 23rd ATSDR meeting citizens from the surrounding areas recommended that ATSDR also assess the impact of the slurry spill on other public water systems, especially the Lawrence County (Louisa) Water Treatment Facility. Verifiable geographic data spoken to by an area citizen indicated that the Lawrence County Water facility might also pose present a potential exposure path to area residents. It was recommended that ATSDR also assess the drinking water source in Lawrence County as a potential exposure path as of the October 2000 slurry release.

Based on the September 23rd public comment period, it was recommended that ATSDR...
REVIEW ITS DATA COLLECTION AND COMPILATION METHODS

BACKGROUND SOILS DATA: During the September 23rd public meeting, a question was asked to ATSDR concerning background soil data that was used to compare impacted with un-impacted areas. A citizen representative explained to ATSDR and the

¹⁹ Pages 15-28 of the Martin County Project Team's July 2002 report to the Appalachian Regional Commission provide a verifiable summary of documented incidences of agency and company collusion at the Martin County site. Available online:
http://www.anthropology.eku.edu/MCSPIRIT/PDF/Final_Report.pdf

Appendix B of the Martin County Project Team's September 2003 Response and Technical Assessment provides a verifiable incident of agency and company collusion at the Martin County site. Available online:
http://www.anthropology.eku.edu/MCSPIRIT/PDF/Appendix_B.pdf

²⁰ See, for example, our Executive Summary of July 2002 recommendation to the ARC, available online:
http://www.anthropology.eku.edu/MCSPIRIT/PDF/Executive_Summary.pdf Recent KY State EQC July 2003 Recommendation to the Governor and EPA Region 4, available online:
<http://www.kyeqc.net/resolutions/mcc%20epa.pdf>

public present that the State of West Virginia soil ranges there were used by ATSDR as background data were inappropriate given wide variances in the geology and the Appalachian orogeny in the eastern part of the state. ATSDR then explained that they also used Big Sandy watershed soil ranges. Though, these ranges were not reported as separate in the public health assessment.²¹ It was then recommended by the public representative that all background data sources used in establishing range comparisons be fully cited and that these separate data sources be reported as separate range data as would be standard scientific reporting protocol. This would allow the public and its representative to better assess the validity and verifiability of the soil data presented by ATSDR and to separately assess and evaluate the impacts of the slurry release on area soils based on the clear presentation of the data and data comparisons.

1. It was also recommended that verifiable background data from unaffected areas of Coldwater creek be cited, analyzed and presented in the ATSDR soils impact analysis.²² Some of this other data is summarized and discussed in the MCPT *Technical Assessment* of the ATSDR PHA.²³
2. In addition, to allow the public to better assess the data and distributions, the MCPT recommends that the data be presented more fully than range data. We recommend that ATSDR report also the mean, median, mode, standard deviation, standard error for both impacted and baseline soil registry data. We recommend that data be presented in more standard statistical format for better outside public evaluation of the chemical distributions of soils data presented ATSDR. Below is template that we recommend ATSDR use when reporting and comparing impacted and not impacted soils.

Big Sandy Watershed Soils Registry	State of West Virginia Soils	Unaffected Soils, Coldwater Creek	Coal Sludge/ Slurry
Arsenic X+/-SD, SE (Min, Md, Mdn. Max, N)			
Barium....etc.			

²¹ See: Table 2: Range of metals detected in slurry and background samples. U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. 2003. Petitioned Health Consultation. Public Comment Release: Martin County Coal Slurry Release. Inez, Martin County, Kentucky. EPA FACILITY ID: KYN000407233. April 22. p.7.

²² See: Martin County Coal Company Slurry Release. Project Impact Report #1. (2001). November 16.

²³ See: Melissa Dieckmann (2003, September) Technical Assessment. Available online: http://www.anthropology.eku.edu/MCSPiRIT/PDF/Section2_Response.pdf

- **DRINKING WATER DATA APPENDED:** It was also recommended at the September 23rd public meeting by a representative of the public that drinking water data (from the permanent intake) be fully presented (X+/- SE; X+/-SD with min, max, mdn, md) with comparison screening values for metals and organics (volatiles and non volatiles). And that drinking water data from the permanent intake be presented, in full, in an Appendix to the PHA for public review and inspection.
- **REPORT WATER DATA FROM PERMANENT SOURCE:** During the September 23rd public meeting, it was brought to the attention of ATSDR that the public health assessment (PHA) is written to suggest that much of the tap water data summarized and casually discussed by ATSDR in its PHA was based on data drawn from the temporary intake source. For example, ATSDR concludes, “no adverse health effects are expected to occur as a result of drinking water from the alternate water source (p.12).” In addition, page 3 (paragraph 6)²⁴ and page 8 (paragraph 2) of the ATSDR PHA also provide similar statements to suggest that much of ATSDR’s drinking water assessment was based on temporary intake data.
- During the September 23rd meeting, it was recommended by a representative of the public that these statements be clarified and that drinking water data from the permanent intake be the subject of analysis and the topic of scientific discussion in the ATSDR public health assessment (PHA).
- **COMBINED TOXICOLOGICAL IMPACTS:** During the September 23rd meeting, a question was asked to ATSDR concerning its measurement and assessment of combined and interactive toxic impacts on human health. A representative of the public noted that chemical toxicities were only reported and compared individually with individual screening levels (*MCLs*); it was noted that combined and interactive effects were not presented nor reported. ATSDR then stated for the public record, at the September 23rd public meeting, that those analyses were left out of the health assessment since it was a document written

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- Page 3: paragraph 6: “*Following the spill incident*, ATSDR’s Emergency Response Section assisted EPA Region 4 in evaluating available drinking water data. Also, in response to a request from the Mayor of Inez, ATSDR provided a written evaluation of the raw water data and tap water samples collected by the Inez Waste Water Department. The Metals concentration detected were below maximum contaminant levels (MCLs) and not expected to cause health effects due to ingestion. ...”
- Page 8: paragraph 2: “*Residents were drinking water from a temporary intake immediately following the spill incident and noticed changes in their water quality.* An evaluation of the water quality results for the Martin County Water District #1 are discussed in the public health implications section.”

Taken from: U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry. 2003. Petitioned Health Consultation. Public Comment Release: Martin County Coal Slurry Release. Inez, Martin County, Kentucky. EPA FACILITY ID: KYN000407233. April 22. pg. 2, 8.

mainly for the general public. Upon the request of the public representative, ATSDR agreed at their September 23rd public meeting to include in their second draft health assessment of the Martin County slurry release an appendix reporting quotients of combined and interactive toxicological impacts on human health on water and soil data as is standard ATSDR practice in assessing toxic impacts as was stated by ATSDR at the September 23rd public meeting.

Appendix A

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ber, 298-7077."

said MCES is trying
n in Warfield for an
ion so quicker re-
ea can be provided.
ayor, Tom Hayes

to help handle emergencies.

"We're checking out a couple
of places in Warfield, but we
haven't settled anything yet."

The Judge's office was closed
Friday, Monday and Tuesday.

EPA OK'd pumping from Tug

By CLETUS TURNER
SUN News

LICK BRANCH — Safe drink-
ing water and how to obtain it is
an on-going question facing Mar-
tin Countians in the aftermath of
the October 11, sludge spill.

State Div. of Water rep. Gene
Blair said recent rains have placed
the county in the position of "wait
and see" as to what the effect of the
sludge remaining in streams will
have. When the rains began two
weeks ago, Blair warned area wa-
ter districts that it was "their call"
on the use of the Tug River as their
primary water source.

Water plant operators at Ker-
mit and Inez had opted to begin
pumping from the Tug River again
after weeks of using temporary
lines provided by Martin Co. Coal.
But the Tug River pumping was
stopped after the rains brought
black water out once again.

"We're waiting for the turbid-
ity levels to go down some. We
don't want to pump black water
into the reservoir," Inez plant man-
ager Niles Cumbo said.

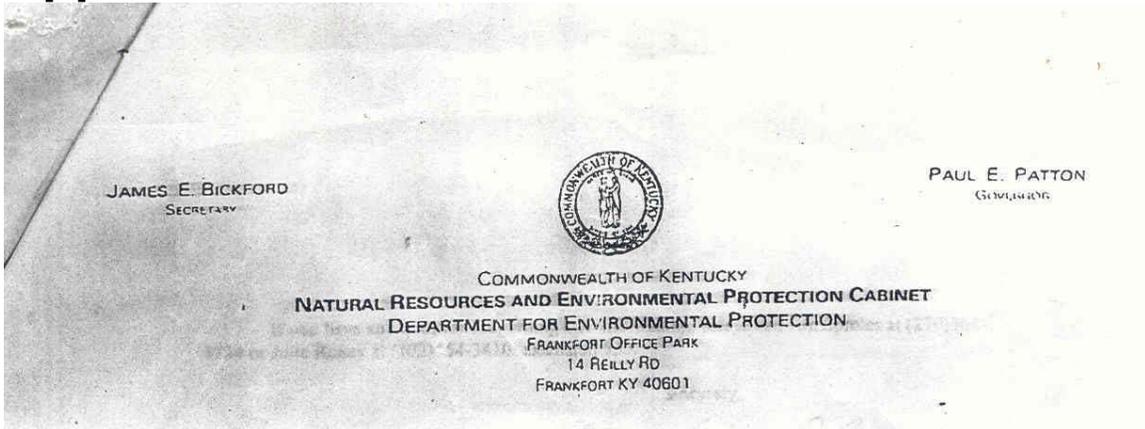
Over the Christmas weekend,
water pressure in the entire county
weakened. On Christmas eve and
morning water service was com-
pletely off in the Warfield-Lovely
area. Then Tuesday morning wa-
ter service was off in Inez.

Cumbo said two water lines
had broken but he does not know
exactly what caused the breaks. "I
wish I knew," Cumbo said. He re-
fused further comment yesterday.

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Taken from: Cletus Turner (December 27, 2000) EPA Ok'd Pumping from Tug. The Martin County Sun. p.2.

Appendix B



December 29, 2000

Mr. Niles Combo
Martin County Water District
HC 69 Box 875
Inez, Kentucky 41224

Dear Mr. Combo:

Due to recent concerns with the quality of water produced at the Martin County Water District (MCWD) water treatment plant (PWSID #0800273) in Inez, Kentucky, personnel from the Drinking Water Branch's (DWB) Technical Assistance unit and the Hazard Regional Office inspected the facility on December 12-13, 2000.

Turbidimeters were placed on the filter effluent piping of two (2) filters in order to obtain filter profiles before and after a backwash. A filter backwash was observed, jar tests were run to determine the correct coagulant dosage, physical measurements were made to evaluate C-T compliance, sludge depth measurements were made in both hydrotreaters, flow measurements were attempted in each hydrotreater and pH/turbidity/chlorine residual profiles were developed through the plant processes.

Analytical data was reviewed for compliance with new regulations and samples were collected for total organic carbon, THMs, HAAs, bromide, metal and minerals analyses. The preliminary results of the inspection indicate that the emergency water source being used by the MCWD plant should not result in water quality concerns in the distribution system, rather the concern is the overall operation and maintenance of the plant itself. *Middle Fork*

Attached is a list of the observations and recommendations made by the DWB Technical Assistance personnel during the evaluation. Also attached are backwash turbidity profiles, raw/settled/maximum combined filter effluent turbidity graphs, water quality data through the plant, pictures of various processes and a plant diagram.

The results of the samples collected on December 12, 2000 are still pending and will be sent as soon as they are received. *Demo **



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STATE OF KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION

If you have any questions regarding this information, please call Jim Sproles at (270)384-4734 or Julie Roney at (502)564-3410, extension 535.

Sincerely,

Vicki L. Ray

Vicki L. Ray
Drinking Water Branch Manager
Division of Water

VLR:JWR

Attachments

C: Hazard Regional Office
Jim Sproles
Julie Roney
Drinking Water Files

5/19/11

Martin County Water District # 1
12/(12 & 13) 2000

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

Observations

What does
part of it =

- Filters are not washed properly.
- Filter control valves do not operate properly allowing filters to de-water.
- Coagulant dosage is not sufficient to form a floc.
- Sludge tank size influences backwash cycle.(it's too small)
- No surface wash on filters.
- There is no chlorine chart recorder.
- Jar testing is not practiced regularly.
- The pH meter did not work.
- Lots of leaks in the pipe gallery.
- No written SOP.
- Insufficient equipment to run jar tests.
- Weir on unit 2 is not level.
- No automatic turbidity meters on filters.
- No filter to waste provided.
- Chlorine split between treatment units is uneven.
- Plant junked up.

Recommendations

- Increase the coagulant dosage.
- Repair filter control valves.
- Wash filters until they are clean.