

AGRICULTURAL CHEMICALS SUBCOMMITTEE MEETING RECORD

TIME AND DATE:

10:30 AM, February 15, 2007

LOCATION:

TCEQ, Park 35, Building B, Room 201A, Austin, Texas

PURPOSE OF MEETING:

The FY07 Second Quarter Meeting of the Agricultural Chemicals Subcommittee of the Texas Groundwater Protection Committee.

ATTENDEES:

AGENCIES

Texas Commission on Environmental Quality [TCEQ]
Texas Department of Agriculture [TDA]
Texas Water Development Board [TWDB]
Texas State Soil and Water Conservation Board [TSSWCB]
Texas Cooperative Extension [TCE]
Texas Agricultural Experiment Station [TAES]

REPRESENTATIVES

Steve Musick	Chair, Member, TCEQ, Austin
Ambrose Charles	Member, TDA, Austin
Janie Hopkins	Member, TWDB, Austin
Richard Egg	Member, TSSWCB, Austin
Bruce Lesikar	Member, TCE, College Station
C. Allan Jones	Member, TAES, College Station

AGENCY STAFF

Alan Cherepon	TCEQ, Austin
Joseph L. Peters	TCEQ, Austin
Kathleen McCormack	TCEQ, Austin
David Villarreal	TDA, Austin
Lynne Fahlquist	USGS, Austin

INTERESTED PARTIES

Ed Baker	Syngenta Crop Protection, Mineola
Danelle Farmer	Syngenta Crop Protection, Austin

MEETING SUMMARY:

I. Opening Remarks

The Chairman of the Agricultural Chemicals Subcommittee, Mr. Steve Musick (TCEQ), called the meeting to order. Subcommittee members not in attendance included Barry Miller of the Texas Alliance of Groundwater Districts and Jeff Isler of the Texas Structural Pest Control Board. Ed Baker (Syngenta) introduced Danelle Farmer, who replaces Rex Martin as the new state regulatory manager for Syngenta. She is an Austin resident, which should make it easier for communicating between the ACS and Syngenta.

Mr. Musick welcomed everyone to the meeting and had a few opening remarks before proceeding to the Task Force Reports. The EPA has been working on their environmental strategy at the national level, addressing changes required as a result of a review by the Office of Management and Budget (OMB). The review required EPA and the states to show more environmental results, look at the issues as related to the strategy during our upcoming ACS meetings, and how best to help EPA Region 6 to this end. The ACS will also need to look at pesticides of interest (POIs) identified in various lists of EPA, the ACS, and the USGS. This material will be the subject of the presentation today. Additionally, in our business items of the agenda, the ACS will look at possible changes to the charge and focus of the SMP Task Force, and the related issues to study.

II Task Force Reports

Site Selection Task Force: Janie Hopkins (TWDB), the Task Force Chair, provided a brief estimate of groundwater monitoring the TWDB will conduct in the near future. She anticipates over 500 total samples, including over 200 in the Edwards-Trinity plateau area, and additional samples from the Pecos Valley and other aquifers. Alan Cherepon (TCEQ) will provide a refresher training class for TWDB groundwater monitoring staff in two weeks. The work conducted in the Barnett Shale by the TWDB was clarified as only involving water level measurements. The minor changes to the FY07 monitoring plan will be addressed as item IV on the agenda.

Education Task Force: Bruce Lesikar (TCE), the Task Force Chair, provided a brief summary of activities in the past quarter. A tri-fold brochure was developed by Dana Porter, as assisted by TCEQ, on general pesticide best management practices (BMPs) to prevent groundwater contamination by pesticides. The brochure was provided at various recent venues, including the Texas Plant Protection Conference, Texas Agricultural Aviation Association Convention, and the Texas Ground Water Association Convention. Dana Porter has also been involved with several educational efforts involving water quality issues in the Panhandle in December, January, and February, totaling about 250 people. Alan Cherepon (TCEQ) added that he and Joe Peters (TCEQ) shared a table and presentation time with Randy Rivera (TDA) at the Texas Agricultural Aviators Association convention in Austin in January.

None of the other attending task force chairs had anything new to report.

III. Pesticide of Interest Presentation

Alan Cherepon (TCEQ) presented a summary of potential pesticide of interest for Texas (see handout). He opened with passing around a spreadsheet table of pesticides of interest he compiled, based on one done by Nebraska and revised to fit Texas needs.

EPA has been letting the states know about the upcoming requirement presented at various venues, including the PREP Water Quality class this past summer, and in Regional meetings. There are ten separate tables of top pesticides compiled by various agencies and groups of agencies. These include the most often detected pesticides in the IPD, the 1996 draft SMP (only a portion of the EPA list, as indicated by Ambrose Charles of TDA), the surface water 303d list of mostly (all except atrazine) legacy (no longer manufactured) pesticides, the USGS pesticide synthesis report list of most often detected pesticides (primarily in surface water data, but also found in groundwater), both agricultural and urban pesticides, EPA's 1995 list of most frequently detected pesticides in groundwater (draft SMP Final Rule, using 1992 data), the AAPCO/SFIREG 2006 list, existing pesticides for AWQC (Ambient Water Quality Criteria for aquatic life), EPA Regions 2004 list, and the EPA 1998 water quality standards list.

Mr. Cherepon said the spreadsheet that was circulated around is based on the Nebraska Department of Agriculture spreadsheet given to PREP water quality class attendees, as a method of listing and assessing the various pesticides on the lists for pesticides of interest and of concern. The presentation slide only showed the field names, which included pesticide characteristics such as half-life, toxicity, leachability, and solubility. One variation from the Nebraska list is the totaling of how many of the lists were the pesticides appearing on. This metric should provide Texas with a thorough understanding of which pesticides should be of interest and possibly of concern. Other items to consider include are whether the pesticide is detected in Texas groundwater, surface water, or both, whether it is a legacy pesticide, potential for groundwater contamination, whether it is a restricted use pesticide (RUP) and how widespread its use, which ones have not been analyzed for or only on a limited basis, and which are agricultural, urban, or both.

The top pesticides on the various lists are no surprise, including atrazine and metolachlor as the top two, followed by the others as indicated in the presentation/handout. Mr. Musick asked for an elaboration on the pesticides of interest and concern, as defined by EPA. Mr. Cherepon said that EPA has presented these terms in various venues during the past year or more, as critical fields in their tiered assessment metric. Each state will be required to provide numbers of POIs and POCs to EPA for use in equations aimed at indicating how successful the states are at managing pesticides by lowering the amount of pesticides present in their water sources.

The EPA will also require the active management of pesticides. One subcommittee member asked what active management meant. Mr. Cherepon said it encompasses everything, and provided some examples of how the ACS has managed pesticides. The active management of pesticides by the ACS includes groundwater monitoring, vulnerable areas delineation and monitoring, data-mining (providing all available pesticide monitoring data to EPA in database format), identification of high use areas, education and outreach, and no detects above or approaching reference points in groundwater. Details and accomplishments of each of these

were presented on separate slides (see attached handout). Mr. Musick added that pesticide management will encompass all things (surface water and groundwater, human health and safety, as well as addressing the OMB's findings). The USGS pesticide synthesis report had a lot of money and science behind it, and did not duplicate EPA efforts, which resulted in the level of interest raised on their findings.

Some questions followed on the basis for a pesticide making these lists. Was it based on leachability, use, or detection frequency? Mr. Cherepon said the characteristics that make pesticides likely to migrate to groundwater, combined with detection frequency, was the primary basis for determining which pesticides to include on these lists. Some discussion followed, about whether the lists presented were based more on use or detection. Mr. Cherepon said that at least the USGS report list was primarily based on detection, and primarily in surface water. A few other questions were raised about why certain pesticides were on the list when they were not even analyzed for, such as Glyphosate. Ms. Fahlquist said this pesticide has been difficult to analyze for, but the USGS has been analyzing for it more in recent years. She was also asked why they would analyze for DDT metabolites, but she didn't know.

Another issue involved use maps for many pesticides, especially those available on the USGS website, as part of the pesticide synthesis study. Comment was how relevant ten-year old use data would be, especially since cropping patterns have changed. Lynne Fahlquist (USGS) countered that the USGS did see detections of these pesticides mimicking these use maps. Mr. Cherepon added that at the PREP training class this summer, an EPA representative and Joe Zachmann from Minnesota presented on ways to get pesticide use data through the EPA, and the many road blocks and pitfalls you encounter in going through this process. They offered assistance and advice to any state wanting to accomplish this data retrieval for their state. Also, another presentation at the same training class pointed out how attempting to estimate urban pesticide use was even more difficult. Mr. Cherepon recalled a group working with satellite photos for crop estimation purposes was working out of Texas A & M University, and that Allen Jones (TAES) had mentioned it was a number of years ago. Doctor Jones said they were doing this as part of a nationwide water quality modeling study, which is what they needed the cropping data. It will still be an estimate on which, if any, pesticides are being used on those crops. This was all summarized by a question, do we want to, and can we come up with lists of pesticides of interest and concern? Numerous other issues were brought up at different times during this discussion on use maps, which would probably confuse the main issue. This included which pesticides are decreasing or increasing in detections. 2,4-D, pre-emergent pesticides and alachlor were probably decreasing, while fipronil and glyphosate were increasing.

Mr. Musick added that water quality is TCEQ's responsibility, but EPA is interested in a more comprehensive approach to pesticide management. They want both surface water and groundwater managed, linking of water quality and monitoring with management responsibilities. The identification of POIs and POCs will take a concerted effort, with the POCs requiring more management responsibilities. Without clear guidance from EPA, the ACS must be cautious. We should determine what our existing data means, and identify data weaknesses prior to providing a management plan. TCEQ will need to bring in our surface water programs for future meetings. There will be a learning curve with these programs, as surface water is very different than groundwater issues, especially aquatic life monitoring and such. Dr. Jones added

that the ACS should assess data and findings, re-analyze resources and expenditures, to determine what changes are needed for next year. National guidance should be taken into account, as well as the difference between federal and state program emphasis and rolls.

A follow up question from a subcommittee member was “where is this going?” Dr. Jones commented that after years of data with a limited number of pesticide detects, what is the ACS assessment of how the program money is being spent? Mr. Musick said the program has a limited budget, and that we may consider laboratory analysis on fewer samples, while having more analyses performed on these fewer samples, or something else. The ACS should reanalyze expenditure of resources for next year. Someone also asked if there were any strong guidance from the USGS or EPA. Ms. Fahlquist said the USGS conducts many analyses at few locations. Dr. Jones added that federal and state roles try not to duplicate efforts. Ms. Hopkins asked if there is any estimate on per sample cost for LCRA laboratory analyses versus immunoassays. Mr. Cherepon said it was around 20-25 samples typically sent to LCRA’s laboratory, for about \$10,000, while immunoassay samples are around 400-500 samples at a cost of about \$10 to \$20 per sample. The immunoassays were primarily for cooperative monitoring. TCEQ is trying to make some changes in analyses this year, which will be addressed in the next agenda item. Dr. Jones asked if efforts could be increased or decreased in some areas. Mr. Cherepon replied that we are doing some of this in FY07 by dropping metolachlor and adding four urban pesticides for immunoassays, which segwayed into the next agenda item.

IV. Draft FY07 Monitoring Plan, minor revisions

The revised proposed FY07 groundwater pesticide monitoring plan was presented by Alan Cherepon for the subcommittee members to review and comment on. Due to changes in the FIFRA grant program, the subcommittee may need to address several priority pesticides identified by the USGS in their pesticide synthesis report, including some urban pesticides (pyrethroids, malathion, fipronil). Many urban pesticides are not even monitored for at present. As a result, TCEQ will be conducting immunoassay analyses on diazinon, organophosphates/carbamate, and chlorpyrifos. Metolachlor analysis by immunoassay will be discontinued due to little detection of this analyte and at low concentrations relative to the action level of 100 ppb. There are also occasional calibration problems and needing to re-run the metolachlor immunoassay analysis. Alachlor immunoassay analysis was tested last fiscal year, but due to the lack of detects, this test will also be discontinued for FY07. Additionally, metabolite analyses will be discontinued, as few detects at low concentrations have been made. The cost and difficulty in securing a lab that can achieve low detection limits have also contributed to this decision. Waste methods or other, newer methods are also being considered for a small number of samples. There is a recurring issue with matrix interference with the Hale County Airport monitoring wells and some other wells. The decision to analyze by waste method 8141A is partially to avoid matrix interference, and partially due to the method including several urban pesticides (diazinon, malathion, some organophosphates, while also including the triazines atrazine and simazine to the drinking water method).

The ensuing question and answer period addressed whether the ongoing monitoring had shown any significant changes over the years. Mr. Cherepon said there were a few wells in the

Panhandle which have shown some variation. Mr. Musick added that the ACS will want to scrutinize this portion of the program for next year. Dr. Jones asked for clarification, whether this meant decreasing rather than increasing the Panhandle monitoring, at which Mr. Musick replied yes. Ms. Fahlquist asked if the Public Drinking Water monitoring program analyzed for chemicals other than pesticides, at which Mr. Cherepon said, yes, they analyze for volatile organic compounds, metals, and other standard suites of contaminants.

EPA Program Changes related to Pesticide Water Quality Program and Review of SMP Task Force Charge

Mr. Cherepon provided a handout summarizing the upcoming changes to the EPA pesticide program and how they may affect the charges/focus of activity of the SMP Task Force. Mr. Musick summarized various issues, including changes to the EPA National Strategy, Program Activity Measures (PAMs), states being required to provide the information that will enable EPA to report on the PAMs, and that EPA requests all available pesticide monitoring data (groundwater and surface water) be provided to them by the states, in database format. Mr. Musick asked for TDA's input and comments on these changes.

Dr. Charles said these are preliminary measures, that EPA does not have a clear way of accomplishing these yet. Some of the POIs and POCs are addressed in documents from the past in some areas for demonstrating impact to environment and human health, and they have been generally lowering target levels for most pesticides. The POIs are based on persistence, while the POCs are based on levels that impact human health and the environment. How many of these are managed, he was not sure. The states are to determine the number of POIs and POCs, and how many were managed. EPA will take these numbers to come up with a number estimate used to justify the amount of money needed for this program.

Dr. Jones asked how much money EPA provides for this program in Texas. Mr. Musick said about \$118,900, plus a 15% state match, and he wasn't sure about the fringe, direct and indirect amounts, and added that TCEQ can and has used some 106 Groundwater grant funds for program overlap. EPA has suggested some alternative funding as well.

Mr. Musick believes that the key factors for EPA's pesticide program include it being support to meet required reporting specified by the Office of Management and Budget, will require additional effort to replace the PMP as the primary mechanism for this program, and the ACS should develop a charge for the SMP Task Force to develop guidance on preliminary information needs for EPA, and how to coordinate various pesticide agencies with responsibilities in doing so. This will be a multi-year effort. We should initially focus on monitoring assessment, take small steps to expand to the pesticides EPA is interested in, while bringing in surface water for a more comprehensive picture of pesticides, using the SMP Task Force to provide guidance and focus efforts, and see where this goes. It is still early in the process. Dr. Jones asked if EPA has ever provided direct input at our meetings. Mr. Musick replied that they have, but this was some years ago, but nothing recently. Instead, they have provided some direction at regional and national meetings, such as the Region 6 states and tribes pesticide meetings and the AAPCO/SFIREG Water Quality meetings. Mr. Musick concluded that TCEQ would prepare a

draft charge for the next meeting, along with any additional information from EPA, and discuss this further at that time.

V. Information Exchange

IPD Summary Report

Joe Peters (TCEQ) provided a summary and handouts on the draft Interagency Pesticide Database (IPD) report and updates to the database. Key items included the following:

- The most recent USGS data (some as recent as 2006) has been input
- TCEQ's LCRA laboratory data from 2005 and 2006 has been converted into database format and only requires being entered
- The 2005 and 2006 immunoassay data is in the process of being input
- The TAES metabolite analysis data is also being input
- The IPD draft report has been completed and provided here for review and comment, with a 30-day deadline on comments
- Consideration for placing the report on line on the ACS Website

Someone asked if there were plans for placing the database on the Website, but this would require considerable effort and staff time. Ms. Hopkins suggested if it were in downloadable instead of interactive ("queryable"), it would be much easier to accomplish.

VI. Public Comment

Ms. Fahlquist had copies of a new USGS publication comparing findings in the northern and southern High Plains NAWQA studies. She added one comment on one of the presentation slides earlier in the program. She clarified that the USGS provides data, while the EPA performs the management for that data. The USGS tries not to duplicate any EPA efforts, which is probably why the pesticide synthesis study has had the impact it has. Mr. Musick added that the data is from the NAWQA studies, which have been ongoing for some years, and that the OMB identified the report as a significant resource.

Mr. Cherepon quickly mentioned one more handout; a summary of issues pertinent to the ACS that were covered at a recent AAPCO/SFIREG meeting.

VII. Announcements

None

VIII. Adjournment

Recorded and transcribed by Alan Cherepon.

Attachments

Pesticides of Interest to Texas Presentation

Revised FY07 Pesticide Groundwater Monitoring Plan

Program Changes and Review of the SMP Task Force Charge

IPD Summary Report

Summary of issues relevant to the ACS from the 12/4-5/06 SFIREG Meeting

In their afternoon meeting, the decision was made by the Texas Groundwater Protection Committee that the FY07 third quarter meeting of the Agricultural Chemicals Subcommittee will take place on 4/18/07 at 10:30 a.m., in TCEQ Building F, Conference Room 2210. It should be noted that this date is a Wednesday, due to the difficulty in securing a conference room on a Thursday. Future meetings are anticipated to be scheduled for Wednesdays, unless noted otherwise.