

Deer Park Community Advisory Council

Summary of Student-Plant Manager Dialogue

Monday, November 26, 2018

DPCAC community and plant members and 20 Deer Park High School (DPHS) engaged in discussions about jobs and workplace conditions in the petrochemical industry. The input that follows was provided in several ways:

- Students from science, math, and career and technology classes submitted more than 300 questions and responses to these questions before the meeting, providing industry with valuable, unfiltered feedback about student views of industry.
- Teachers sent a few questions.
- Highlights from small group discussion that students reported to the full group.
- Each small group was invited to record on a worksheet any input they would like included in the DPCAC meeting summary

Students uniformly said they would like more information about plants and the opportunities for work in the petrochemical industry. They suggested presentations, internships, and open houses. DPCAC recommended www.petrochemworks.com as a resource for learning about industry jobs and what it takes to get them. The site will ask you about your interests and skills and then match you with jobs that might interest you. Job openings are also posted on this free resource.

Questions and Responses Students Submitted before the Meeting

Ques. 1: What questions would you ask chemical plant manager about their job or workplace conditions?

Workplace safety:

When was the last time you had a meltdown or malfunction?

Is it a safe place to work at?

Is it dangerous?

On a scale from 1-10 how dangerous would you rate your job?

How much of a risk is it working at a chemical plant?

Is there a high risk of losing life (ex. high risk of falling and death using scaffolds)?

Do you sometimes feel unsafe?

What's the risk of taking up a job--healthwise?

How does working in a chemical plant affect your health?

Does it get hot?

How often do you get to work with hazardous or dangerous chemicals?

How many chemicals will I be exposed to?

Is there any risk of getting burned with chemicals?

Have you ever caught on fire?

How many people get hurt?

How many injuries happen in year?

Is there a guarantee of safety?

What exactly happens to prevent a chemical explosion?

What really happens when they burn off chemicals?

Why do you put a lot of gas in the air?

Why so much pollution?

What are you doing about the pollution in Deer Park?

Are all the fumes in the air safe?

Do you wear any kind of mask to protect you from harsh chemicals?

Is the equipment in good condition?

What are the safety procedures?

Does it affect your life expectancy?

Is it really true that working in certain departments of the Shell company can lead to long term health effects?

How do you maintain safety and security within your facility?

How often do you analyze the safety conditions?

How do you prevent people from getting ill when there is a problem?

Money issues:

Where is the best spot to work at in a chemical plant based on the best salary?

Does it pay good money?

How much would I be getting paid and how many hours can I work?

What is the salary?

How long is the work day?

How much do you get paid hourly?

Do you get a lot of vacation days?

How do you manage to pay everyone?

Is the pay worth breathing in toxins every single day?

General questions about the job:

Is there a uniform?

When will I be required to work?

How do you run the plant?

What are the company's values?

Do you have a special kind of insurance?

Would I have medical coverage?

What made you choose this job?

What are the pros & cons of your workplace?

Was this your first choice as a job, if not, what made you change your mind?

What do they actually do in the plant?

How do you manage to keep your life balanced with work & personal stuff?

How do you manage your time?

What do you do?

What does your schedule look like?

What is a typical day of work for a chemical plant manager?

How do you "move up the ladder" at a chemical plant?

Is it easy to advance in this industry?

How is the environment in chemical plant?

Do you work in good conditions?

How much fun and group work do you do?

Are you happy with the work you do on a daily basis?

What's an example of common situations you deal with at your job?

What does a chemical engineer do at the place and what does it take to become one?

What's your favorite thing about your job?

What are some everyday things you do?

What's your level of education; what did you need to study?

What are the education requirements?

What classes (schools) do I take?

How much of the knowledge you gain in high school is applicable to your job now?

What did it take for you to get to where you are now?

What does it take to become a manager at a plant?

What qualifies you for the position you have?

What do their jobs actually consist of?

What ways can the plant affect the community?

What sparked your interest to do the job you wanted?

How is the job; is it good for you?

Is the job hard?

What is the purpose of your plant?

Does the plant have negative effects on the environment?

What are some challenges of your job?

What drives you the most?

Is this job something you enjoy?

How do you get all of your oil?

Where do you dispose the leftovers?

Do you hire after high school?

Could I start working as soon as I turn 18?

What are some rules or obligations?

Does it get tiring working there?

Is your job ever interesting and how much does it teach you?

Does it always smell bad or do they give you something?

What are the different jobs offered at plants?

What is it like to work with chemicals?

What skills would I need to have?

What kind of social skills are required?

Is this a good field to work in?

Do you find your breaks satisfying, or do you feel overworked?

How do you make the world a better place through your daily tasks?

What daily activities do you do in order to get prepared for a chemical plant?

Is there food involved?

What is your favorite chemical?

Is it hard working insane shifts?

How many chemicals are used in one day?

What is the cost to build a chemical plant?

Do you get any heaters or hot chocolate?

What school did you go to?

Is your job boring?

Are there any jobs that are not boring?

How often do trucks travel to gas stations?

How is it being in charge of a company?

Do they do more paperwork or is it more hands on?

What interests you to keep working for your company?

What helped you decide what you wanted to do?

Do you work overtime frequently?

Is your work repetitive or is everyday different for you?

Did you take a management class and a HR class?

Is there a lot of traveling involved?

What are the benefits of working for a plant over somewhere else?

How do you go about legal matters and regulations concerning environmental issues?

How do you manage a vast working community with varying professionals?

Is this job something you want to do for your whole life?

Do you look forward to going to work every day?

What differences are there between a management position, operator position, and a chemical engineer?

How stressful and how time-consuming is your job?

Have you ever been in a situation where you didn't know what to do?

How many different jobs/responsibilities does each person have?

What is one of the great experiences that you want to share about your career?

What is your major priority as a manager?

How many square acres is the plant?

Ques. 2: What would it take to interest you in a career in industry?

To know how competitive the field is

Learn more about what jobs are there

- Having more jobs for women

- See if it's easy and interesting

- Opportunities in the industry

Knowing a little more about the industry

A well-paying job

- More information about the pay and benefits

- Enough money to support a family, limited schooling, & good benefits

- The hours, money, and schooling required

- 200,000 yearly income

- If it meets my salary standards

- The benefits they offer and the retirement benefits

- Salary and participating in a job I enjoy

- A million dollars

- Free dental

- Food

Interesting work material/conditions

- If I like what I'm doing, then I'll be interested

- Satisfaction from work, feeling like you have greatly contributed to something, learning new things

- Career would have to interest me and wouldn't take away my social life

If the job is stable

- Would I have a solid job for a few years in the company or would people be laid off soon

- A solid contract since that industry is always fluctuating and really good benefits

- If it was not as harmful

- Knowing what the expected growth is in the field

Make it sound fun; all it seems like they do is sit around

- Having a fun job and reasonable hours

- Field trips

If overtime wasn't the only way to make good money

Interacting with technology

If it had animals

Being able to work with chemicals

I don't know, but if I did I would take over my dad's business [Dad owns 2 companies that work in the plants]

I feel like I'd have to see what you do and see if I'd enjoy it

Make it fun & not strict

A job that is fun and interesting, something I most likely won't get tired of

I would like to visit the plants

I would like to see what one day at the plant would look like

Show that it is fulfilling

Would have to feel dedicated to the job or interested in it

If there are not so many requirements to be in that career

high pay and little in requirements regarding education

A nice work place/environment

Something that could make an impact on the world, but also be fun for me

A lot of convincing

If I had a family member that worked there

A call or text

A safe work site

Not as harsh conditions

Want to have a job I look forward to going to everyday

An active job, not a desk job

A hands on or social interaction with people and/or equipment

A flexible schedule

Being offshore, something that's not extremely dangerous

Ability to help other, directly

Ability to work outside Houston area (away from actual plants)

Good health plan

Be better at math

If there were coop classes/on the job training

It would have to have space involved

Something related with petroleum

Having something to do with reading and writing being available in the career

Welding related jobs
Medical field related jobs
Biomedical engineering related jobs
Mathematician related jobs
Engineering related jobs
Business related jobs
Accounting or Finance related jobs
Assurance that the industry is not having a negative effect on the environment
The experiments you can do with chemicals
Close to home and friends working there
My dad
Nothing, I'm already interested
Nothing, I'm not interested/want nothing to do with it

Ques. 3: What issues may be holding you and your peers back from considering a career in industry?

Health hazards
 Health related issues
 The chemicals and the hazards
 Dangerous
 The injuries and stress
 The plants exploding
 Safety
 The many precautions needed
 The work area is very dangerous
 Risk of getting killed, hurt
 Cancer
 All the chemicals I would be breathing in
 Loud work areas
 Afraid that a fire would break out at one of the plants
 Dying from pollution
 The accidents that happen
 The effects of the chemicals

Heard a lot of stories about people not being safe and getting hurt

Being constantly around harmful chemicals

Don't agree with the harsh environmental factors

Personal health issues

Education related

Some people would rather have an education

The harsh environment and a prejudice about the lack of a formal education

The stigma that it is a highly physical and unsafe job that is only for blue-collar workers

College

Cost of education/length of degree

The things I'll have to do to get there, such as classes; The amount of work/schooling

Had a friend that couldn't pass his basic plus

People dream "bigger" than industry

College classes to do with science are holding me back

Usually see working at a plant as "last resort" king of work or "Plan B"

Hard college classes in a rigorous school--many engineering schools are difficult

The amount of people who are wanting to go into this career makes me think I wouldn't qualify

Very rigorous course work through college and I am usually a more hands-on person

Too many years of college to become a chemical engineer

A need for education

Idea of going to college and getting a career that is influenced by our peers and parents

All the calculations and non-useful classes to get a Bachelor's for that industry

What the uniform looks like

Lack of advertisement

Very hard work

Manual labor

The thought of having to physically do something

The hard work and the tools that are used

Too much work

Stereotypes/assumptions

Are females able to work all jobs

I want to go into the medical field

Workplace area not a good fit

- Work conditions

- May have to work outside for a little

- Industry creates chemicals and has no creative outlet

Not knowing enough about the job and plants

- Lack of knowledge

- Being uninformed about opportunities

- Lack of information about the industry

The potential of malpractice

A lot of layoffs

Don't want to stay in Deer Park

- Restriction to living in the Houston area

- Being tied down to Deer Park

All of the responsibility that goes with the job

- I'm a girl and there should be more simple duties

The ability to not be able to perform math correctly

Family

- My dad because he doesn't want me working in the plants

- My mom works at a chemical plant and everyday she comes home exhausted

- Less family time

- My grandfathers are in industry--they hate it

- If we would have to move and not be able to with family

- It'll be far away from my family

- My dad, an operator, told me it wasn't a good job option

- Both my parents are chemists and being around it my whole life I have no interest in it anymore

Drug test

Disinterest

- Would like to do something else

- Lack of interest of what the job is

- I don't like working in the industry

- Don't like that type of work

We have no actual classes in school to peak interest

Boring work; It is a boring normal job--these jobs need more diversity

Chemistry is not appealing

Wouldn't enjoy the work

Unexciting job

The danger or the co-workers

Employee mentality and management issues

Do not want to work with a bunch of men

I feel like I can do better

Other, larger paying jobs in STEM

The weather during the summer and I will be sweating

Wouldn't want to work outside

Low salary and not much benefits

Not enough money paid to the workers

Peers wanting a job that pays a bunch of money

Not enough pay and too much hours

Harsh hours

Not my first choice because of the work schedule

Working shifts such as 5pm to 5am and long shifts

Seen many people in Deer Park and Pasadena live their lives at the plant, and I'm not sure if I
want to do the same

The amount of hours worked, not getting holidays

Not being able to spend time with my family

Time management

Not sure of career path right now

Does not look appealing to us

Questions Submitted by Teachers

- Do the plants have any work/study programs-i.e. financial support (or partial support) for employees to take course work towards a degree?
- Are employees who show initiative and talent identified and encouraged to pursue a different job opportunity at the facility?

- How often do employees visit schools (any level/grade) to showcase what the plant does or produce? Are the plants encouraged by the schools to visit? If they have the opportunity to go to different schools, which level (elem/middle/high) tends to be the most receptive/interested?

Highlights of Small Group Discussion as Reported to the Full Group

What would you ask chemical plant managers about their job or workplace conditions?

- Safety is top priority.
- What do they like about their job; how they got where they are
- Stuff you need to know- colleges, prepare ahead of time; change careers mid-stream.
- What do they do on a day to day basis? routine, check emails, etc., time management
- How do they maintain a work/life balance?
- Safety; different jobs; improve things; website
- How much HS knowledge is actually used? It is the basis for foundation.
- Education/experience needed; What is value at plant?
- Struggles of employees
- Start with one degree- switch gears
- Various types of jobs- office/plant
- Safety

What would it take to interest you in a career in industry? What issues may be holding you and your peers back from considering a career in industry?

- Communication
- What interests you- pursue your interests
- STEM- Women in Industry
- Not knowing what opportunities are available
- What education is needed
- Lack of knowledge
- Tell us your story, everyday experiences (Plant Managers)
- Different branches-opportunities to do things
- Safety- especially flares (Plant Reps discussed the function of a flare)
- Interest in Salary
- Benefits/Salary
- Travel- do you have to travel?
- Time off

What surprised DPHS Students about the discussions?

- Misconceptions about who gets hired and safety.
- Calculus- Theory and backup- not used on an everyday basis
- Possibility of switching majors
- If they take a job in Deer Park they do not "Have" to stay in Deer Park
- Different careers at Plants (Business, IT, HR, etc.)
- International Travel

What surprised DPCAC Community and Plant Members about the discussions?

- Still misconceptions about career opportunities

- Schools don't communicate career issues
- Salary- work/life balance
- Not apprehensive about industry
- Student participation- open dialogue
- Environment Competitive- Positive, family, cooperative working experience

Highlights of Small Group Discussion as Recorded on Worksheets for Inclusion in Meeting Summary

What sparked your interest (asked of Plant Managers)?

- Chemistry and Calculus were two favorite classes. Wasn't sure what he wanted to do so discussed with his teachers. Dad was a Mechanical Engineer.
- I thought I wanted to work in aerospace but the chemical/manufacturing industry had been the most stable and beneficial.

General questions for Plant Managers:

- *What you do you do as a mechanical engineer?* I did project stuff right of school. Mostly replacing things and built new plants.
- *How much knowledge did you get in High School that you can use now?* Gets you in the door, a good base for knowledge. Communication skills are a key for success.
- *How many projects do you have going on?* It varies by plant, plant size and product.
- *What do you regularly struggle with?* Safety is top priority. Ensuring no one gets hurt. Deciding what to do and how to do it.
- *What degrees did you study?* Chemical Engineering (Company looks for AA in Process Technology for production positions. There is also ongoing education.)
- *Where is the greatest demand?* Operations side right now.
- *Which do you value the most: education or experience?* Both have high value. Depends on where in a person's career they are and what the hiring company is looking for. Education gets you in, your future is up to you.
- *Do you have interns?* Some larger companies do.
- *Are there opportunities for advancement?* Depends on you!
- *Would speaking multiple languages be important?* Yes! It makes you valuable.
- *What is most rewarding?* Seeing success of a group; constant mental stimulation; providing new opportunities to folks; making sure everyone goes home safe.
- *What led you to the role?* PR role that led to Shell; High School interest in Chemistry, pursued Chemical Engineering degree.

What would it take to interest you in a career in industry?

- Very safe and a lot of good things. Many different jobs are available. Used websites to get information.
- Would like to see what people do every day in your field.
- Personal stories
- Different roles-How did you get there?
- Different Experiences
- Open House Tour
- Looking for more information-like we are getting at this meeting.

- Actual jobs and what they do.
- Connection with education.
- Understanding Career Paths

What issues may be holding you and your peers back from considering a career in industry?

- Stigmas- Women in workplace. (Can do any job.)
- Won't make enough money. (You can get all the money you want.)
- Risk and the level of difficulty
- AP classes are the only ones that are getting the education in order to get a degree in "industry."
- The flares that we see are a little scary. (The plant managers at the table discussed the function of the flare systems.)
- Are layoffs a big issue? Not for us, but we are small. Everyone is doing well right now. Layoffs are a function of the economy.
- If you work for a plant for some years, can you go to school and learn something else and get another job? Yes, people do it all the time.
- Too much math and science
- Misconceptions about industry