NIEHS

National Institute of Environmental Health Sciences

The Future of Hazardous Materials Cleanup and Training

Sharon D. Beard, Industrial Hygienist

WORKER EDUCATION & TRAINING PROGRAM

NIEHS
National Institute of
Environmental Health Sciences

The Evolution of the Brownfields/Minority Worker Training Programs and the Associated Cleanup Markets

Sharon D. Beard, NIEHS, Moderator

WORKER EDUCATION & TRAINING PROGRAM

NIEHS
National Institute of Environmental Health Sciences

Panelist

- Doris Gill, Brownfields Grant Manager and Administrative Assistant to the City Manager of Port Arthur - Job Training Experiences in Port Arthur from the Local Level
- Steve Fenton, National Operations Office Supervisor, CCCHST/Kirkwood Community College - Overview of Emerging Environmental and Green Careers
- Gary Gustafson, Program Manager, Laborers-AGC Education and Training Fund - Lessons Learned from the Laborers-AGC Minority Outreach Program

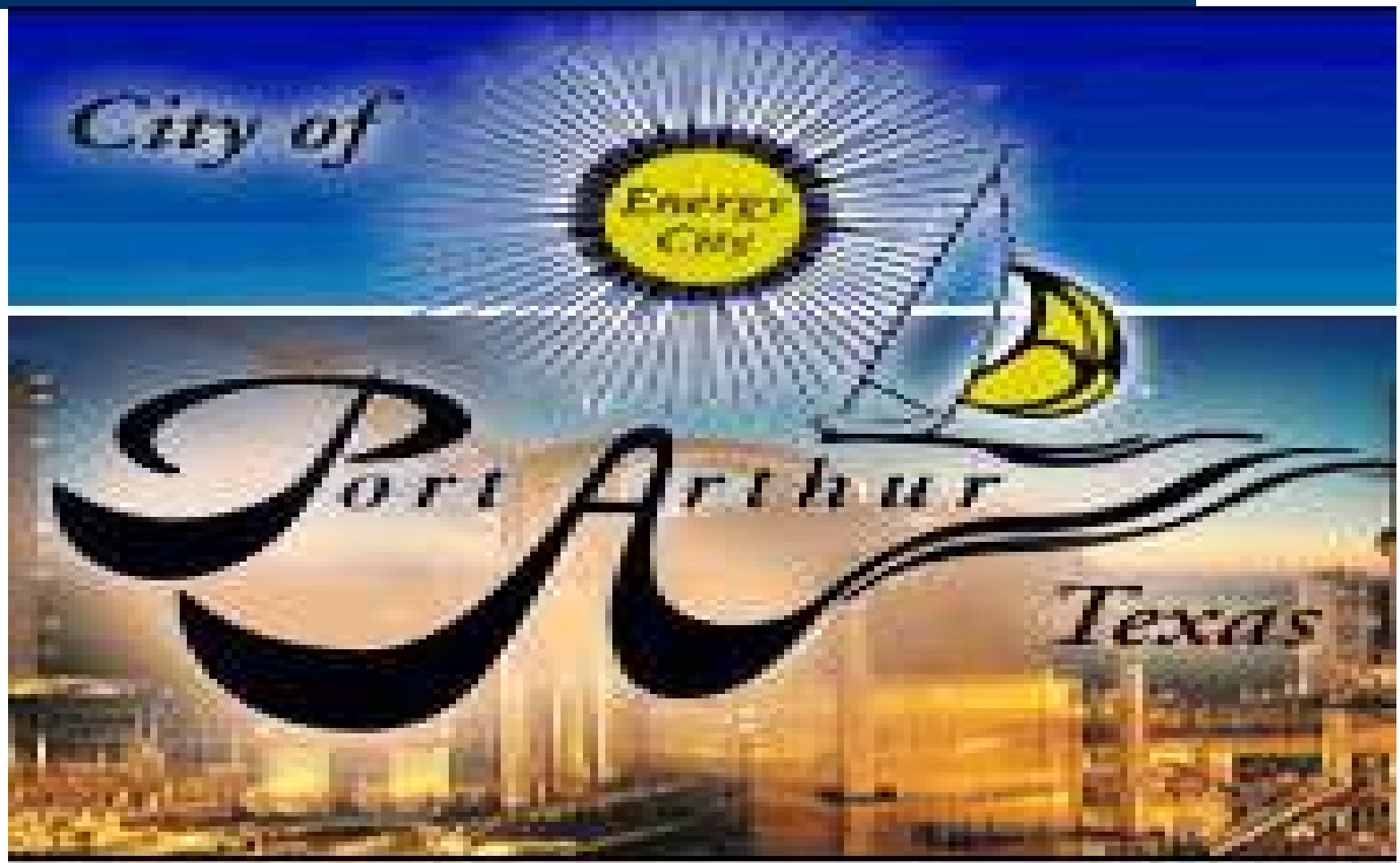
City of Port Arthur, Texas NIEHS/ OAI, Inc. Job Training Grant Program

Presented by

Mrs. Doris Jean Gill

Brownfields Manager

CITY OF PORT ARTHUR, TEXAS



Hurricane Rita
Devastates Our City- Sept. 24, 2005

The Damage: Extensive and Unparalleled

- 5,000 residents have not returned to City
- Civic Center, Central Mall and Airport still under construction from storm damage
- Hundreds of homes still leveled
- Many small businesses closed and not returning to the tax rolls
- Many companies hurt by housing shortage

WIDESPREAD DAMAGE TO HOMES AND FAMILIES!

Some Private Businesses Still Closed

The Oil Goes to the Squeaker!

- The City of Port Arthur prepared a $200,000 Brownfields Job Training Grant. The grant was completed. **But then came Rita….**
- WE HAD TO EVACUTE BY SEPT. 23
- THE GRANT WAS DUE OCT. 3
- ALL ROADS TO PORT ARTHUR WERE CLOSED UNTIL OCT. 10. No grant extension granted!
- WE DID NOT STOP TALKING UNTIL SOMEONE LISTENED TO " THE FORGETTEN STORM" RESIDENTS! **Thanks NIEHS and OAI!**

NIEHS and OAI- Positive Partners

The City of Port Arthur Developed a Very Productive Working Relationship with OAI

- OAI, Inc. provided a site visit and planning session
- All invoices were paid in a timely manner
- All questions were answered promptly
- We received support and encouragement

Collaboration is the KEY

- **We all wanted this program to succeed!**
- Therefore we all gave 100% effort to make the program a positive experience for the trainees:
- The Collaborators:

  Community: Brownfields Board Members
  City of Port Arthur
  Lamar State College Port Arthur
  Industrial Safety Training Council
  Port Arthur Economic Development Corporation
  Texas Workforce Center of Southeast Texas

Salute to the Movers and Shakers

We all worked

to make

it happen!

City of Port Arthur Brownfields Committee Members

TEAM EFFORT- We Did It!

- Steve Fitzgibbons, Doris Gill, Brownfields
- Lois Cornwell, Sue Rutledge, TWC
- Sandy Stretcher, Lamar College PA
- Dick Murphy, ISTC
- Floyd Batiste, PAEDC
- Willie Lewis, John Comeaux, BF Co-Chairs
- Dale Watson, Paul Brown, Johnny Hulin, Geraldine Hunt, Barbara Mulroy, Roosevelt Petry - Community Leaders

Port Arthur's NIEHS /OAI Partnership- 2 Job Training Grants- May 2006-July 2008

- Funding Total= $214,404 to train 150 persons
- Training Providers:

  TWC = Texas Workforce Center

  Lamar = Lamar College of Port Arthur

  ISTC = Industrial Safety Training Council

  City = City of Port Arthur

  PAEDC = Port Arthur Economic Development Corporation.
- Total Residents to Receive Training = 150 plus 30 fast track

$94,000 provided by PAEDC under Grant 2 (Construction class – NCCER)

- The Port Arthur EDC funded our program for 50 slots beyond the funding provided by NIEHS and OAI, Inc. (not part of OAI stats)
- This allowed us to train more local residents than our grant proved.
- This provided $200 stipends for “all” grads.
- TWC also provided funding for approximately 10 local residents at no cost to our grant.

I. Development Training

Training Area	Trainer	Hours	Cost
Skills Assessment			
TABE Testing	TWC	8	NC
Orientation	TWC	4	NC
Drug Testing	City and Local Provider	2	$4,000
Abbott Mechanical Reasoning	City	4	NC
FDIC Money Smart Program	City	8	NC

II. Professional Skills

Training Area	Trainer	Hours	Cost
Workplace Math	Lamar	4	$600
Workplace Writing	Lamar	4	$600
Critical Thinking	Lamar	2	$300
Time Management	Lamar	2	$300
Mechanical Reasoning	Lamar	4	$600
Stress Management	TWC	8	NC

III. Technical Training

Training Area	Trainer	Hours	Cost
Hazwoper	ISTC	40	$22,600
Safety Badge (Basic Plus)	ISTC	6	$2,625
NIEHS Katrina/Rita Training	City	4	NC
CPR / First Aid	City/ Health	8	$375
Mold	ISTC	6	$6,750
Fire Guard	ISTC	8	$6,750

IV. Construction Training

Training Area	Trainer	Hours	Cost
Construction –Hands on	Lamar	30	$4,500
OSHA 10	ISTC	10	$12,000
Training Model for two rounds NCCER Core Curriculum	Lamar	90	$900 per student

Total Hours of Training

- Total Hours of Training =

  160 hours + per trainee- Grant I

  90 hours + per trainee- Grant II

Value of Training if purchased individually= $4,000- Grant I (Environ.)

$2,000- Grant II (NCCER)

Cost per person under grant= $0

Letter of Obligation for Trainees

Letter of Obligation signed by each trainee prior to beginning the program:

Key stipulations:

- ✓ Resident of area affected by Hurricane Rita
- ✓ Pass drug screening prior to first day of class
- ✓ Score at appropriate level on TABE test
- ✓ Attend class daily all four weeks.

Members of JTG Class I
June 5-29, 2006

Members of Job Training Class II – Attended Class at Lamar College: June 12 -July 7

Additional Program Costs Assisting Trainees paid by Grant

- Trainee lunches-

  provided for Grant I participants only

  ($5 per day x 4 weeks x 5 days per week)

  = $7,500
- Trainee Drug Testing

  Provided for both grants

  ($40 x200 applicants) = $4,000 per program
- City Bus Transportation=

  Bus Passes issued to those in need

Incentives for Our Trainees-

Cash and In-kind Services for Our Program

- PAEDC awarded $150 to each trainee upon completion of coursework ($11,750)- Grant I
- PAEDC awarded $200 to each trainee for completion of course work ($24,000)- Grant II
- TWC provided grant funds to purchase gear for each trainee to keep ($14,000)
  - -regulation work boots, fire retardant coveralls, safety helmet, and gloves
- City of Port Arthur offered bus passes
- Lamar College gave free classroom space

Four Week Class Schedule (1 of 3)

Session I

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
June 2006						
				1	2	3
4	5 @ TWC Orientation-4 hrs.-TWC ---------- TABE- 4 hrs.-TWC	6 @ Lamar-PA Writing- 4 hrs.. ---------- Math- 4 hrs	7 @ Lamar-PA Writing - 4 hrs. ---------- Math- 4 hrs	8 @ Lamar-PA Mech. Test Abbott-City of PA ---------- Crit. Thinking/ Time Management-Melanie Nau 982-6045	9 @ Lamar-PA Stress Management-8 hrs. TWC	10
11	12 @ Lamar-PA Hazwoper-/Mold ISTC	13 @ Lamar-PA Hazwoper-/Mold ISTC	14 @ Lamar-PA Hazwoper-/Mold ISTC	15 @ Lamar-PA Hazwoper-/Mold ISTC	16 @ Lamar-PA OSHA 10 ISTC	17
18	19 @ Lamar-PA Mechanical Reasoning-Dan Harriman 883-8658 ---------- Katrina Training-Doris Gill	20 @ Lamar-PA Money Smart- 4 hrs. SBDC ---------- Katrina Training-Doris Gill	21 @ Lamar-PA CPR- 8 hrs. Health Dept.	22 @ Training Site Fire Guard-8 hrs. ISTC	23 @ Lamar-PA Safety Badge 5-6 hrs. ISTC	24
25	26 @ Lamar-PA Construction- 8hrs. Terry Jackson	27 @ Lamar-PA Construction- 8hrs. Terry Jackson	28 @ Lamar-PA Construction- 8hrs. Terry Jackson	29 @ Lamar-PA Construction 6 hrs. Terry Jackson ---------- Conclusion-TWC-2 hrs.	30	

NIEHS Hurricane Response Training Booklet

NIEHS
National Institute of Environmental Health Sciences

National Institute of Environmental Health Sciences
Hurricane Response Initiative

Safety Awareness for Responders to Hurricanes:

Protecting Yourself While Helping Others

WORKER EDUCATION & TRAINING PROGRAM

Graduation Program

NIEHS/ OAI/ K-BMWT Brownfields
Construction/ Industrial Job Training Grant Program

Graduation
Class II

Friday, July 7, 2006
2:00 p.m.
Lamar State College Port Arthur

VII. Welcome……Mrs. Sandy Stretcher, Lamar State College

VIII. Overview of Program…Mrs. Doris Gill, City of Port Arthur

IX. Graduation Speaker……..Mayor Oscar Ortiz

X. Acknowledgement of Brownfields Committee Members…...
Committee Co-chair /Councilman Willie Bae Lewis

XI. Presentation of Certificates, Badges, Stipends…….
Sandy Stretcher, Lamar State College
Doris Gill, Brownfields Manager
Lois Cornwell, Texas Workforce Port Arthur
Sue Rutledge, Texas Workforce Port Arthur
Dick Murphy or Representative, ISTC
Floyd Batiste, Port Arthur EDC

XII. Dismissal

The Graduates

Alford Acrond	John Frasier	Yvette Mitchell	Donaldson Thomas
Chris Barrier	Lacrecia Gallow	Kanika Roberts	Eustavia Wagner
Chris Brown	Kevin Gasper	Lita Roberts	Charles Williams
James Bryant		Janice Rogers	
De'Boria Davis	Kayla Johnson	Nina Taylor	

Special Note: Please notify the TWC office and Doris Gill at 983-8298 when you are hired for a job in this field or in any field. The grant requires that we must document all jobs obtained by our trainees.

Good Luck!

Class I Graduation Day-
at Lamar State College Port Arthur

Mayor Of Port Arthur Congratulates the Graduates

Proud Grads Listen to Mayor

The Big Moment- We Made It!

Many Grads Experienced Their First Time Ever On A College Campus! Many Proud Parents Attended the Event!

Placement Level hits 90%- 45 HIRED!! 50 graduated from the First Training Program ending July 2006

- Because these companies saw the strength of our program and how it would benefit them to hire our trained workers, our program was a success for the City and for the trainees:
- **KTM Maintenance- hired 10 trainees**
- **Mason Construction- hired 1 trainee**
- **Protherm Inc. - hired 1 trainee**
- **Compass Environmental- hired 7 trainees**
- **GP Industries- hired 3 trainees**
- **Hydro-Chem- hired 1 trainee…AND LOTS MORE!**

Placements: Grant II- 65%- 32 HIRED!! 50 graduated. 30 more in Nov. 2007 We anticipate surge in hiring very soon

- We are just in time for anticipated job surge at Motiva, Inc. Now is the time to TRAIN!
- BECON /Bechtel, Inc. is offering placement

Hiring pay levels of $12.65 to $14.95 for level I helpers in area construction fields

One grad is earning $22 per hour at the LNG plant. BECON has worked well with us.

- 15 have taken fast track. 15 more will start .
- A variety of companies hired our graduates-

Keeping up with the BOOM!

- Port Arthur, Texas is about to experience a tremendous industrial BOOM from the petrochemical industry- Motiva, Inc. to become largest refinery in North America!
- Our goal is to make and keep our Port Arthur citizens ready, willing and trained to walk into the jobs that are coming to our town
- Our goal is to restore hope and improve the quality of life for our community

The Future: Thinking outside the Box

- More focus on training the under-employed
- More focus on flexible hours
- More focus on getting input up front from the companies we are targeting
- Design a “win-win” program for the City, the Trainee and the Employer
- Continue to seek shareholder buy in. We found a great partner in BECON/Bechtel, Inc.

Publicity for our Grant Helped

- **Three articles** in the Port Arthur News
  - 2 articles Published 2006
  - 1 article Published in 2007

Flyers sent to all churches/ schools in the target area . Also TWC office.

Several ministers gave strong endorsements

- Local **Radio Station** announced program

News Article- May 6, 2006

5/4/06

The News
Saturday, May 6, 2006

Texas Work Source

Mike Tobias/The News

Center Facilitator John Landow, right, assists a customer with their employment related data at one of the many computer stations available at the Texas Workforce Center in Port Arthur.

Classes offer job training

By David Tjerina
The News staff writer

Port Arthur residents who want free construction, Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) job training will not want to miss out on classes which begin June 5.

Classes, focused on those subjects and others will be offered from 8 a.m. to 4 p.m., for four weeks as part of the Katrina/Rita Brownfields Minority Worker Training Program at the Texas Workforce Commission office at 5900 9th Ave. and at Lamar State College-Port Arthur.

The training classes are being funded by a $80,004 grant the city received from the National Institute of Environmental Sciences, in February, and is a partnership between the city, TWC, LSC-PA, the Industrial Safety Training Council and other groups.

"We want our Port Arthur citizens to be prepared to help fill the labor void and to receive a good job and living wage in the industries that are in or near our city, Doris Gill of the City of Port Arthur said. "I do want to point out although the title is minority worker, it's opened to all races."

Participants will also receive training in Occupational Safety Hazard Association standards, jobs ethics and the math, writing and critical thinking skills necessary to function in the workplace.

They will also receive a free bus pass to attend the classes, $5 a day for lunch and a $150 stipend upon completion of the training.

"Our goal is to train 75 residents and place 50 percent of those trained prior to Sept. 2006," Gill said, adding the training will come in handy with the announcement by Motiva Enterprises LLC recently that its Port Arthur refinery will likely be the site of a $3.5 billion expansion.

To qualify for the training, applicants must have a high school degree or equivalent. Applications area available at the TWC office, PSC-PA, Memorial High School and city hall. Deadline for applications is May 18.

"I think (the training) will be extremely helpful because what it does is it gives individuals a good setup for their safety background to successfully attach themselves to all this constructor in the area," said Lois Cornwall, director of the Port Arthur TWC.

Cornwall added construction work opportunities were open in the housing sector and refinery sectors and said the most recent unemployment statistics recorded for Southeast Texas showed it had a 6.5 percent unemployment rate.

Contact this reporter at:
(409) 721-2426
dtjerina@panews.com

News Article- June 25, 2006

6/25/06
Port Arthur News

Storm grant pays for training

By David L. Tjerina
The News Staff Writer

Twenty-one year-old Henry Odbourne was unemployed and at home recently when a friend told him about a job training program opportunity. If he qualified, the program would net him 160 hours of classes over a four-week period and a $150 stipend.

Odbourne listened to his friend and applied for the program and was one of 75 from Port Arthur, Groves, Nederland and Port Neches chosen to participate in the Katrina/Brownfields and Minority Job Training Program funded by the National Institute of Environmental Health Sciences/Environmental Protection Agency.

The program is one viewed by administrators that will help fill the needs of companies needing entry-level employees and will benefit the students as well.

Odbourne is betting on the job training helping him to find a job.

"I hope that I can get hired on as one of the refineries, if I don't get that, I'll probably try to go offshore and work," Odbourne said.

Prior to Hurricane Rita, Odbourne was employed by the Lamar Ready company at the Port of Port Arthur. But after the storm hit, he lost his job. Later, he and some family members traveled to New Orleans and spent about four months doing disaster work there.

Now he's glad he's in the training program.

"It looks good, it's occupying my time," Odbourne said ahead his training. "I was living off the money I earned in New Orleans and off income tax refunds."

The training program was funded with an $80,000 job training grant from the NIEHS and the EPA, which was developed to aid students affected by Hurricanes Rita and Katrina. It was augmented with a $14,000 grant from the Texas Workforce Commission for fire safety gear and an $11,000 incentive grant to pay the $150 stipend from the Port Arthur Economic Development Corporation.

The city of Port Arthur, the Texas Workforce Commission, the Industrial Safety Training Council and Lamar Port Arthur State College combined forces to provide the classrooms for the students.

As part of the program, classes of 25 people each — the first of which began June 5 and Odbourne is in — are being taught hazardous waste operations and emergency response, Occupational Safety and Health Administration guidelines, basic construction, fire guard skills and more.

The second class of the program began June 12 and a third begins July 10.

For the younger students, this is their first chance to learn the industrial and construction skills needed to help them obtain a job that will help them obtain higher living wages. For the older students — and we have many that are over 30 and 40-year-old — the program would help move them out of jobs that are underpaying," Denis Gill of the City of Port Arthur said.

The first classes scheduled to graduate July 30, and immediately following the ceremony, the students will have the opportunity to attend a job fair comprised of small, large and industrial construction companies.

Several construction companies based in or out of the area have called the Texas Workforce Commission and have expressed an interest in hiring employees, said Lois Cornwell, the manager of the Texas Workforce Commission's Port Arthur branch.

Despite a number of large construction projects expected to occur in Southeast Texas soon, unemployment rates area-wide in May were listed at 6.3 percent and in the city of Port Arthur, at 7.9 percent, Cornwell said.

"When we say skilled labor, we mean welders, carpenters, mechanics, ... said Robert Foster, a labor market analyst with the Southeast Texas Workforce Development Board. "These are the skills you can't pack girls up through on the job training."

The Triangle area's workforce has dropped 1,800 from September of 2005, which was pre-Hurricane Rita, Foster said.

In some cases, some people left the area in September and October and they didn't own a home or property in Mary Ann or Nederland, he said.

"The pressing problem right now is one of the big issues," Foster said. "If we could get the workers, there's no place for them to live."

He added that high gas prices make commuting from places like Houston and Jasper impractical.

The TWC hopes that by paying for the safety courses and providing the students with entry level job skills, they will be hired, and will move up the work ladder faster, she said. Companies who hire students from the program will benefit from having workers who have passed a TWC reading and writing assessment and a drug test.

Demand for the classes was great, 200 people applied for the program and 98 percent of the people chosen to participate in it are from Port Arthur.

"To me the skills we're getting are open a lot of opportunities for me," said Kenya Dennis, 35, who worked at Wal-Mart as a greeter and cashier prior to being referred for the job training program.

Lena Washington, 21, who lost her apartment during Hurricane Katrina and recently came back to the Port Arthur from Austin, was also optimistic about the opportunities the training program provided him.

"It has all the certifications I need and with the I can get in the refineries, whether it's in Port Arthur or Houston," Washington said.

Mike Tobias/The News

DEVELOPING NEW SKILLS: Following the class instructions, Ebony Stephenson, right, practices CPR skills on one of several "dummies" made available to her during last week's Minority Job Training Program, which was funded by the National Institute of Environmental Health Sciences/Environmental Protection Agency.

Sunday, June 25, 2006 / The News

Four Job Fairs Held for our Grads

- **Friday, June 30, 2006**

  6 **companies attended**.(sponsor TWC)
- **Monday, August 28, 2006**
- **5 companies attended. (sponsor TWC)**
- **Wednesday, August 29, 2007**
- **10 companies attended (sponsor Becon)**
- **Saturday, September 22, 2007**

  1 company attended (Sponsor AETI)

Job Fair Employers Await Graduates

Job Fair Employer Ready to Meet Graduates

Certificate of Graduation

Courses placed on certificate

Workforce Math	8 hrs.
Workforce Literacy	8 hrs.
Job Readiness Skills	8 hrs.
Critical Thinking/ Time Management	4 hrs.
Stress Management	8 hrs.
Money Smart	4 hrs.
Hazwoper	40 hrs.
Mold Remediation	16 hrs.
OSHA 10	10 hrs.
Mechanical Reasoning	4 hrs.
Katrina Disaster Training	4 hrs.
CPR	8 hrs.
Fire Guard	6 hrs.
Basic Plus	6 hrs.
Construction	30 hrs.

Success Story: Mr. Xavier Windom

- “I was offered my job back after this training program, but they only gave me a $5.00 an hour raise. ” said Mr. Windom.
- “ $5 per hour!” said every professional in the room. Do you know what that means?…
- $5 x 8 hrs per day x 5 days per week =$200
- $200 per week x 50 weeks **=$10,000 more a year** because of four weeks spent in our JT program!

BINGO!!!! Now That’s Success!

CITY OF PORT ARTHUR, TEXAS

The Evolution of the Brownfields/Minority Worker Training Programs and the Associated Cleanup Markets

Overview of Emerging Environmental and Green Careers

Steven Fenton, National Operations Office, CCCHST
Kirkwood Community College

Kirkwood COMMUNITY COLLEGE

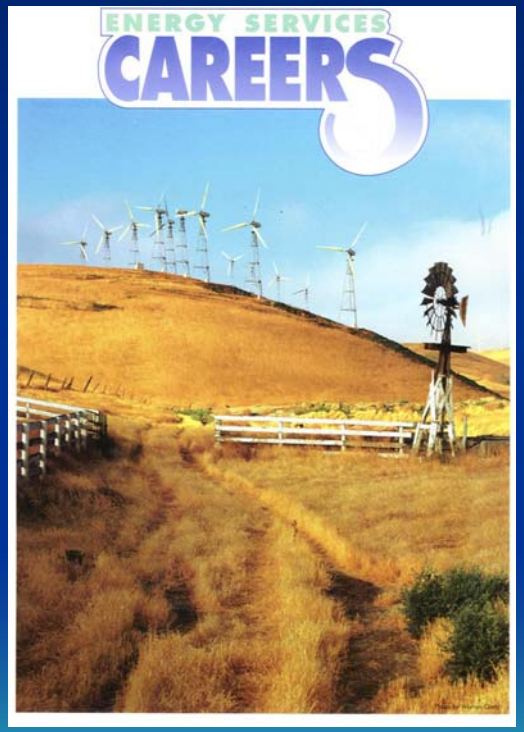
Overview of Emerging Environmental and Green Careers

Advanced Technology Environmental Education Center (ATEEC)

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Partnership for Environmental Technology Education (PETE)



Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Both Reports are being revised in December 2007 and will be accessible at:

http://www.ateec.org

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Energy Services & Technology Model Curriculum

- Introduction to Energy Management Principles
- Alternative and Renewable Energy Sources
- Heating Systems
- Cooling Systems
- Electrical Lighting and Motors
- Energy Control Strategies/Technologies
- Energy Costs, Economic and Environmental Analysis
- Energy Efficiency Methods
- Energy Analysis Capstone

http://www.ateec.org/pete/docs/Energy_Program-CD.pdf

Overview of Emerging Environmental and Green Careers

President's High Growth Job Training Initiative

Fourteen Sectors fit the criteria of (1) they are projected to add substantial numbers of new jobs to the economy or affect the growth of other industries; or (2) they are existing or emerging businesses being transformed by technology and innovation requiring new skill sets for workers. The 14 sectors include:

Advanced Manufacturing
Aerospace
Automotive
Biotechnology
Construction
Energy
Financial Services
Geospatial Technology
Health Care
Homeland Security
Hospitality
Information Technology
Retail
Transportation

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Career Voyages
good jobs
better pay
brighter future

Career Voyages is a collaborative effort between the U.S. Department of Labor and the U.S. Department of Education and in their list of “In-Demand Occupations” Energy was identified as a high growth industry.

http://www.careervoyages.gov/energy-main.cfm

Kirkwood
COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Career Voyages
good jobs
better pay
brighter future

http://www.careervoyages.gov/energy-main.cfm

Five Categories of Energy Jobs Include:

- Electrical Power
- Nuclear
- Oil and Gas
- Mining
- Renewables

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Career Voyages
good jobs
better pay
brighter future

http://www.careervoyages.gov/energy-main.cfm

By Clicking on “In-Demand” Occupations, you will find:

- Comprehensive Description of the Occupation
- Projected Need for Employees (2004 – 2014)
- Projected Growth of the Occupation
- Wages (Bottom 10%, Median, and Top 10%)
- Education & Training of those in the Occupation
- Comparison of National versus State Employment Outlook
- Introductory Video of the Occupation
- Spanish Language Option

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Careers in Renewable Energy:
http://www.careervoyages.gov/includes/incsmallwindow-energy-greenenergy.cfm

- Wind Energy
- Micro Renewables
- Solar Energy
- Marine Energy
- Wave Energy
- Sustainable Transport
- Environmental Impact
- Tidal Energy
- Hydro Energy
- Bioenergy
- Biofuels
- Green Buildings
- Energy Finance
- Carbon Management
- Waste Management

Overview of Emerging Environmental and Green Careers

GREEN ENERGY CAREER GUIDE

JOB AREAS in "GREEN BUILDINGS" INCLUDE:

http://www.greenenergyjobs.com/career-guide/green-building-jobs/

- **Green Building**
  Green Design
  BREEAM, LEED standards
  Ecological Design
  Sustainable Materials
  Construction

- **Micro Renewables**
  Solar Water
  PV
  Micro-wind
  Heat Pumps
  Grid Tie
  Inverter Systems

- **Planning**
  Building Standards
  Planning Strategy
  Environmental

- **Energy Efficiency**
  Thermal Insulation
  Energy control systems
  District Heating systems

- **Engineering**
  Energy Management
  Project Management
  CAD

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Occupational Information Network (O*Net):

http://online.onetcenter.org/

- Provides a list of tasks, knowledge, skills, abilities, work activities, work context, job zone, work styles, and wages and employment trends. *O*Net* also provides the Standard Occupational Code (SOC) for each occupation, and a sample of reported job titles within the SOC.

- Note: O*NET OnLine was developed for the U.S. Department of Labor by the National Center for O*NET Development.

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

National Wages & Employment Trends for Hazardous Materials Removal Workers (SOC: 47-4041.00)

http://online.onetcenter.org/link/summary/47-4041.00

- Median wages (2005) $16.20 hourly, $33,690 annually
- Employment (2004) 38,000 employees
- Projected growth (2004-2014) Faster than average (21-35%)
- Projected need (2004-2014): 22,000 additional employees

Note: State specific data is also available on this site

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Sample of Reported Jobs - Hazardous Materials Removal Workers (SOC: 47-4041.00)

- Asbestos Abatement Worker
- Decontamination / Decommissioning Operator (D & D Operator)
- Radiological Control and Safety Technician
- Waste Handling Technician
- Field Technician
- Hazmat Technician (Hazardous Materials Technician)
- Sampler
- Site Worker
- Nuclear Waste Handler

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

A Few More Job Possibilities…

- Xeriscaping and Energy-Efficient Landscaping: Xeriscaping refers to landscaping in ways that do not require supplemental irrigation. It's promoted in areas that do not have easily accessible supplies of fresh water.

- Mold Remediation: Even though this is not necessarily new, it's the newest issue in the environmental remediation field. From a programmatic view it is also easy to add since few states actually accredit mold training. (Texas is the only one I know of).

- Clean-up of Meth Labs: While Meth lab busts in some states are declining, increasing state regulations drive new business. There are no national standards for cleanup, but about 15 states have adopted rules. The EPA has revised its definition of brownfields to include former meth labs.

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

In Summary …

Today, some of the fastest growing occupations are in the environmental sector. According to the U.S. Department of Labor, the "hottest jobs" include:

- **Environmental engineers**
- **Hazardous materials removal specialists**
- **Pollution prevention**
- **Energy efficiency**
- **Environmental science and protection technicians**

Other industry experts list additional emerging and expanding "hot jobs" including:

- **Conservation biologists**
- **Industrial ecologists**
- **Water and wastewater**
- **Environmental monitoring (satellite remote sensing, geographic information systems (GIS), nanotechnology, and global positioning systems (GPS)**
- **Environmental policy integration**

Kirkwood COMMUNITY COLLEGE

Overview of Emerging Environmental and Green Careers

Questions?

Steven Fenton
CCCHST National Operations Office
35215 SE Aspen Lane # 1301
Snoqualmie, Washington 98065
Phone: (253) 261-1010
Email: sfenton103@aol.com

Kirkwood COMMUNITY COLLEGE

NIEHS Fall Technical Workshop

Chapel Hill, NC

October 18, 2007

Minority Outreach Program Evolution

- **Laborers-AGC Participated in the MWTP and BMWTP since inception**
- **Started our MOP in September 2005 with 2 sites**
  - **Washington DC**
  - **Detroit, Michigan**

Process

- Must submit plan to Laborers-AGC
- Plan addresses:
  - Need
  - Outreach/recruiting strategies
  - Partnerships
  - Training
  - Placement
  - Program evaluation

Minority Outreach Program

- **During 2006 - 2007 Program Year:**
  - **MOP increased to 5 sites**
    - **Denver, CO**
    - **Detroit, MI**
    - **Hartford, CT**
    - **Southern CA**
    - **Washington DC**

Partnerships

- Union Apprenticeship Programs
- Community Based Organizations
- Building Trades Associations

Opportunities

- **Union Apprenticeship**
- **Continuing Education**