

AGRICULTURAL CHEMICALS SUBCOMMITTEE MEETING RECORD

TIME AND DATE:

10:30 AM, October 17, 2003

LOCATION:

TCEQ, Park 35, Building F, Room2210, Austin, Texas

PURPOSE OF MEETING:

The FY04 First Quarter Meeting of the Agricultural Chemicals Subcommittee of the Texas Groundwater Protection Committee.

ATTENDEES:

AGENCIES

Texas Department of Agriculture [TDA]
Texas Commission on Environmental Quality [TCEQ]
Texas Water Development Board [TWDB]
Texas Alliance of Groundwater Districts [TAGD]
Texas Structural Pest Control Board [TSPCB]
Texas State Soil & Water Conservation Board [TSSWCB]
Texas Cooperative Extension [TCE]

REPRESENTATIVES

Steve Musick	Chair, Member, TCEQ, Austin
Ambrose Charles	Member, TDA, Austin
Janie Hopkins	Member, TWDB, Austin
Bruce Lesikar	Member, TCE, College Station
Jay Bragg	Member, TSSWCB, Temple
Murray Walton	Member, TSPCB, Austin
Barry Miller	Member, TAGD, Gonzales

AGENCY STAFF

Joe Peters	TCEQ, Austin
Alan Cherepon	TCEQ, Austin
Lynne Fahlquist	USGS, Austin
Abiy Berehe	TCEQ, Austin
Monty Dozier	TCE, College Station
Mason Miller	TCEQ, Austin
Rodney Adams	TCEQ, Austin
Brenda Smith	TCEQ, Austin
Arthur Talley	TCEQ, Austin

INTERESTED PARTIES

Ed Baker
George Caldwell
Donna Long

Syngenta Crop Protection, Mineola
Texas Farm Bureau, Austin
DLS Technologies, Inc.

MEETING SUMMARY:

I. Opening Remarks

The Chairman of the Agricultural Chemicals Subcommittee, Mr. Steve Musick (TCEQ), called the meeting to order. He welcomed everyone to the meeting, and asked the subcommittee members to introduce themselves. One Subcommittee member was absent: Dr. C. Allan Jones (TAES), and Dr. Lesikar (TCE) was late. After these preliminaries, Mr. Musick proceeded to the Task Force Reports.

II Task Force Reports

Site Selection Task Force: The Task Force Chair, Ms. Janie Hopkins (TWDB), provided a brief summary of work the TWDB and cooperating entities may perform this fiscal year. However, the TWDB has not yet to finalize any plans at this time. The TWDB may continue with the cooperative monitoring program through 2004, anticipating completion of the Trinity and any other remaining minor aquifers. The High Plains Underground Water Conservation District #1 and the Panhandle Groundwater Conservation District are also anticipated to continue cooperating in this program in the Panhandle region. Cooperative monitoring throughout FY04 would fill the remaining gaps in aquifer monitoring and complete the ambient screening of the state's major and minor aquifers for atrazine and metolachlor.

As a continuation of the Site Selection Task Force Report, Mr. Alan Cherepon (TCEQ) provided an update on the FY03 Monitoring summary and FY04 Monitoring Plan. Since there are a large number of sampled wells that are still awaiting assignment of state well numbers, and latitude/longitude summaries, the final report on FY03 sampling will be presented at the next ACS meeting, along with a short presentation on long-term atrazine trends in select PWS wells in the Panhandle. Also, since TCEQ has yet to secure a contract for laboratory analyses, the draft FY04 Monitoring Plan will not be presented for Subcommittee approval until the next meeting. Mr. Cherepon did indicate the cooperative monitoring and screening for atrazine and metolachlor will likely continue, to complete this effort for all aquifers. Other potential changes could address other pesticides, as well as degradates, but input is needed from the SSTF on these matters.

Education Task Force: The Task Force Chair Dr. Bruce Lesikar (TCE), had not yet arrived for the meeting, but when he did arrive later in the meeting, his only comments were to summarize that Monty Dozier (TCE) has been busy with presentations and research, Dana Porter (TCE, Lubbock) has been preparing and presenting pesticide-related materials in the Panhandle, and that Lynne Fahlquist (USGS) has a High Plains groundwater conference coming up on December 10th, which will be held at the Agricultural Research Center. Mr. Musick said a presentation on the atrazine

runoff prevention research that Monty Dozier and others had recently completed, would be given following the Task Force reports. There were no other business or updates from the other Task Forces, so the presentation commenced.

III. Atrazine Runoff Prevention Research Update

Monty Dozier (TCE) provided a summary of atrazine runoff prevention research he and several other TCE scientists have completed recently. This work was primarily conducted at the Stiles Farm near Thrall, and the TAMU IMPACT Center in College Station. The purpose of the work is to provide improved techniques in pesticide runoff prevention, so as to enable producers the continued availability and use of the herbicide atrazine. Three types of application were compared for weed control; effectiveness, yield (income potential), and cost. The three methods of atrazine application were traditional Broadcast method (spread over pre-emergent crop field), PPI (pre-plant incorporation, in which the atrazine is mechanically mixed into the soil prior to planting), and banding (atrazine is applied directly over the crop row, while the furrows in between are weeded mechanically).

Atrazine, a broadleaf herbicide, was ranked as the number one herbicide in the U.S. and in Texas from 1995-1997, and has been detected in several Texas reservoirs/watersheds in recent years. Improved application methods are needed to prevent further degradation of Texas water quality, to ensure continued availability of this effective product, and to ultimately provide for continued profitability for producers of selected crops on which this is used.

The study was conducted on land with central Texas Blackland soils. A variety of things can affect runoff, including rainfall amounts, intensity, how soon after application rainfall occurs, crop damage by other phenomena, such as drought, hail, tornado/high winds, unseasonably high or low temperatures, and insect damage. The 2002 testing season was affected by hail and grasshopper damage, so no yield data is available for that year.

The results indicate the PPI application method was best for this type of soil and weather patterns, as by incorporating the atrazine directly into the soil by mechanically mixing it in prior to planting, rainfall appears to affect this method the least, since less of the pesticide is available at the surface to be washed away or carried on the soil. Also, re-application is not necessary after heavy rains that could occur following application. Yields appear to be similar for the PPI and the banding methods over the Broadcast method, which offsets the additional costs of these two methods. Several issues must be kept in mind; Numerous characteristics can affect runoff, and more permeable soils (sandy) and a shallow water table would likely result in an increase of atrazine transport into the aquifer. Other issues include various unknowns, as well as how these results would translate to larger plots/large-scale production. Still, the results indicate less atrazine and less runoff with either the PPI or banding methods of application, which may result in less impact on local watersheds.

IV A. Ongoing discussion of sources and pathways of atrazine contamination and BMPs

This business item was deferred until the next ACS meeting.

IV B. Update on the Environmental Technology Verification Partnership in Atrazine Immunoassay Monitoring

Mr. Cherepon provided a summary of the partnership opportunity related to immunoassay work, in which he recently participated. Battelle is managing an EPA program called Environmental Technology Verification (ETV), conducting verification on existing technology related to atrazine analysis by commercially available immunoassay methods. Mr. Cherepon actually set up and ran the samples through analysis by four vendor-supplied kits. The testing of controlled samples in a laboratory setting required travel to Battelle's lab in Duxbury, Massachusetts.

The four vendors included the following:

- Silver Lake, who's kit was similar to using pH paper, although a bit more involved, and would only provide a positive/negative result to indicate whether atrazine was present above a 3 ppb concentration.
- SDI and Abraxis, who's kits are similar, and are the one's used extensively by TCEQ.
- Beacon, which has a kit similar to SDI/Abraxis, however their kits do not require the addition of magnetic particles, or a magnetic base for separation, tap or other water can be used for the washing step rather than washing solution, and the incubation periods are about 15 minutes longer.

The SDI/Abraxis kits and system appeared to work best, however, the testing report is needed before a final conclusion can be made on this. Mr. Cherepon commented on the various positive results of participating in this program:

- An opportunity to work with the owners/technical experts for most of these companies, enabling him to learn some finer points of the methods, and to "edit the calibrators", a step not yet performed by TCEQ staff.
- Working with an analytical QA expert from Battelle, who identified a pipetting issue, in which Mr. Cherepon had been pipetting a greater volume of standards, control, and samples than required, but this proved to be a non-issue, as consistency was more important, and the results were determined valid. This will result in using less standards and control in the future by TCEQ staff.
- Sample dilution technique was conducted during the test, a skill that can confidently be used by TCEQ staff, should the opportunity present itself.
- Approximately \$13-1400 in extra supplies were left by the vendors at Battelle's lab, and Mr. Cherepon was allowed to have them shipped for use in Texas PMP monitoring program.

Lynne Fahlquist (USGS) asked the only question; do the immunoassay kits detect only atrazine? Mr. Cherepon replied that the kits detect parent atrazine, as well as certain percentages of other triazines and degradates, and that these cross-reactivities are indicated in the papers that come with each kit.

IV C. Review of Agricultural Chemicals Subcommittee Charge

As part of the Texas Groundwater Protection Committee's strategy implementation effort of reviewing charges and the work of the various subcommittees, the charge for the ACS will be reviewed to determine whether initial efforts have reached completion, or if any changes are necessary. Regardless, the ACS needs to identify high points of what they have done, how do we characterize the charge at present, where do we need/want to go from here, and submit this to the TGPC for review. The formation of the TGPC and ACS goes back to 1989, when details for their membership and operation were established by the Legislature. The 70th Legislature charged the TGPC with water protection program development, addressing agricultural chemicals and water quality in an advisory role to the TCEQ. The first draft Generic SMP for Texas, was delivered to EPA in December 1990, and published in 1991. During the mid-1990's, the ACS began its efforts on the expansion and testing of the process components of the SMP in order to prepare for a Pesticide-Specific SMP for Atrazine. The ACS also continued its negotiation with EPA for SMP concurrence. With publication in June 1996 of EPA Proposed PMP Rules, a revised PMP was developed and submitted to EPA in 1996 and 1998. The current version of the PMP titled, *Texas State Management Plan for the Prevention of Pesticide Contamination of Groundwater* received EPA concurrence in June 2000 and was published in January 2001. Since this time, the ACS has been further developing the PMP program and testing the various components.

The handout identifies various tasks addressed by the ACS and their status. Efforts included facilitating coordination and cooperation, development of a multi-faceted monitoring program, region-based education and outreach, and a review of the remaining PMP components. The chair feels the ACS has devoted much time and has done well with fostering cooperation and coordination with the various agencies and stakeholders, vulnerable areas have been identified and mapped by applying the SPIM model, TCEQ, TWDB, and several Groundwater Conservation Districts have conducted monitoring and investigation programs, addressing response and contamination issues. Through investigative efforts in the Panhandle, several potential sources and contributing factors have been identified. BMPs are being considered for a regional approach, producers, and public outreach. Looking at all that has been accomplished, has the ACS done well, did we leave anything out, and do we need to make any changes?

Mr. Musick went around the table, asking input from each of the Subcommittee members. Mr. Walton (TSPCB) said there was nothing really required in the urban pesticide realm, as they have reduced pesticide usage by 1/2, and there aren't that many water soluble pesticides used in any great quantities. Dr. Charles (TDA) said the PMP initially focused on four pesticides, but the EPA may possibly change this to the primary leachable pesticides in each state, as well as possibly needing to include surface water. Without further clear indication from EPA, there is no reason to pursue developing any pesticide-specific plans at present. Ms. Hopkins (TWDB) commented that funding and ability to fill specific positions for this work, as well as management-to-staff ratios established for all agencies will be issues from her perspective. Mr. Miller (TAGD) feels that the best work of the ACS has been coordination and cooperation, and encourages the ACS and TGPC to call on the groundwater districts for increased participation, especially some of the newer ones. It just depends on whether they have pesticide issues within their district. Mr. Bragg noted the cooperation of

producers in addressing pesticide issues. Mr. Walton added that the USGS studies have detected very low levels of certain pesticides, but nothing of concern for urban areas. Perhaps the USGS may have information that indicates what pesticides should be targeted. Ed Baker (Syngenta) said that better data and information, more educational efforts are needed. Also, with the Food Quality Protection Act, pesticides won't be pulled off the market until it shows up in the food or water, and by then it is too late to do much. This approach results in more pesticides being removed from use, and the ones that remain are less effective. Dr. Lesikar (TCE) added that we still need to address some of the questions that arose from the investigations and response. Mr. Dozier's presentation indicates there is much variation in each region, with soil types, and weather. These should also be noted and addressed, if possible. Mr. Walton added that if we can't prove that pesticides are not getting into the water, we may lose the use of all effective pesticides over time. Mr. Musick will summarize this discussion, and they will be presented to the TGPC at the afternoon meeting. A revised charge will be circulated to subcommittee members for review and presentation to the TGPC at their next meeting.

IV D. Atrazine Interim Re-registration Eligibility Decision (iRED) Update

Mr. Ed Baker with Syngenta, Inc. had an update on the EPA iRED for atrazine. He said there were 8 Texas watersheds that have volunteered to participate in the program, but the only manufacturer of atrazine that has signed the M of Agreement was Syngenta. If they do not sign this, they could have their product registrations revoked by EPA. Another issue involves a lawsuit filed against EPA by the Natural Resource Defense Council, for their stance on atrazine, as harmful/endangering an endangered species (salamander). He thinks this is just a delay tactic to keep the EPA from making any changes to atrazine's MCL. Also, the scientific panel for the European Union voted against renewal of atrazine's registration. Syngenta didn't defend their ability to manufacture and sell the pesticide, as most of Europe uses another triazine, and they are more concerned at present with the paraquat issue. He doesn't know if this will affect the registration of atrazine in the US.

Arthur Talley of TCEQ's TMDL Team had some questions regarding the iRED monitoring program. The TMDL program has just announced that Aquilla reservoir meets the TMDL standards, and with the new monitoring including degradates, he is afraid the new program will counter their results. Mr. Baker assured him that the trigger for the iRED is at 37.5 ppb vs 3 ppb for the TMDL program, and would not anticipate having any problems, as none of the reservoirs have approached the higher trigger for the iRED. They have reached the 2 ppb trigger for voluntary monitoring, and the iRED does require weekly monitoring for the 90-day period following atrazine application in the agricultural lands making up the watershed. However the iRED does have more data from more monitoring, but higher trigger levels. The major issue is one of explaining the different triggers and language between the different programs. More and better communication should be established between the two programs. Messrs. Baker and Talley can discuss these details following the meeting.

V. Public Comments

The only public comments made was asking for the USGS to provide contact information.

VI. Announcements

Ms. Fahlquist announced there will be a one-day conference on High Plains groundwater, 12/10/03, at the TCE Agricultural Research Center in Lubbock.

Mason Miller (TCEQ) announced that the Source Water Assessment Program is about 90% completed.

Mr. Cherepon mentioned several conferences, including the EPA QA workshop in Dallas during the week of 10/20/03, The EPA Region 6 FIFRA meeting in Dallas on 10/28-29/03, and the Texas Plant Protection Conference in College Station on 12/3-4/03.

Dr. Lesikar announced there will be a TCE water conference 11/5-6/03 at College Station, and that Dr. Jones has been conducting an international water conference in Houston this week, and should fill us in at the next meeting.

Dr. Charles announced that long-time ACS participant and TDA employee, Jeanette O'Hare, has gone to work with the USDA in Colorado, and that her services will be missed.

The decision was made by the Texas Groundwater Protection Committee that the FY04 second quarter meeting of the Agricultural Chemicals Subcommittee will take place on 01/22/04 at 10:30 a.m., in TCEQ Building F, Conference Room 2210.

VII. Adjournment

Recorded and transcribed by Alan Cherepon.

Attachments

Review of Texas Groundwater Protection Committee Charge to the Agricultural Chemicals Subcommittee