

GIST MEETING
March 5, 2002

Dave Watkins, chairperson, called the meeting to order at 9:15 am on March 5, 2002. Dave welcomed members and went over housekeeping matters.

Introduction were made:

Armando Benincasa	WV Department of Environmental Protections-Legal Services
Roger Reinhart	US Environmental Protection Agency-Region 3
Garth Connor	US Environmental Protection Agency-Region 3
Dr. Dee Ann Staats	WV Department of Environmental Protection-Science Advisor
Donald Criss	WV Department of Environmental Protection, Division of Water Resources, Groundwater Program
Ellen Herndon	WV Department of Environmental Protection, Division of Water Resources, Groundwater Program
William Toomey	WV Bureau for Public Health, Office of Environmental Health Services
George Dasher	WV Department of Environmental Protection, Division of Water Resources, Groundwater Program
Sarah Wallace	Ohio Environmental Protection, Drinking Water
Steve Williams	Ohio Environmental Protection, Groundwater
Andrew Hartten	DuPont
Ann Bradley	Spillman, Thomas & Battle, Attorney for DuPont

Dave explained the involvement of Ohio state EPA. Ohio EPA has a request to Allyn Turner, Director DEP Division of Water Resources for limited involvement with West Virginia to participate on the GIST for sharing of information.

Armando Benincasa asked what was Ohio EPA doing on their side of the river. Sarah Wallace stated mainly crowd control at this time and keeping the public informed. She said they do not have enough information available yet to do anything else.

Armando asked Dave if he had reviewed the letter from the Little Hocking Ohio Water Associations lawyer, Kevin J. Hopper. Dave at this time read the letter. He deferred this matter to the lawyers.

Armando asked about Little Hocking view. Sarah stated at this time Little Hocking has not taken a stand one way or another.

George Dasher asked Sarah about the public meeting held in Ohio. She stated 850 people attended.

A discussion on Ohio, Dupont, West Virginia and EPA Region 3 & 5 took place their involvement. Andrew Hartten, DuPont, said DuPont agreed on the same sampling regiment with Ohio as West Virginia but with Little Hocking being the center of the 1 mile radius. To date the agreement

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has not been finalized. Steve Williams said Region 5 intends to sign the EPA consent order. Dave said a Memorandum of Understanding with Ohio EPA is being reviewed. He also stated West Virginia is on schedule with what was agreed upon in their consent order with DuPont.

Garth Connor, Region 3 EPA, said that Region 3 & 5 are close to agreement on their order with DuPont.

Roger Reinhart, Region 3 EPA, discussed the order. The order would address private and public water supplies where C8 concentrations exceed 14 ppb. The order further details that DuPont would be required to supply a temporary water source where C8 levels exceed 14 ppb. Once the CAT finalizes a health protective level of C8 then that level will become the limit. If a drinking water source is over the limit then DuPont will be required to supply both a private and public drinking water source with either a new permanent source of drinking water, or supply a treatment alternative for that particular source.

Dr. Staats discussed risk communications. She and Dr. James Becker, MD a local physician and environmental health toxicologist from Marshall University attended the public meeting at Blennerhast. Dr. Becker explained risk factors that one would encounter in the world besides C8. Dr. Staats explained C8 toxicology and what the CAT was doing to determine C8 health protective levels. She said Mike Dower from TERA was going through the GIST information obtained on C8 and TERA will put out a final report on the risk assessment levels for the CAT. After TERA submits findings to CAT, Dr. Staats said the CAT will work out dosage and screening levels.

Steve Williams wanted to know when the C8 final screening level will be published. Dr. Staats said they are working to have information available by mid-April.

Garth Connor, EPA 3, stated that Roy Scenca, EPA 3, will handle press releases and public relations matters resulting from EPA consent order. Roy can be reached at 215-814-5567.

William Toomey asked Dr. Staats would she forward CAT information to John Wheeler since he was working as consultant for Health. She agreed.

Dave stated that the West Virginia's Memorandum of Understandings dealt only with the GIST and not CAT team. CAT will need to do their own Memorandum of Understanding.

Dr Staats suggested that Ohio EPA needs their own toxicologist and risk communication persons.

Andrew Hartten, DuPont, gave a multi part presentation on private and public water well sampling and the findings.

The first section of his presentation dealt with the following:

1. Review of the 1 mile radius, Ohio River PWS results
2. Should the 1 mile radius be extended to 2 miles.
3. Next steps on OWR PWS sampling
4. Review and comment on proposed Ohio River surface water sampling.
5. GIST comments-historical summary report

6. Based on all information obtained a list of site data gaps to would be developed
7. Discuss efforts underway to determine source concentration in Little Hocking PWA well field.
8. Review CAT team status

Andrew stated that data on the sampling as of this meeting was inclusive.

Dr. Staats asked if all surveys were in. Dave said for the most part yes. All the surveys they have received in the last week and half have been outside the 1 mile radius. Dave stressed not to communicate the well results or share information until respective homeowners have been notified. He stated that 25% of the data is being currently validated by a third party, (i.e. Environmental Standards, Inc.) Dave said for the most part there were no problems with sampling the wells and Potesta people did a good job. He pointed out cisterns were included in the sampling, especially those that collected rain water.

Discussion ensued of information generated from lab results and survey. Andrew said out of 427 homes contacted 369 surveys were returned. There were 136 private water wells samples collected and 49 PWS collected and sampled.

Andrew stated the following as criteria for sampling:

1. Wells accessible
2. Some homes do no want sampling
3. Some homes never reached after multiple attempts
4. Cisterns used for human consumption or watering of gardens were sampled
5. Personal safety of sampling team considered – DuPont's confined space policy prohibited the taking of samples by DuPont, so DEP personnel took the samples.

Discussion on the content of the cover letter that accompanies the analytical results and the analytical result format that is to be sent to homeowners on C8 findings. The cover letter was read by Dr Staats and then passed around. The following rewording was agreed upon for the last sentences under APFO in the Guide To Evaluating Analytical Results that is to be sent to homeowners.

"....to provide alternative sources of drinking water, e.g. bottled water, if the concentrations of C8 in any drinking water source is greater than 14 ppb. This concentration of C8 will trigger the provision of an alternative drinking water source in the interim until West Virginia's team of scientists finish developing a health protective level for C8. Then this health-protective level will become the trigger for provision of an alternative drinking water source."

It was also agreed that the footnotes on Exygen analytical result sheet are to be moved up next to ug/L to make them user friendly.

There was a discussion on Little Hocking Ohio's Well field and Tupper Plains Ohio PWS.

Dave said by the end of the week he would have an air model on concentrations of C8 in the air from DEP Division of Air Quality.

Sarah Wallace passed out Ohio maps of water wells in the affected areas.

Andrew Hartten passed out maps he generated on Washington Work and Local Landfill area, Letart Landfill area and Dry Run Landfill area to members.

Discussion on outfall discharge and surface water involvement from Washington Works. Ohio River surface water sampling will have to be done.

Parkersburg well field samples will be collected by end of this week and then according to Andrew their results will determine how much further to go up the stream from there.

Roger Reinhart said they would like to take duplicate samples when DuPont obtains their samples. Andrew said they should get together to work out details.

Meeting adjourned for lunch at 11:20 am and reconvened at 12:45 pm.

Andrew gave an overview of the Proposed Ohio River Surface Water Sampling Plan. The proposed scope of the plan is:

- A. Objectives near Facility:
 - 1. Characterize background C8 concentrations in the river water upstream
 - 2. Assess C8 concentration in the river water along the facility reach (e.g. is there a concentration gradient toward Little Hocking)
 - 3. Evaluate the C8 concentrations in river water downstream of the facility with sampling emphasis near Lubeck PWS and Tupper Plains PWS
- B. Objectives near Letart:
 - 1. Evaluate whether C8 has impacted Ohio River quality near primary surface discharge and groundwater flux locations

Sampling techniques for river samples were discussed. Samples to be taken in various locations in the river (mid-channel and near shore), at various depths within river water column (surface, mid-column and bottom). Andrew stated pH, water temperature, conductivity and meteorological data will be collected. This sampling of river water will be the first vertical profile of the water. Dr. Staats asked Andrew if she was correct that C8 does not adhere to soils and he said she was correct.

Dave asked would river sampling be performed by Potesta's group and Andrew said the set up would be as for the rest of the sampling that has been done. Dave asked for any comments on the proposed Ohio River Plan. Steve Williams, Ohio EPA, asked Roger Reinhart if they wanted split samples on the river samples and he said yes. Steve and Roger will work out the details. Members agreed on the plan. The following are sites that will be sampled further down on the Ohio River West Virginia side: Ravenswood PWS, Mountaineer Plant, and New Haven. Ohio EPA will handle Village of Racine, Village of Syracuse and the Village of Pomeroy.

Dave received a call from ORSANCO wanting the West Virginia results when available.

Andrew gave an overview of the off site 1 mile radius sampling results as follows:

- 1. 46 samples collected -- 35 wells, 6 cisterns and 4 springs.

2. Upwards of 30 results above 1 ppb
3. 5 wells used
4. No cisterns/springs used for drinking water
5. Lack of a definable plume in groundwater from landfill

Discussion on stepping out at the Washington Works and Local Landfill 1 mile sampling radius. Ohio will handle the step out into Ohio. The step out will be 2 miles from the center of the original 1 mile radius on the West Virginia side. Samples will be taken of those wells used for drinking water on a monthly basis including the Christmans' private well. There is to be three more consecutive months of sampling (March, April and May) or until CAT number is established. Samples of drinking water will be sampled that have shown 1ppb concentration of C8.

Andrew gave an overview of the Letart Landfill sampling:

1. 26 wells sampled
2. No cisterns or springs sampled
3. Majority of results are non-detected
4. 2 sampling points had results exceeding PQL (0.02ppb) but below 1ppb.

All agreed that the Brinker well will be sampled monthly for 3 months and there would be no step out at Letart.

Andrew gave an overview of Dry Run Landfill sampling:

1. 47 sampling points collected - - 35 wells, 8 cisterns, and 4 springs.
2. 14 wells used for drinking water did not have results greater than 0.339ppb.
3. 1 cistern was used for drinking water and all cisterns tested results were less than 1 ppb.
4. 1 spring used for drinking water and all spring results were below 1 ppb.

Discussion on Dry Run Landfill sampling took place. Members agreed that AbbottRL, AbbottTS, Atkinson, Baker, Nicholson and Parker water wells will be sampled monthly for 3 months. It was decided that additional information would be needed before a decision is made on stepping out at Dry Run Landfill.

All data will be looked at to see if there are any gaps in the data area that would necessitate more sampling.

George Dasher gave a presentation on the present groundwater monitoring wells and those he wants DuPont to install. George requested from Andrew the following information in order to model the sites groundwater flow better:

1. If there are gas wells, where are they
2. Water level of Ohio River
3. Depth of wells
4. Surface elevation of wells
5. Cross section of bedrock under river
6. Match data received with wells on map. Unable to do this now.

George asked for groundwater stream monitoring monthly. Andrew said that is being done. George asked for the diameters of the wells in use. Andrew said diameters range from 2-4 inches depending on their location (e.g. Landfill requires 4-6 inch diameter and permitted wells require 4 inch wells.) George said if a 2 inch diameter well is to be used permission will need to be obtain from the groundwater program. He wants the following additional wells: 4 at Local Landfill, 3 at Letart and 5 at Dry Run Landfill. They are needed to fill in gaps in groundwater flow modeling. Andrew said he would do a well locational plan for groundwater approval. There are data gaps in surface and groundwater. George said there are seeps at Letart and they need to be found and Brinker Run needs sampling. Andrew said he would look into this.

Don Criss discussed his attempt to model groundwater at the landfills. He took the sampling and location data from his spreadsheet and attempted to do a model on the Local Landfill. Because the concentrations were so low and there were several gaps in the data area he was unable to do one. He suggested to start modeling from the plant. Several members asked him to email the spreadsheets he has to them. Andrew said a conceptual model has been completed but more data is needed. After a discussion a subcommittee was established to develop a model of the plumes etc. This committee is headed by Andrew Hartten (DuPont) with the following members: Don Criss (DEPGW), Mark Kozak(USGA), Jack Wang(EPA Region 3). Andrew wants information from all the sources(USGA, health department, EPA, Ohio EPA and DEP) that he can obtain in order to create a clear and thorough model. Andrew asked for an Ohio EPA representative. Steve Williams said he would like to help but would need to check with his supervisor before committing. Dave asked Armando if a Memorandum of Understanding was needed to do a subcommittee, Armando answered none needed.

A discussion on a chemical fire that occurred in May 1994 at a Shell facility east of Little Hocking well field. A 3M type foam was used by the company to put out the fire. There was some concern whether this would have C8 in it and would it have made an impact to the Little Hocking, Ohio well field. Dr. Staats requested a MSDS on the foam used. Steve Williams said he would try to get her the information.

Andrew said there had been inquiries on deep wells on their site. Dave said those 2 wells were closed before 1980. These wells were closed under permit. They were used to inject hydrochloric acid.

The next meeting is scheduled for May 22, 2002 at DEP Division of Water Resources conference room at 9:00 am.

Dave asked for anymore business and there was none. He closed the meeting.

Respectfully submitted,

Ellen Rae Herndon
3/19/02

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