

# Pharmaceutical Disposal Advisory Group Meeting #5

Date: May 27, 2010

Time: 9:00am – 12:30pm

Location: TCEQ Austin, Bldg E, RM 201S

## ***Minutes***

Sign-in took place from approximately 8:30am to 9:00am.

TCEQ Study Team Staff in Attendance: Elston Johnson, Jessica Huybregts, Eric Beller, Angela Curry, Daniel Ingersoll, Clyde Bohmfalk, Michelle Bacon and Jeff Horvath.

Today's Powerpoint presentations will be available on the Pharmaceutical Disposal Advisory Group webpage by June 10<sup>th</sup>:

[http://www.tceq.state.tx.us/permitting/water\\_supply/pdw/pdagroup](http://www.tceq.state.tx.us/permitting/water_supply/pdw/pdagroup)

Total Attendees: A total of 50 people attended in person (including TCEQ staff) and 20 people attended via LiveMeeting and/or teleconference for a total of 70 participants.

See list of attendees (in person and LiveMeeting/phone participants) on the webpage listed above.

## ***Time (am) Event***

9:00 Meeting called to order by Jessica Huybregts (hereby JH)

9:01 Opening remarks and welcome by JH. JH presented slides with the agenda for today's meeting. JH explained the format of the meeting, which was to allow individuals who submitted material to make presentations.

9:04 Introductions were made by each participant, both onsite, LiveMeeting, and on teleconference.

9:09 JH introduces the first speaker, Elizabeth Choate (hereby EC) of the Texas Veterinary Medical Association.

9:10 **Presentation by Elizabeth Choate, Texas Veterinary Medical Association:** EC explained that veterinarians face unique challenges in waste disposal. Veterinarians have to deal with the disposal of a wide array of waste, from dead animals to sharps. Veterinarians also have to act as their own pharmacists.

EC identified two overriding concerns with pharmaceutical disposal: 1) a lack of clear, defined disposal options, and 2) controlled substances. EC indicated that controlled substances seemed to be the number one concern among veterinarians.

EC stated that there are only three general options for pharmaceutical disposal among veterinarians, and that all three are cumbersome. EC first identified disposal by returning the waste to the manufacturer. She stated that this was cumbersome because not all manufacturers take back their pharmaceuticals, particularly controlled substances.

Next, EC identified reverse distribution. She stated that this method was cumbersome because there are so few reverse distributors in Texas, which often makes out-of-state disposal necessary. Also, the DEA list of reverse distributors is often out of date. This method is also costly, which is of particular concern to veterinarians, since so many of them are small-business owners. She indicated that the cost can range from \$30 to \$750 for disposal, and that there is often a per-pill charge. Finally, there is a lot of paperwork involved with this method.

The final method is a controlled burning under the authority of the DEA. However, EC stated that the DEA no longer sends out agents to oversee the process, and local law enforcement doesn't want to handle it either. Furthermore, this process is also paperwork intensive.

EC indicated that one, unintended result of the difficulty in pharmaceutical waste disposal is that veterinarians tend to hold onto pharmaceuticals longer than they should.

EC concluded that veterinarians would like to see clearly-defined, inexpensive disposal options.

9:15 JH ask for questions from the audience. None being heard, JH introduces the next speaker, Ed Gruber (hereafter EG) from the Texas Health Care Association.

9:15 **Presentation by Ed Gruber, Texas Health Care Association:** EG introduced himself as a representative of the Texas Health care Association and also as a consultant pharmacist in the long-term care industry.

EG began by citing some history of pharmaceutical waste disposal in his industry. He state that many drugs were simply flushed down the toilet because there were no other practical methods of disposal.

*Note from presenter: This statement reflects a historical practice and flushing is no longer in use. The example was used to provide contrast to the current method of disposal.*

EG then described the model used by skilled nursing facilities to dispose of drugs. First, drugs that have to be destroyed and that cannot be sent back to the manufacturer *are stored under the control of the administrator or the director of nurses at the nursing facility.*

*Note from presenter: Phrase 'are kept under storage in the administrative home or by the director of nurses' is deleted and replaced with corrected phrase.*

Next he described that the consulting pharmacist visits the facility each

month to oversee boxing of the pharmaceutical waste. The consulting pharmacist verifies the inventory of unused controlled substances, the pharmaceuticals are put in a box, and the box is picked up by the biohazard company. The boxes are sealed and signed by the consulting pharmacist on tamper-proof tape. The boxes are then incinerated by the biohazard company, which returns proof of incineration to the facility.

EG then offered some personal opinions that were not necessarily the views of the THCA. First, EG stated that many long-term care facilities have to deal with books of regulations, so more regulation for pharmaceutical waste is generally unwanted. Second, EG indicated that pharmaceutical waste in homes is impossible to regulate; however, people tend to hoard their medications, which can cause a poisoning risk. EG's personal opinion was that the state of Texas should spend resources on wastewater treatment, since most pharmaceutical waste in wastewater is the result of excretion.

9:22 EG concludes his presentation, and takes time to respond to questions from the audience.

{Stakeholder in audience} asked whether the program that EG described for skilled nursing facilities was mandate by statute or voluntary.

EG stated that it is mandatory.

Selin Hoboy from Stericycle (hereby SH) asked how EG deals with controlled substances and hazardous pharmaceutical waste under the system.

EG stated that the controlled substances are tightly monitored through inventory methods that track doses. He stated that the unused doses are kept in a double-locked box under the control of the Administrator or Director of Nurses, and that they are boxed with the other dangerous drugs that are sent to the biohazard company. EG stated that the controlled substance waste is usually rendered unusable by mixing it with some horrible liquid. He also repeated that the boxes are sealed and signed with tamper-proof tape.

SH asked if the biohazard company knows what they are receiving.

EG states that the contract with the biohazard company indicates what types of drugs they will be receiving.

SH asked if the biohazard company is a registrant.

EG responded that they are registrants, as far as he knows.

{Stakeholder in audience} asked what the cost to destroy pharmaceutical waste per facility was.

EG responded that he did not have exact numbers in front of him, but that the rate is per box and per weight, and that the range is about \$10-25 per box. He also indicated that this includes other biohazard waste.

EG stated that there might be a representative from Stericycle in the audience who would have a better idea of the cost.

SH (Stericycle) stated that they have some contracts with nursing homes in Texas, but that her understanding was that they did not pick up controlled substances, or that controlled substance disposal might be subcontracted. She also indicated that DEA substances should not be in those materials unless you have a specific DEA variance.

EG responded that the method he described was approved by the State Board of Pharmacy.

Gay Dodson (herby GB), Texas State Board of Pharmacy (TSBP) stated that TSBP has a requirement that a disposal company has to be registered with the DEA before it can collect controlled substances.

9:28 JH introduces the next speaker, Chief Mike Gentry (hereby MG).

**9:28 Presentation by Chief Mike Gentry, Texas Police Chiefs**

**Association:** MG introduces himself as the Police Chief of Harker Heights and a board member of the Texas Police Chief's Association.

MG first made a distinction between drugs that are collected by law enforcement for evidentiary purposes as opposed to voluntary collection. He stated that drugs that are collected as a part of law enforcement activities are held until the conclusion of the prosecution, at which point they are disposed of under a destruction order issued by the judge. He stated that the drugs are ordinarily disposed of through incineration, often with the help of local agencies or people at the DPS laboratory.

MG then spoke about drugs that are surrendered to law enforcement. He stated that this is often from assistance with hospices or from unattended deaths. He stated that law enforcement often have two problems with accepting these types of drugs. First, they don't feel comfortable accepting and destroying drugs that are unidentified or unidentifiable.

Next, they don't want to have an unfunded mandate that requires them to handle surrendered drugs at a large expense with taxpayer money. This concern comes from past experience with methamphetamine lab busts, which are very expensive to dismantle.

As a side note, MG indicated that surrendered drugs are often destroyed at the same time and in the same manner as drugs collected as evidence. When this is done, the event is documented through photographs, videotape and witnesses. However, he stated that this is not uniform around the state. He stated that some police departments will coordinate with local fire departments

for disposal of drugs since the fire departments often have contracts with biohazard disposal companies due to their EMS services. He stated that this method is not available where a particular jurisdiction is only serviced by a volunteer fire department.

MG suggested as a solution that the TCEQ could relax standards on incinerators. He indicated that it was frustrating from a budgetary standpoint for a local government to purchase an animal incinerator, for example, and then find out that the incinerator can only be used for that one purpose.

9:38 MG concludes his presentation, and takes time to respond to questions from the audience.

JH asked what volumes of drugs are received by law enforcement, both surrendered and as evidence.

MG responded that the answer to that question is widely varied depending on location. He stated that his jurisdiction collects about one 20 pound box of surrendered drugs per year, which is small enough to fold into their destruction of illicit drugs. However, he stated that other jurisdictions have much higher volumes.

{Stakeholder from audience} asked whether the incinerator in his area is a crematorium or a municipal solid waste incinerator.

MG responded that the incinerator is for animal carcasses associated with an animal adoption and care facility.

Eric Beller (hereby EB) added to the discussion. He indicated that animal carcass incinerators can operate under TCEQ regulations with a permit by rule. In order to have an incinerator for other purposes, you would need to have a permit from the Municipal Solid Waste Permitting Division. If a person wanted the incinerator to be used for other purposes, it would be subject to a lot of other requirements.

9:44 JH introduces the next speaker, Ken Diehl (hereby KD).

9:44 **Presentation by Ken Diehl, San Antonio Water System:** KD introduced himself as a representative of the San Antonio Water System in the Resource Production and Compliance Department.

KD began by noting that SAWS responded to the March 2009 Associated Press article by creating an internal team to address micro-constituents, endocrine disruptors, and pharmaceuticals in surface waters. The team created a two-phased approach for identifying these constituents that involved sampling and a drug disposal program.

KD stated that SAWS contracted with USGS to take two samples from the Edwards Aquifer drinking water supply – one from the north side pumping station

and one on the south side pumping station. He indicated that the samples came out clean.

KD stated that stakeholder input during their monthly team meetings indicated that abuse of pharmaceutical drugs at home was an increasing problem. The internal group debated the utility of conducting a disposal program, and concluded that it served the purpose of diverting pharmaceuticals away from people who may abuse them, of removing them from the environment, and of educating people about the disposal of drugs.

KD then discussed SAWS's pilot program. He noted that the group started a website called MeddropSA.com for the disposal initiative. The pilot program was in conjunction with the City's single day household hazardous waste collection event. Law enforcement handled the transport and incineration of the drugs. SAWS also complied with the TCEQ notification process for HHW collection events.

KD presented the results of the take-back program. The event occurred on December 2009 and resulted in the collection of 171 pounds of drugs within 5 hours. The total incineration cost was \$180. The drugs were accepted by the police department, where they kept the drugs in their vault, and then forwarded onto the City the cost of the incineration in Bay City.

KD then identified some unresolved issues created by the take-back event. First, there was an issue concerning the handling procedures of unidentifiable drugs and sharps. Next, the pharmaceutical school members of the event wanted to know more about what types of drugs weren't being used and why.

KD concluded his presentation by noting that there are two more collection events hosted by SAWS on June 5<sup>th</sup> and September 11<sup>th</sup>, 2010.

9:56 KD concludes his presentation, and takes time to respond to questions from the audience.

{Stakeholder from audience} asked if KD knew what impact the collection of 171 pounds of pharmaceutical waste would have on the overall water system, or even the impact of collecting 100% of unused pharmaceuticals.

KD indicated that it is nearly impossible to quantify the impact of one take-back program on the overall water system.

{Stakeholder from audience} asked whether the pharmaceuticals were sorted and categorized when they were collected.

KD replied that they were not, but that they were considering that for the September 11 collection event. He said that the narcotics division made the call on the program protocol, and that having graduate students identify the pills was potentially very time consuming, especially since a lot of drugs were unidentifiable.

{Stakeholder from audience} stated that, of the 4 billion prescriptions dispensed each year, that 35-50% goes unused, depending on the study. He suggested that this amount is not insignificant, and that current take-back programs have only retrieved a fraction of the total.

KD agreed with the audience member, but noted that the community did not have an outlet for disposal. He argued that their strategy was to create an outlet, regardless of whether quantification was possible or necessary.

Jack Ranney of the Lower Colorado River Authority commended SAWS for their initiative, and noted that the amount of drugs collected was good for a first-time event. He noted that it takes some time for the community to become aware of programs like these. He also noted that this is one option among many, and that it may be cost effective in relation to a treatment process, especially in tough economic times. He also mentioned that it is hard to quantify what percentage of pharmaceuticals in wastewater is from excrement alone.

Jeanie Jaramillo of Texas Panhandle Poison Center (hereby JJ) stated that her organization also has a take-back program, and that they have an inventory system for the pharmaceutical waste collected that she is happy to share with SAWS.

10:04 JH introduces the next speaker, Carol Batterton (hereby CB).

**10:04 Presentation by Carol Batterton, Water Environment Association of Texas:** *Ms. Batterton presented materials from a PowerPoint presentation. The presentation materials are available on the TCEQ website.*

CB noted that WEAT supported the passage of Senate Bill 1757 because they felt it was an important first step in beginning to address the issue of pharmaceuticals in wastewater. She noted that due to research efforts, the industry is aware of the constituents that are entering and exiting wastewater treatment plants, but what is still not completely understood is the impact of those constituents.

Her concern is that regulations will be imposed upon wastewater treatment plants, i.e., effluent limits that regulate pharmaceutical constituents, when the impact is yet unknown.

Given that concern, CB suggested that the proper course of action is to focus on those pharmaceuticals that are deliberately disposed of. She noted that human excretion is impossible to control. Therefore, she noted that Texas should promote disposal practices by simplifying waste regulations, creating guidance documents, and by harmonizing the efforts of various agencies.

CB cautioned that the responsibility for pharmaceutical waste disposal should not fall squarely on utilities and local governments, but rather on all responsible stakeholders. She also noted that there should be a source of

funding and public education, but did not promote any particular type of program over another, i.e., a take-back or a mail-back program.

10:11 CB concludes her presentation, and offers to respond to questions from the audience. No questions were received.

10:12 JH introduces the next speaker, Loraine Fries (hereby LF).

**10:13 Presentation by Loraine Fries, Texas Parks and Wildlife Department:**  
*Ms. Fries presented materials from a PowerPoint presentation. The presentation materials are available on the TCEQ website.*

LF noted that pharmaceutical constituents in surface waters have an adverse effect on fish and wildlife. These adverse effects include endocrine disruption, altered behavior and toxicity. She noted that endocrine disruption can create gender changes in fish, such as creating fish with both male and female characteristics. Altered behavior can involve reduced predator-avoidance.

LF noted that current technology for wastewater treatment does a good job removing the constituents for which they are designed, but that they are not designed to remove the pharmaceutical constituents in wastewater.

LF identified other sources of endocrine disruptors beyond wastewater treatment plants, such as concentrated animal feeding operations, certain pesticides used in agriculture, and other industrial wastes or illegal wastes. She went on to note that the feminization of male fish can create reductions in fish populations to a point where extinction is a possibility. She noted a Canadian study on that issue, and was open to giving the source to whoever needed it.

LF stated that pharmaceuticals have been found in the tissues of fish according and that a USGS study, which included three sites on the Rio Grande, found that 16-50% of large mouth bass collected were inter-sexed.

LF then reviewed a study conducted by their laboratories in San Marcos. She stated that they worked with a graduate student named Adam Foster, the City of San Marcos and Texas State University to evaluate influence and effluence from the San Marcos Wastewater Treatment Plant. The study showed that the majority of the pharmaceuticals coming into the plant were actually removed through the treatment process, with the exception of anti-epileptic and flame retardant. They are also involved in a study with the Hornsby Bend Biosolids Plant and the City of Austin to examine environmental trace contaminants in the soil.

10:22 LF concludes her presentation, and takes time to respond to questions from the audience. No questions were asked.

10:22 JH introduces the next speaker, Mike Howe (hereby MH)

10:23 **Presentation by Mike Howe, American Water Works Association:** *Mr. Howe read from a prepared statement. The contents of the prepared statement are reproduced below.*

“From the outset when we first proposed this legislation with Senator Watson, I have been a strong advocate for creating a program that would allow consumers to return drugs to pharmacies, including legislation to allow pharmacies to accept controlled substances, providing for a process to render all returns unusable and then have the returns picked up for incineration by the existing licensed waste haulers.

Pharmacies already store returns on-site though not in the volume we are talking about. And many routinely take back controlled drugs if they were prescribed in error or needed to be changed for some reason.

This would require state and possibly federal legislation and guidelines allowing pharmacists to routinely accept controlled substances back and, of course, some determination of who pays for the final destruction. Pharmacists have DEA licenses and I expect DEA would go along with legislation that would allow for the above.

The successes of the many local collections are an excellent measure of demand by consumers. Consumers want to do this. The problem with local collection programs is that unless police or sheriff deputies are on site, certain medications cannot be accepted. Plus, removal and disposal must be done by an appropriately licensed disposal and transport company. So using pharmacies would be the best solution.

Mail-backs could also work through pharmacies as a separate solution or in conjunction with pharmacies taking back drugs. We here in Texas could do both and be very effective.

Additional legislation could also require doctors to limit the amount of first time medications prescriptions to two weeks instead of 30-days to reduce the unused amounts if the prescription is changed.

In most European Union countries and in two Canadian Provinces the pharmaceutical companies pay for all or part of these programs. Supporting take back programs is not a mystery to them and if they step up now, then they could avoid what may ultimately be Federal legislation that requires them to take responsibility 'cradle to grave.' Additionally, by assuming the costs of the take programs, significant good will could be generated.

This is not only an issue for prescribed pharmaceuticals for consumer use. We also must limit the use of pharmaceuticals in livestock and control the runoff from feedlot operations.

While high quality research is ongoing, we may never know or have the 'good science' of the effect of pharmaceuticals on humans, at least not in our lifetime. It may take multiple generations before we know if small concentrations of pharmaceuticals have a cumulative effect on humans.

We already know that some aquatic life is impacted by endocrine disruptors in the water, and we have any number of incidents where medications we thought were beneficial ended up having adverse effects.

Until and if we ever have the 'good science', then we in the public drinking water industry must fall on side of protecting public health and advocate for a program that does everything possible to reduce the amount of pharmaceuticals in the waters of Texas.

Plus, as water suppliers, we need to advocate on behalf of our rate payers to be sure they are not saddled with the expense of treatment to remove these compounds from our water supply.”

10:26 MH concludes his presentation, and takes time to respond to questions from the audience. No questions were asked.

10:27 **Break**

10:50 **Return from Break**

10:50 JH introduces the next speakers, Dorinda Martin (hereby DM), Scot Maitland (hereby SM), and Nathan Pope (hereby NP).

10:51 **Presentation by Dorinda Martin, Dripping Springs Pharmacy:** DM is a pharmacist, and she and her husband own two pharmacies in the greater Austin area.

DM recalled her experience as the director of clinical services at a nursing home corporation. According to her experience, these facilities would produce many boxes of unused pharmaceuticals that would have to be destroyed quarterly. The pharmacists would prepare the drugs for destruction in the presence of licensed personnel at the facility, and then place them in a red hazardous waste bag for pickup by a hazardous waste management company.

DM also recalled that very early on in her career, unused pharmaceutical waste was flushed.

DM then presented information from a special feature published in the April volume of the Journal of American Pharmacist Association. The feature was entitled “Encouraging Safe Medication Disposal through Student Pharmacist Intervention,” and concluded that 13% of the residents knew that it was proper to dispose of drugs after mixing it with kitty litter or coffee grounds, 27% flushed, and 34% simply disposed of their pharmaceutical waste in the trash. Only 30% had received information on safe medication disposal. In a follow-up survey, 80% indicated that they were willing to change their disposal methods.

DM noted that the shortcoming of the study is that it did not find out why those individuals were disposing of the drugs. She noted that a different study showed that half of unused drugs are expired, a 33% are no longer needed, and 20% are from people who have passed away. She continued that the expired drugs could be addressed by pharmacist intervention to reduce unneeded drugs at the prescription stage. On other occasions, fewer drugs could be prescribed to patients who may not be alive for much longer.

DM cited other studies indicating that abuse is rising among pharmaceutical drugs. She noted that a lot of this abuse is due to the misconception that prescription drugs are inherently safer than illicit drugs.

DM went on to note that pharmaceutical waste diversion and disposal has gained attention from pharmacists at the national level. The National Community Pharmacy Association is encouraging community take-back programs and the American Pharmacy Association is publishing articles and raising awareness. Pharmacy schools are conducting studies and take-back programs.

DM stated that, in her opinion, additional regulation is costly and unnecessary. Pharmacists already have to deal with several layers of regulation by several different agencies. She noted that additional regulations would deter pharmacies from conducting take-back programs. She further noted that pharmacist could be integral to the disposal process, especially through intervention to reduce unnecessary prescriptions.

11:01 DM presented a short video. The video described and promoted their pharmaceutical waste take-back program.

**11:04 Presentation by Nathan Pope, Co-Owner Live Oak Pharmacy:** NP noted that, in his experience, anecdotal evidence indicated that people wanted to dispose of unused pharmaceuticals in order to get it out of the house to avoid exposure to their children, and for environmental reasons (to avoid letting it get into the drinking water).

NP then went on to describe the take-back program that they instituted. He noted that most of the pharmaceutical waste that was returned was over the counter medication. He opined that a lot of these medications went unused because they were stored for a long time in anticipation of their use, and then expired.

He indicated that a challenge with the program was in screening controlled substances. He stated that a lot of individuals bring in controlled substances, and that they have to tell them that they cannot accept them. NP also noted that another problem with the program was that envelopes for the mail-back program could not be given directly to individuals in their home because of concerns regarding controlled substances. A pharmacist has to be there to screen out controlled substances.

NP noted that cost was an issue with the take-back program, since every pound of pharmaceutical taken back cost about \$12 for the pharmacy. This includes the envelope, the time, and the shipping. The pharmacy has spent \$400 thus far on the program, which comes out of their profits. He noted that an expanded program would require funding.

11:11 NP concludes his presentation. DM, NP, and SM take time to respond to questions from the audience.

{Stakeholder from audience} asked if the money that is needed to conduct the take-back program is passed on to the customers or taken out of profits.

NP answered that the money comes out of their pharmacy's profits. He indicated that they could pass the cost on to the consumer, but that they consider their take-back program to be a community service.

SH asked if they had seen a program that charged, and if they knew of a price tipping point for consumers. SH compared it to the environmental fee associated with an oil change, where no one ever disputes it.

NP answered that he has seen people pay to turn in sharps, so they may pay to turn in pharmaceutical waste.

DM answered that she thinks it depends on the neighborhood and the clientele. She answered that economically distressed areas might have clients that would not pay for the program.

11:16 JH introduces the next speaker, Jeanie Jaramillo (hereby JJ).

**11:16 Presentation by Jeanie Jaramillo, Texas Tech School of Pharmacy and Texas Panhandle Poison Control Center:** *Ms. Jaramillo presented materials from a PowerPoint presentation. The presentation materials are available on the TCEQ website.*

JJ began by describing the take-back program that the Texas Panhandle Poison Control Center held in conjunction with the Amarillo Independent School District. The name of the program is called Medication Cleanout, and it is a drive-through, community take-back event held in Amarillo (though the forthcoming event will also be held in Lubbock). The program happens twice a year, and is limited to household waste. The primary goal of the program is to prevent poisoning, misuse, abuse, and environmental contamination. The secondary goal of the event is to collect from the events, such as information as to why medications go unused.

JJ indicated that they confronted some issues in the creation of the program. First, there are a lot of regulations on the issue of pharmaceutical disposal, and they cross disciplinary fields. Many of the regulations were not drafted with take-back programs in mind.

JJ discussed the reasons behind the structure of the program. She stated that the recurring-event structure was chosen over a permanent location because of funding, because law enforcement could not be involved on a full-time basis, and because citizens tend to pay more attention to a one-time event.

JJ then discussed the reasons behind the drive-through format of the program. She indicated that people enjoy the convenience and privacy of using their car, and that an indoor event has higher security issues.

She then stated that the program used a survey in order to collect information about the participants. The survey was intended to collect information about people's pharmaceutical disposal practices – why people dispose of their meds, how would they have disposed of their meds if not for the program, and their at-home storage practices. She discussed the pros and cons of collecting data.

JJ went on to discuss the sorting process that was followed at the event. The process was illustrated with a flow chart, basically showing that controlled substances were screened out for handling by law enforcement, and that unidentifiable drugs were treated as controlled substances. She explained that a pharmacist, pharmacist technician, or pharmacy student is necessary for the identification process, as well as a pharmaceutical database. The non-controlled drugs are logged and packaged for disposal by a waste disposal agency. The controlled drugs are counted and logged, but then the law enforcement officer take possession of the drugs.

JJ then displayed the results of the take-back events. The September 12, 2009 event had 296 participants, collected 900 pounds of medications, and also collected about 70 pounds of controlled substances. The most common over-the-counter items collected were vitamins, analgesics, and dermatologic agents. The most common non-controlled items were cardiovascular agents, analgesics, and antidepressants. The most common controlled items collected were analgesics, upper-respiratory agents, anxiolytics and hypnotics.

Next, JJ displayed the results of the survey. She indicated that the most important survey result was that 55% of respondents would have kept their pharmaceutical waste had there not been a take-back event, 9% would have flushed them, 16% would have thrown them in the trash, and the remaining 20% were not sure.

JJ went on to discuss the obstacles associated with take-back programs. One issue was the complexity of the laws, which often do not specifically contemplate take-back programs. DEA regional offices are often not in agreement as to how to handle these events. As for the TCEQ, she stated that she wishes the Agency would drop the requirement to treat HHW "as if it were hazardous waste," and also that the Agency would create rules and guidance for take-back programs. She would like to see cross-agency cooperation, or a cross-agency guidance document.

JJ raised a concern over take-back programs that were run irresponsibly or illegally. Her concern was that such a program could negatively impact responsible and legal programs. She also raised a concern about funding in general. She concluded by stating that the rules for controlled substances are a huge obstacle because a take-back event that cannot accept controlled substances is counter-productive. Controlled substances are the most important to get out of the house, and citizens often have no idea if their unused medications are controlled substances or not.

11:43 JJ concluded her presentation and took time to respond to questions from the audience. No questions were asked.

11:44 JH opens up the floor to comments for the remainder of the meeting.

Chris Geisler, Waste Management Healthcare Solutions (hereby CG) recommended that disposal options be addressed in the study. In particular, he wanted to know which disposal method would be recommended between landfill disposal, waste-to-energy, RMW incineration, or hazardous waste incineration.

JH responded by saying that “alternative disposal methods” is being considered by the pharmaceutical team for the report.

11:45 Hearing no more requests for comments, JH made concluding remarks. JH announced the date and format of the next meeting (June 24<sup>th</sup>). JH indicated that written comments would be accepted up through July 2, 2010 – see Expression of Interest document on the webpage:  
[http://www.tceq.state.tx.us/permitting/water\\_supply/pdw/pdagroup](http://www.tceq.state.tx.us/permitting/water_supply/pdw/pdagroup)

11:48 Adjourned

*Minutes offered for review 6/3/2010-6/10/2010.  
Minutes finalized 6/11/2010.*