

GCPTA MEETING MINUTES

Isle of Capri Casino & Hotel – Westlake, Louisiana

Date: Friday, July 28, 2006

Time: 9:00 am – 1:00 pm

Steve Ames opened the business meeting and welcomed everyone in attendance. There were 64 members and guests in attendance. Introductions were given by all in attendance. Steve A. explained to the membership and guests that this was not a business as usual meeting. Today we will be celebrating our 10th year anniversary and going down memory lane.

Approval of Last Meeting Minutes-Mike Gragg - Minutes of the May 5, 2006 meeting were approved as written on July 28, 2006.

Subcommittee on Rules/By-Laws – Mike Gragg

The following member was approved by the steering committee:

Non-Voting

In-Region David Conrad, Sasol N. America,

How the GCPTA Came To Be

Presented by Mike Kukuk (College of the Mainland), see the GCPTA web site (www.gcpta.org) to view this presentation.

Funding the GCPTA in the Early Days

Presented by Mike Kukuk (College of the Mainland), see the web site (www.gcpta.org) to view this presentation.

How CAPT Was Born

Presented by Johnny Payne (BP), see the GCPTA web site (www.gcpta.org) to view this presentation.

PTEC™ Program Start Up In Louisiana

Presented by Ronnie Madere (Dow Chemical), see the GCPTA web site (www.gcpta.org) to view this presentation.

Internship Programs

Presented by Monte King (Shell Oil), see the GCPTA web site (www.gcpta.org) to view this presentation.

Benefits of GCPTA Membership

Presented by Pete Lamothe (Eastman Chemical), Pete gave a presentation speaking of the benefits that Eastman Chemical has experienced with their partnership with GCPTA. He said the GCPTA was a major resource for Eastman. The benefit of being associated with GCPTA is three fold the Industry, the Educational, and the people of the organization. By being part of the GCPTA Eastman was able to have their employee Martha McKinley, have input during the development of the curriculum. This gave Eastman's management the assurance from the beginning that the PTEC™ graduates would come to them with a good core of skills. Through co-op and internship programs Eastman have the benefit of seeing students first hand before making a decision of hiring them, also allowing them to make early job offers to students they were interested in. "Being a GCPTA member allows us to have partnerships with other PTEC™ colleges", Pete said. Pete wants to thank Mike Gragg of Dow for allowing Eastman's management to come to his plant for a presentation on PTEC™ to acquaint them with how Dow was applying it. Eastman is very pleased with Kilgore College for working and setting up a PTEC™ program in place so fast. The benefit of having the resources of GCPTA and CAPT is unmeasurable, by using these connections each members of the GCPTA has the opportunity to network and tour the programs already in use at other facilities.

Benefits of GCPTA Membership (cont)

Presented by Harry Wood (LIT), Harry said the common bond of our members through our relationships is to educate our students to become world class process operators. Thanks to GCPTA we have been able to accomplish this. Harry said that he had made a new best friend today, Monte King of Shell Oil; they will be working together through the GCPTA to bring more students into the college program to help meet Shell's future technician needs. One of the greatest things about this Alliance is the relationships formed between education and industry. Harry said when one says world class organization it really has become world wide. As a result with this relationship with the alliance LIT has been contacted by India, Bangladesh, and now Egypt has contacted us. They want LIT to help develop, The Technical College of Suez. Part of what is wanted is to use the GCPTA and CAPT program to teach their students.

Walter Tucker is currently on a faculty internship as a result of the relationship between CAPT and Industry. Because of the internships our faculty and students have worked on off shore rigs, in refineries resulting in receiving training that could not have been gotten anywhere else. We have just had a female high school student workshop on our campus; as a result we now have 4 new students interested in Process Technology. Harry said that he remembered when Mike Gragg of Dow came up and hired 40 people from LIT's program and said those that were hired are still working there today.

Student Success Story

Presented by Samantha Blankenship (BP), Samantha said that she was honored to be at GCPTA's 10 year anniversary. She also said it was an honor to be a representative of BP, the company that she had dreamed of becoming an employee of. As well as represent the college that was the educational foundation that helped her achieve this goal. Samantha said that she was a product of the GCPTA;s members hard work. She also stated that because of this she has achieved a goal that she had set for herself back in 2001. After attending a simple orientation on Process Technology it was instantly known that this was what she wanted, not just a job but a career for her, along with a good job that she could use to support her family. After working as a Process Technician these months Samantha stated it is a very rewarding and fulfilling career. The avenues of opportunities within the company I work for and the Industry together is never ending. Samantha is one of many students that have become successful after completing the PTEC™ college program. Samantha thanked everyone for helping make achieving her goal possible. Samantha stated "In fact as of today BP has employed 200 students from College of the Mainland who have completed the PTEC™ program.

Walk Down Memory Lane

Presented by Don Parsley (Valero), this included a several minute presentation using still pictures set to music showing the past and present membership participating in past meetings and functions.

Past Accomplishments and the Road Ahead

Presented by Steve Ames (ExxonMobil), see the web site (www.gcpta.org) to view this presentation.

New Business

Steve Ames stated the GCPTA will be reinstating Career Fairs this fall at San Jacinto College and Lake Charles. Details to be announced as plans are finalized.

Reginald Christy from Milby High School, Houston, TX is requesting speakers to come to his school and speak about PTEC™ Careers. Contact Reginald Christy at Off:(713) 928-7431, e-mail:rchristy@houstonisd.org

**The next meeting is November 10, 2006 at the Isle of Capri in Lake Charles.
Steve encouraged all the members to attend the meetings.**

Alliance Website

Gulf Coast Process Technology Alliance Website (www.gcpta.org).

Center for the Advancement of Process Technology (CAPT) Website www.capttech.org.

Contact the GCPTA at sderickson@sbcglobal.net.

Future GCPTA Meetings

Friday, November 10, 2006 Isle of Capri, Lake Charles, Louisiana

Friday, January 26, 2007 South Shore Harbour, League City, Texas

Friday, April 27, 2007 Lake Charles, Louisiana

Friday, July 27, 2007 South Shore Harbour, League City, Texas

****** Other Events ******

(CAPT) Critical Issues & Best Practices Conference

South Shore Harbour Resort and Conference Center

October 3, 4, & 5, 2007

October 3 Training and Development Pre-Conference

October 4 & October 5 Critical Issues and Best Practices Conference

Meeting adjourned at 12:20 p.m.

Respectfully submitted,

Mike Gragg, Secretary
Gulf Coast Process Technology Alliance

MG/ra



College Advisory Reports

July 28, 2006 Meeting

1. **Texas State Technical College-Marshall, TX – Bobby Smith** reported the following:

- 17 students enrolled
- 8 expected graduates
- 4 students in Intern/Coops
- 0 students on scholarships

Comments:

- 3 summer 2006 graduates have secured full time employment at Huntsman Chemical in Midland, Texas. They are completing their degrees as co-ops for the summer.
- A fall 2006 graduate is working as a co-op this summer at Eastman Chemical Co.
- A STeP camp was conducted the week of June 5. A total of 30 students (16 female, 14 male) from 13 different high schools attended the camp. The camp was 4 days and 3 nights. Activities included a presentation by Plastipak on their plant operation, team work exercises (Ropes course, float your boat), 2 plant tours, chemistry experiments, roundtable discussions and a houseboat ride on Caddo Lake. The camp was very successful and the students really enjoyed it.

- **New Equipment:**

A 30 kw electric boiler has been purchased and is being installed by the students. Water from the reverse osmosis unit will be used as boiler feed water. The unit will be operational by this fall.

- **Advisory Committee Meetings:**

Met April 24, 2006

Scheduled to meet August 17, 2006

Hot Topics:

1. Changes to the curriculum. Plan to add a Physics course and at least 1 Oil and 1 Gas Course to the curriculum.

2. **San Jacinto Community College Central – Mike Speegle** reported the following:

- 60 students enrolled
- 4 expected graduates
- 4 student in Interns/Coops

Comments:

- 3 students are interning at Pasadena Refining Systems Incorporated and one is interning at Total.
- Spirax/Sarco, the largest manufacturer of steam equipment in the world presented 6 hours of free classes to sophomore level process tech students on steam systems, the basics of steam, steam traps and condensate systems. This was conducted at their facility in Deer Park.
- The tool trainer unit completed in November of last semester is being used for training on equipment isolation and basic operator maintenance. Students are required isolate fluids in the piping, select the proper tools, and replace gaskets and valves.

- **High School PTEC™ Programs:**

Consulting with Pasadena High School about dual credit courses. Joan Mullinax is pursuing this endeavor. She has come to an agreement with two high schools on dual credit.

- **New Equipment:**

Spirax/Sarco donated a condensate pump system on a skid to the department. They will advise on attaching it to the pilot plant distillation tower.

- **Advisory Committee Meetings:**
Met April 5, 2006
Scheduled to meet September 20, 2006
Hot Topics:
 1. Review of syllabi
 2. Dual credit courses between high school and college
 3. Review of documents for the 2006 female summer institute

3. Louisiana Technical College-Ascension Campus – Cleve Marchand reported the following:

- 23 students enrolled
- 2 expected graduates
- 4 students in Interns/Coops
- 6 students on scholarship
- **Comments:**
 - We are working with several local companies to provide internships for the Fall and Spring semesters.
 - We are still working to get our additional “Glass Labs” for the students.
 - We are advertising with the hope of increasing our student numbers.
- **Student Organization Activities:**
SGA
SkillsUSA – working on starting with P-Tech students.
- **High School PTEC™ Programs:**
Comments:
There is no High School P-Tech program in the summer. We are working with the Department of Education on PTEC™ 101.
Our campus is working with 3 parish school systems on PTEC™ 101 –Ascension, Iberville, and Livingston.
- **New Equipment:**
 - Received a \$50,000 Carl Perkins Leadership Grant for 17 Simulation Models and 10 Computer Systems
 - Received another \$50,000 Carl Perkins Leadership Grant for acrylic models, pump cut-aways, pump cavitation, and fluid bed catalytic cracking unit
 - Received the Simulation of “Glass Lab” E from Carl Perkins Tech Prep funds for \$5,400
- **Advisory Committee Meetings:**
Met May 9, 2006
Scheduled to meet July 11, 2006
Hot Topics:
Goals for 2006 - 2007
Internship positions
Need for classrooms and labs areas
- **New Best Practice:**
Standardize high school courses – which courses; hours per course; and what equipment needed
- **Upcoming Events:**
Working with Department of Education to standardize PTEC™ in the high schools.

4. Lamar Institute of Technology – Harry Wood and Walter Tucker reported the following:

- 189 students enrolled
- 14 expected graduates
- 20 students in Interns/Coops
- **Comments:**
 - Eastman Chemical has made a donation to its scholarship program for this year.

- ExxonMobil selected two Central High School students to receive full scholarships to student process technology at LIT. It also awarded on student a \$2,000 scholarship for the fall and two others \$1,000 scholarships.
- ChevronPhillips, DuPont-Sabine River Works, Invista and Firestone Polymers, all of Orange, and BASF of Port Arthur all have reviewed scholarship programs.
- Port Arthur Industries Group initiated its first internship program with 19 students. The Port Arthur group continues to support its scholarship program for recent graduates of Memorial High School who plan to major in Process Technology.
- **Advisory Committee Meetings:**
Met May 4, 2006
Scheduled to meet August 31, 2006

5. Alvin Community College – Mark Demark reported the following:

- 140 students enrolled
- 10 expected graduates
- 6 student in Interns/Coops
- 4* students on scholarships
*Process Technology or ACC Institutional scholarships.
- Comments:**
Four student interns are involved with building the new Pilot Plant.
- **Student Organization Activities:**
No Process Technology student organization
- **High School PTEC™ Programs:**
No students participating
No high school participating
Comments:
Local high schools have no interest in participating with a Process Technology TechPrep program, although they enthusiastically support the ACC Process Technology High School Forums help in the Spring and Fall terms and the Process Technology Open House held in the Summer.
- **New Equipment:**
Work continues on the MCIR Pilot Plant to convert syngas (H₂+CO) to transportation fuels. Startup is forecast for late August.
- **Advisory Committee Meetings:**
Met June 13, 2005
Scheduled to meet September 12, 2006
Hot Topics:
 - Election of Committee Chairperson – still open
 - Approval of Mission, Vision, and Objectives
 - Pilot Plant operations
 - Kick off audit
 - Discuss Process Technology Forums and Open House
- **New Best Practice:**
Hiring of ACC students to support research & development projects
- **Upcoming Events:**
 - Pilot Plant startup
 - Fall Process Technology Forum.

6. Nunez Community College – Larry Goodwin reported the following:

- 23 students enrolled
- 0 expected graduates
- 0 students in Interns/Coops
- 0 students on scholarships

Comments:

We have recently concluded early registration with 30+ applicants. We anticipate a Fall enrollment of 60+ students for our second semester.

▪ **High School PTEC™ Programs:**

Comments:

We are anticipating beginning Introduction to Process Technology with 2 area High Schools this coming semester.

▪ **New Equipment:**

- We continue to enlarge our labs with equipment. We have had significant donations from Chalmette Refinery and ConcoPhillips. We have also received additional equipment via various grants.
- We have, in conjunction with several vendors developed new equipment that will benefit all GCPTA member schools in the future.

▪ **Advisory Committee Meetings:**

Met May 24, 2006

Scheduled to meet August 2006

Hot Topics:

Scholarships, Internships, BOT training, and hiring practices

▪ **New Best Practice:**

- Several new pieces of equipment to enhance training capabilities for various PTEC™ courses: Acrylic dynamic floating roof tank mode, acrylic dynamic centrifuge trainer, Acrylic dynamic charcoal filter, an acrylic chemical injection trainer, and a multidimensional trainer. All of this equipment will be incorporated into the curriculum in the Fall.

▪ **Upcoming Events:**

- Registration for Fall Semester

7. Louisiana Technical College-River Parishes Campus – George Foret reported the following:

- 129students enrolled
- 14 expected graduates
- 18 students in Interns/Coops
- 12 students on scholarships

Comments:

- The following companies participate in our internship program: Shell Chemicals, Entergy Operation, Inc., ChevronPhillips, Shell E&P, Marathon Petroleum Company, and Dow-St. Charles.
- Scholarships have been awarded by Dow, Shell, Nalco, Career Builders, Dupont, and Marathon.
- Special Program Assistance – PELL, WIA, STEP, TOPS

▪ **Student Organization Activities:**

Student Government Association, Skills U.S.A.

▪ **High School PTEC™ Programs:**

11students participating

4 high schools participating

Comments:

Hahnville, Destrehan, Lutcher, St. James

▪ **New Equipment:**

Delta-V Emmerson Control System (DCS)

▪ **Advisory Committee Meetings:**

Met May 5, 2006

Scheduled to meet July 28, 2006

Hot Topics:

- Safety-Establish dedicated campus PM-Budget for maintaining MEOH Unit and Glass Labs.

- Facilities-More classroom space is needed to accommodate PTEC™ Program and Spec. training
- Placements-54 students have been placed for the period January 1, 2006 thru June 22, 2006. Companies include: Marathon, Stockhausen, Pennicile Polymers, Petroleum Services, Valero, Say Bolt, Hutco, and Shell Offshore E&P.
- **New Best Practice:**
Expansion of Evening Division. Spring 06 Semester – we are offering 9 Evening Courses
Three on line courses-enrollment evenings-95 students.
- **Upcoming Events:**
 - Oil and Gas Conference-Houston, Texas-Sponsored by Shell E.P.
 - Upcoming specialized new hire training—Dupont, Chevron, Marathon, Dow, Valero
 - Upgrade methanol plant to delta v control system

8. BrazosportCollege – Gary Hicks reported the following:

22 expected graduates (May 2006)

Comments:

We just finished a 17 week training program for 20 new hires for BASF.

- **New Equipment:**
Currently planning to build a new control room for our outside training unit.
- **Advisory Committee Meetings:**
Met May 6, 2006
Scheduled to meet September 6, 2006
- **Upcoming Events:**
Mark Stoltenberg and Gary Hicks will be doing some job shadowing at Dow and BASF this summer.

9. Wharton County Junior College – Wayne Stephens reported the following:

48 students enrolled

4 expected graduates

3students in Interns/Coops

1 student on scholarship

Comments:

- We have doubled our enrollment in the past two years via advertising (for the first tie in the 6 years the program has been in existence) and hosting events for the community, such as our student cookout in April, etc.
- We have 3 interns at EquiStar Matagorda Operations and 1 CAPT/PAC scholarship for the fall semester)
- **New Equipment:**
We purchased small scale fuel cell technology, using solar, hydrogen and methanol fuel sources. We introduced it in our first summer session Systems 2420 course.
- **Advisory Committee Meetings:**
Met July 14, 2006
Scheduled to meet TBA
Hot Topics:
 - One of our partners, Bay City Community Development Corporation, is putting together final plans to build a new training center in Bay City, which among other programs, will house our PTEC™ program. We asked for 10,000 sp. ft. of the proposed 20,000 sq. ft. building plus approximately 2000 sq ft outside (under a covered metal roof) for a small scale operating unit (process to be determined at a later date)
 - We met with them Friday, July 14, 2006 along with other reps from the college and the architect that would be designing the facility. He is the same architect that designed Brazosport College's training facility which we would like to emulate.

▪ **New Best Practice:**

Introducing "Alternative Fuel Source" manufacture to our Systems course in summer one session. The purpose was to get students to begin thinking ahead about "other" fuel sources, and to see just how simple such fuels such as ethanol, are to make.

A lecture on ethanol fermentation reactions was first given to the students and then they were given several raw materials (juices, yeasts, sugar sources,), a one gallon amber bottle (sterilized and biocided), heat sources to warm the mixture, scales to measure, etc. Students carefully recorded the weights and amounts of the raw materials added to the glass bottles (acting as reactors), and placed a heavy duty balloon on the bottle. pH adjustments were made to hold it around 4.0 and we also recorded conductivity.

Each day we took photos and measured the size of the balloons, indicating the activity of the reaction by how much CO₂ was being manufactured in the "reactors". We did not have fermentation locks, so to prevent the CO₂ from reentering the reaction, as the balloons got about the same size, we tied them off and removed them, and then put a new balloon on the "reactor".

When the reaction had stopped, we first measured the alcohol content of each reactor with hydrometers, and took 150 ml samples out. We filtered the samples, distilled at 78°C (172°F), (the latest filter medium being used by ethanol distillers to break the azeotrope), and then redistilled the product. (This increases purity by about 1% from 94 to 96%).

Then we ran specific gravities and densities on the finished product, posted the results and announced the winner (who received a good round of applause as best (In-House Distiller)).

Though yields varied, and would were not good enough for commercial manufacture, the students commented on how this project gave them confidence in manufacturing a finished product, and also to "think out of the box" in process, and got them rally thinking about alternate fuel sources.

We collected the finished products (100 mls of ethanol), added 500 mls of distilled water, blue food coloring and distilled this mixture in the DTU-100 (I talked with Bayport Training first, and they said it should be ok to try it). We ran it around 78°C and it separated very cleanly. Purity was in the 96% range. As the ethanol is more azeotropic than the methanol that we normally run, the separation is more difficult.

- I have begun testing a small biodiesel process, but am having some mechanical problems. I hope to have the bugs worked out by fall, and will see how I can work it into various courses then.

I would welcome any sharing of alternative fuel cell information with other partners and colleges.

- Footnote: Interestingly enough, Rice University (featured on one of the local news stations last month) is currently making their own good quality biodiesel and running the college's lawn equipment on it.