



**Christopher A. Ruggiero**  
**Vice President, General Counsel & Secretary**

**Monroe Energy, LLC**

**4101 Post Road**  
**Trainer, PA 19061**  
**Ph: 610.364.8409**  
**Fax: 610.364.8404**  
**christopher.ruggiero@monroe-energy.com**

March 26, 2018  
VIA ELECTRONIC MAIL

Jeffrey H. Wood  
Acting Assistant Attorney General, Environment and Natural Resources  
Division  
U.S. DOJ-ENRD  
P.O. Box 7611  
Washington, DC 20044-7611

Re: Comments on Proposed Settlement in *In re PES Holdings, LLC, et al.* (D.J. Ref. No. 90-5-2-1-10993/1)

Monroe Energy, LLC ("Monroe") respectfully submits these comments on the proposed settlement agreement in *In re PES Holdings, LLC, et al.* Monroe owns a refinery in southeastern Pennsylvania and is an obligated party under the Renewable Fuel Standard ("RFS") Program.

Monroe submits these comments to underscore that the proposed settlement agreement between EPA and Philadelphia Energy Solutions ("PES") is a reflection, and an acknowledgment, of the economic harm caused by the RFS Program. These severe economic effects are not limited to PES. Rather, PES's bankruptcy and this proposed settlement are a manifestation of the broader harm that the RFS Program causes to merchant refineries, the men and women who work there, and the economy and energy security of the United States as a whole. Regardless of the outcome of this proceeding involving PES, this serious, nationwide problem requires a serious, national solution.

1. The RFS Program was "the primary driver behind [PES's] decision to seek relief under the Bankruptcy Code." *In re PES Holdings, LLC*, No. 18-10122, D.E. 10 at 1 (Bankr. D. Del. Jan. 22, 2018). As PES explained in its Disclosure Statement, the "unpredictable, escalating, and unintended compliance burden" of the RFS Program "has cost the Debtors \$832 million since their commencement of operations in September 2012 and, on an annual basis, the Debtors' expense associated with complying with the RFS Program is twice their annual payroll, nearly one and one-half times their annual average capital expenditures, four times their interest expense, and now represents their *single largest expense after crude oil.*" *Id.* (emphasis added).

2. In an industry with often very slim margins, the cost to refiners of complying with the RFS Program is untenable. Compliance costs have increased 1600% since 2012. Monroe spends more each

year to comply with the RFS Program than it spent to acquire its refinery, and more than on any other category of expenses except the purchase of crude oil.

These costs are intensified by the problems in implementing the RFS Program's cap-and-trade model. The market for Renewable Identification Numbers ("RINs") that obligated parties use to satisfy their obligations has been distorted by speculators and market manipulators. The price to purchase these RINs has become disconnected from the realities of the price of renewable fuels and gasoline, harming refiners and precluding innovation and investment in the market for genuine, real-world fuel.

3. The adverse consequences of the RFS Program are clear and acute in the Philadelphia area, where PES is based and where three refiners have closed in the last decade. If more Philadelphia-area refineries were to close, replacing the lost capacity would come at great expense to energy consumers. The United States Energy Information Administration has warned that the pipeline delivering fuel from the Gulf Coast, for example, is already "at or near capacity," and that the shipping infrastructure in Northeastern ports "require[s] considerable modification before they can be used to receive products."<sup>1</sup>

Closure of refineries in the Philadelphia area would also undermine one of the main purposes of the RFS Program. Congress intended to "move the United States toward greater energy independence and security." Energy Independence and Security Act, Pub. L. 110-140, 121 Stat. 1492 (2007). Continued geographic diversity in refining capacity—and a consistent supply of domestic product—is essential to this goal.

For these and other reasons, Pennsylvania—which is home to PES and Monroe—has joined several other states in asking EPA to grant comprehensive relief through a waiver for "severe economic harm." Congress provided this safety valve for the RFS Program by directing the Administrator to waive the RFS Program's requirements when "implementation . . . would severely harm the economy." 42 U.S.C. § 7545(o)(7)(A)(i). To stop the RFS Program from dragging down the refining industry and the rest of the economy with it, Delaware, New Mexico, Pennsylvania, and Texas have requested waivers of the total renewable volume obligation under the RFS Program.<sup>2</sup>

4. As those petitions recognize, when refiners struggle or close, the rest of the economy suffers. Monroe today supports close to 500 direct refining jobs and thousands of indirect jobs in the region. According to a study commissioned by the Commonwealth of Pennsylvania, each refinery job supports approximately 18.3 jobs in the region, 22 jobs in the state, and 61 jobs nationwide.<sup>3</sup> A thousand lost refinery jobs would cost state and local governments millions of dollars in tax revenue.

---

<sup>1</sup> U.S. Energy Info. Admin., *Potential Impacts of Reductions in Refinery Activity on Northeast Petroleum Product Markets* (last updated May 11, 2012), available at <https://www.eia.gov/analysis/petroleum/nerefining/update/pdf/neprodmts.pdf>.

<sup>2</sup> See Letter from John Carney, Governor of the State of Delaware, to Scott Pruitt, Administrator of EPA (Jan. 30, 2018); Letter from Greg Abbott, Governor of the State of Texas, to Scott Pruitt, Administrator of EPA (Dec. 1, 2017); Letter from Susana Martinez, Governor of the State of New Mexico, to Scott Pruitt, Administrator of EPA (Nov. 22, 2017); Letter from Tom Wolf, Governor of the Commonwealth of Pennsylvania, to Scott Pruitt, Administrator of EPA (Nov. 2, 2017).

<sup>3</sup> Center for Workforce Information & Analysis, *Reemployment Assessment and Economic Impact of Conoco Phillips and Sunoco Closings*, Appendix C (Jan. 9, 2012) (attached as Exhibit A).



Jeffrey H. Wood

March 26, 2018

Page 3

The adverse effects of the RFS Program radiate throughout the entire economy in other ways, as well. Higher fuel costs lead to higher prices for other goods and services—including higher food prices—through increased costs of production and transportation. Those prices harm consumers, leaving them with less money to spend on other goods and services. This, in turn, harms employees and businesses in those other industries.

\* \* \*

This proposed settlement is a stark acknowledgment that the RFS Program is causing real harm. Critically, that harm will not end with a government settlement with PES. Instead, the government should recognize this bankruptcy as an alarm—the symptom of a far larger problem—and should promptly take steps to alleviate the severe harm caused by the RFS Program for *all* merchant refiners and the economies and individuals they support. These problems with the RFS Program must be addressed not merely in this proceeding, but at their roots.

Please do not hesitate to contact me if you have any questions or concerns.

Sincerely,



Christopher Ruggiero  
Vice President, General Counsel & Secretary  
Monroe Energy, LLC

# EXHIBIT A

Center for Workforce Information & Analysis, *Reemployment  
Assessment and Economic Impact of ConocoPhillips and Sunoco  
Closings* (Jan. 9, 2012)

# **Reemployment Assessment and Economic Impact of ConocoPhillips and Sunoco Closings**

Appendix A - Reemployment Assessment for ConocoPhillips

Appendix B - Reemployment Assessment for Sunoco

Appendix C - Economic Impact of ConocoPhillips and Sunoco Closings

**Center for Workforce  
Information & Analysis**

**January 9, 2012**

# **Reemployment Assessment Report for ConocoPhillips**

Center for Workforce Information & Analysis  
January 9, 2012

## Reemployment Assessment Request for ConocoPhillips

ConocoPhillips has announced layoffs at its facility in Delaware County. The geographical areas affected by these layoffs are the Delaware County Workforce Investment Area (WIA), which includes Delaware county, and the Philadelphia Metropolitan Statistical Area (MSA), which includes Bucks, Chester, Delaware, Montgomery and Philadelphia counties. Four hundred workers are expected to be affected at this time. Since a complete list of job titles was unavailable at the time of this report, a staffing pattern for the industry was used to estimate the level of layoffs for each occupation. This listing of 51 unique Standard Occupational Classification (SOC) codes is shown in Attachment A. Average wage data for the Delaware County WIA, the Philadelphia MSA and the commonwealth are provided in Attachment B for the SOC occupations projected to be impacted by this layoff.

Attachment C classifies the prospects for reemployment in the 51 SOC occupations into four categories and shows projected 6-month openings in the Delaware County WIA, the Philadelphia MSA and the entire commonwealth.

- Forty occupations representing 244 employees, or 61 percent, are classified as having “Good” or “Fair” Reemployment Prospects. Workers in these categories should find sufficient job openings within the Delaware County WIA or Philadelphia MSA.
- “Fair to Difficult” prospects exist for 6 occupations. The 37 employees in these occupations may have difficulty finding work in their current occupation within their immediate geographical area. However, prospects for reemployment improve if the dislocated employees are willing to relocate elsewhere in the state.
- The remaining 5 occupations represent 119 employees. Reemployment prospects for these workers are classified as “Difficult.” These dislocated employees can expect **substantial** difficulty finding reemployment in their current occupation within their current region and throughout the commonwealth.
- Thirty-nine percent of ConocoPhillips employees work in the occupations that fall into the “Fair to Difficult” and “Difficult” categories. For these occupations, lists of jobs that require similar skills have been provided in Attachment D, and additional information on these related occupations is included in Attachment E.
- Attachment F shows typical educational requirements and work experience, obtained through TORQworks, for the occupation classified as “Difficult” with the greatest number of affected employees – Petroleum Pump System & Refinery Operators.
- The top-employing industries for Petroleum Pump System & Refinery Operators are shown in Attachment G, also taken from TORQworks. Prospects for workers in this occupation may improve if they look outside of the Petroleum & Gas Products Manufacturing industry and consider jobs in the Oil & Gas Extraction industry. Jobs in this industry may exist in the Marcellus Shale region of Pennsylvania; for more information, visit CWIA’s website at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us) then click on “Marcellus Shale Fast Facts.”
- Attachment H is the 2011 High Priority Occupations listing for the Delaware County WIA. Workforce development funding in the commonwealth may be available for training programs required to enter these occupations.
- A real-time look at current job prospects for Production jobs can be found in Attachment I. Help Wanted Online Ads (HWOL) shows counts of online job listings in this field throughout the state within the past month, along with locations and sources. To further explore real-time job postings, visit CWIA’s website at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us) then click on “Job Spidering.”

Some additional characteristics of Delaware County were gathered from the November 2011 edition of the Pennsylvania Civilian Labor Force Packet, available at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us).

- Delaware County had a seasonally adjusted unemployment rate of 8.0 percent in November 2011, up from 7.8 in October 2011. Delaware's current rate is slightly higher than the state (7.9 percent), but lower than the nation (8.6 percent).
- In November 2011, the labor force in Delaware County totaled 275,300. This accounts for about 14 percent of the labor force in the five Philly-area counties that same month (1,941,200).



## Attachment A

### Listing of Potential Layoffs in ConocoPhillips

SOC Code	SOC Title	Layoffs
13-2011	Accountants & Auditors	5
43-3031	Bookkeeping, Accounting & Auditing Clerks	8
17-2041	Chemical Engineers	6
51-9011	Chemical Equipment Oprs & Tenders	3
51-8091	Chemical Plant & System Oprs	12
19-4031	Chemical Technicians	6
19-2031	Chemists	3
13-1072	Compensation, Benefits & Job Analysis Specialists	2
49-9012	Control & Valve Installers & Repairers	6
51-9021	Crushing, Grinding & Polishing Machine Oprs	13
47-2111	Electricians	4
2608503	Engineering Managers	4
43-6011	Executive Secretaries & Administrative Assistants	2
51-9051	Furnace, Kiln, Oven, Drier & Kettle Oprs	1
11-1021	General & Operations Managers	7
19-4041	Geological & Petroleum Technicians	2
51-9198	Helpers--Production Workers	9
17-2112	Industrial Engineers	2
49-9041	Industrial Machinery Mechanics	12
420700	Industrial Production Managers	2
53-7051	Industrial Truck & Tractor Oprs	14
51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	11
53-7062	Laborers & Freight, Stock & Material Movers, Hand	12
51-4041	Machinists	15
49-9042	Maintenance & Repair Workers, General	8
49-9043	Maintenance Workers, Machinery	4
17-2141	Mechanical Engineers	4
51-9023	Mixing & Blending Machine Oprs	12
29-9011	Occupational Health & Safety Specialists	2
43-9061	Office Clerks, General	8
47-2073	Operating Engineers	2
51-9111	Packaging & Filling Machine Oprs	6
43-3051	Payroll & Timekeeping Clerks	1
17-2171	Petroleum Engineers	1
51-8093	Petroleum Pump System & Refinery Oprs	76
13-1023	Purchasing Agents, Other	2
41-4012	Sales Representatives	7
41-4011	Sales Representatives, Technical & Scientific Products	3
43-6014	Secretaries	2
51-9012	Separating, Filtering, Precipitating & Still Machine Oprs	18
43-5071	Shipping, Receiving & Traffic Clerks	7
47-1011	Supervisors - Construction Trades & Extraction Workers	4
53-1021	Supervisors - Helpers & Laborers	2
49-1011	Supervisors - Mechanics, Installers & Repairers	6
43-1011	Supervisors - Office & Administrative Support Workers	3
51-1011	Supervisors - Production & Operating Workers	20
53-1031	Supervisors - Transp & Material-Moving Machine Oprs	2
53-7121	Tank Car, Truck & Ship Loaders	6
51-2092	Team Assemblers	10
53-3032	Truck Drivers, Heavy & Tractor-Trailer	19
51-4121	Welders, Cutters, Solderers & Brazers	4
Total		<b>400</b>

## Attachment B

### Average Wages for SOC Occupations within ConocoPhillips

SOC Code	SOC Title	2010 Annual Average Wages (\$)					
		WIA		MSA		Pennsylvania	
		Hourly	Annual	Hourly	Annual	Hourly	Annual
11-1021	General & Operations Managers	55.99	116,460	59.55	123,860	51.05	106,180
11-3051	Industrial Production Managers	50.83	105,730	48.96	101,840	43.01	89,470
11-9041	Engineering Managers	58.15	120,960	63.32	131,720	58.39	121,460
13-1023	Purchasing Agents, Other	33.68	70,060	30.80	64,060	28.34	58,940
13-1072	Compensation, Benefits & Job Analysis Specialists	30.67	63,790	30.72	63,890	28.16	58,570
13-2011	Accountants & Auditors	37.09	77,150	37.51	78,020	32.98	68,610
17-2041	Chemical Engineers	47.19	98,150	44.28	92,090	43.87	91,260
17-2112	Industrial Engineers	38.34	79,740	40.28	83,780	37.17	77,310
17-2141	Mechanical Engineers	45.06	93,720	40.82	84,910	37.12	77,210
17-2171	Petroleum Engineers	N/A	N/A	N/A	N/A	62.26	129,510
19-2031	Chemists	30.00	62,400	36.52	75,960	33.15	68,950
19-4031	Chemical Technicians	19.05	39,620	23.17	48,200	22.01	45,780
19-4041	Geological & Petroleum Technicians	N/A	N/A	25.15	52,310	23.89	49,700
29-9011	Occupational Health & Safety Specialists	38.78	80,650	32.74	68,090	29.14	60,620
41-4011	Sales Representatives, Technical & Scientific Products	41.92	87,190	44.45	92,460	41.88	87,120
41-4012	Sales Representatives	32.71	68,050	33.44	69,550	30.70	63,850
43-1011	Supervisors - Office & Administrative Support Workers	29.42	61,190	27.43	57,060	24.87	51,720
43-3031	Bookkeeping, Accounting & Auditing Clerks	19.29	40,120	19.21	39,960	17.08	35,540
43-3051	Payroll & Timekeeping Clerks	18.76	39,010	19.52	40,600	17.61	36,620
43-5071	Shipping, Receiving & Traffic Clerks	17.21	35,800	16.50	34,320	15.55	32,350
43-6011	Executive Secretaries & Administrative Assistants	22.74	47,300	24.00	49,920	21.67	45,080
43-6014	Secretaries	16.49	34,300	16.32	33,940	14.74	30,650
43-9061	Office Clerks, General	14.91	31,020	14.98	31,150	13.83	28,760
47-1011	Supervisors - Construction Trades & Extraction Workers	39.43	82,000	36.51	75,940	31.07	64,630
47-2073	Operating Engineers	28.04	58,330	26.08	54,250	21.03	43,740
47-2111	Electricians	37.98	79,000	33.60	69,900	26.89	55,940
49-1011	Supervisors - Mechanics, Installers & Repairers	34.54	71,850	33.16	68,970	30.67	63,800
49-9012	Control & Valve Installers & Repairers	N/A	N/A	25.95	53,980	23.24	48,350
49-9041	Industrial Machinery Mechanics	22.73	47,270	22.94	47,720	21.61	44,940

## Attachment B

### Average Wages for SOC Occupations within ConocoPhillips

SOC Code	SOC Title	2010 Annual Average Wages (\$)					
		WIA		MSA		Pennsylvania	
		Hourly	Annual	Hourly	Annual	Hourly	Annual
49-9042	Maintenance & Repair Workers, General	18.85	39,200	18.88	39,280	17.49	36,390
49-9043	Maintenance Workers, Machinery	12.31	25,610	18.88	39,270	18.51	38,500
51-1011	Supervisors - Production & Operating Workers	31.11	64,710	30.14	62,690	26.82	55,800
51-2092	Team Assemblers	17.00	35,360	15.49	32,230	14.50	30,160
51-4041	Machinists	21.91	45,570	21.01	43,690	18.88	39,270
51-4121	Welders, Cutters, Solderers & Brazers	21.02	43,730	19.31	40,160	17.43	36,250
51-8091	Chemical Plant & System Oprs	25.32	52,670	26.26	54,630	25.04	52,090
51-8093	Petroleum Pump System & Refinery Oprs	28.04	58,320	27.47	57,140	26.52	55,160
51-9011	Chemical Equipment Oprs & Tenders	23.29	48,450	20.56	42,770	20.17	41,960
51-9012	Separating, Filtering, Precipitating & Still Machine Oprs	N/A	N/A	19.64	40,850	19.58	40,720
51-9021	Crushing, Grinding & Polishing Machine Oprs	18.25	37,960	16.65	34,630	17.15	35,670
51-9023	Mixing & Blending Machine Oprs	24.88	51,740	18.26	37,990	17.86	37,160
51-9051	Furnace, Kiln, Oven, Drier & Kettle Oprs	N/A	N/A	18.15	37,740	17.67	36,740
51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	24.60	51,160	19.50	40,570	17.57	36,540
51-9111	Packaging & Filling Machine Oprs	16.77	34,870	14.62	30,410	14.93	31,060
51-9198	Helpers--Production Workers	12.65	26,320	12.92	26,870	12.57	26,140
53-1021	Supervisors - Helpers & Laborers	28.88	60,080	27.68	57,580	24.38	50,720
53-1031	Supervisors - Transp & Material-Moving Machine Oprs	32.89	68,410	30.57	63,590	28.17	58,600
53-3032	Truck Drivers, Heavy & Tractor-Trailer	23.46	48,800	21.63	45,000	19.88	41,360
53-7051	Industrial Truck & Tractor Oprs	20.10	41,820	17.29	35,970	15.93	33,130
53-7062	Laborers & Freight, Stock & Material Movers, Hand	14.43	30,010	13.83	28,760	13.30	27,650
53-7121	Tank Car, Truck & Ship Loaders	N/A	N/A	N/A	N/A	20.19	42,000

Source: Center for Workforce Information & Analysis, Occupational Employment Statistics (OES) Wages, 2010

## Attachment C

### Reemployment Assessment for ConocoPhillips

#### Good Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Accountants & Auditors	5	10	100	314
Bookkeeping, Accounting & Auditing Clerks	8	13	110	373
Electricians	4	14	58	170
Executive Secretaries & Administrative Assistants	2	8	65	194
General & Operations Managers	7	8	79	242
Industrial Engineers	2	4	28	88
Laborers & Freight, Stock & Material Movers, Hand	12	33	248	886
Office Clerks, General	8	35	246	815
Operating Engineers	2	2	22	93
Payroll & Timekeeping Clerks	1	2	20	60
Purchasing Agents, Other	2	2	21	71
Sales Representatives	7	19	134	502
Sales Representatives, Technical & Scientific Products	3	4	36	103
Secretaries	2	14	119	374
Supervisors - Office & Administrative Support Workers	3	9	86	267
Supervisors - Transp & Material-Moving Machine Oprs	2	2	14	55
	70			

#### Fair Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Chemical Equipment Oprs & Tenders	3	1	12	23
Chemical Technicians	6	1	17	42
Chemists	3	0	18	38
Compensation, Benefits & Job Analysis Specialists	2	1	12	36
Engineering Managers	4	1	10	28
Furnace, Kiln, Oven, Drier & Kettle Oprs	1	N/A	2	12
Helpers--Production Workers	9	2	38	173
Industrial Machinery Mechanics	12	3	22	100
Industrial Production Managers	2	1	15	56
Industrial Truck & Tractor Oprs	14	2	41	208
Inspectors, Testers, Sorters, Samplers & Weighers	11	2	20	86
Machinists	15	3	19	80
Maintenance & Repair Workers, General	8	3	14	54
Mechanical Engineers	4	2	14	50
Occupational Health & Safety Specialists	2	0	5	12
Packaging & Filling Machine Oprs	6	2	23	88
Shipping, Receiving & Traffic Clerks	7	6	47	174
Supervisors - Construction Trades & Extraction Workers	4	3	24	82
Supervisors - Helpers & Laborers	2	1	9	37
Supervisors - Mechanics, Installers & Repairers	6	3	25	88
Supervisors - Production & Operating Workers	20	3	30	129
Team Assemblers	10	4	52	244
Truck Drivers, Heavy & Tractor-Trailer	19	9	89	468
Welders, Cutters, Solderers & Brazers	4	1	20	97
	174			

## Attachment C

### Reemployment Assessment for ConocoPhillips

#### Fair to Difficult Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Chemical Engineers	6	0	4	10
Chemical Plant & System Oprs	12	N/A	6	14
Geological & Petroleum Technicians	2	N/A	0	2
Maintenance Workers, Machinery	4	0	2	10
Mixing & Blending Machine Oprs	12	0	8	26
Petroleum Engineers	1	0	N/A	1
	37			

#### Difficult Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Control & Valve Installers & Repairers	6	N/A	0	4
Crushing, Grinding & Polishing Machine Oprs	13	0	1	10
Petroleum Pump System & Refinery Oprs*	76	3	4	14
Separating, Filtering, Precipitating & Still Machine Oprs	18	0	3	9
Tank Car, Truck & Ship Loaders	6	0	0	2
	119			

\* Dominant Occupation

Source: Center for Workforce Information & Analysis, Occupational Employment Projections, 2008-2018



## **Attachment D**

### **Related Occupations for "Fair-to-Difficult" and "Difficult" Reemployment Prospects**

#### **Chemical Engineers**

Agricultural Engineers  
Conservation Scientists  
Engineering Managers  
Foresters

Geoscientists  
Health & Safety Engineers  
Nuclear Engineers  
Nuclear Technicians

#### **Chemical Plant & System Oprs**

Etchers & Engravers  
Extruding, Forming, Pressing and Compacting Machine Oprs  
Furnace, Kiln, Oven, Drier & Kettle Oprs  
Gas Plant Oprs

Photographic Processing Machine Oprs  
Prepress Technicians & Workers  
Pump Oprs  
Water & Liquid Waste Treatment Plant & System Oprs

#### **Geological & Petroleum Technicians**

Chemical Equipment Oprs & Tenders  
Computer, Automated Teller & Office Machine Repairers  
Heat Treating Equipment Oprs  
Multiple Machine Tool Oprs

Ophthalmic Laboratory Technicians  
Power Distributors & Dispatchers  
Pump Oprs  
Ship Engineers

#### **Maintenance Workers, Machinery**

Aircraft Structure & Systems Assemblers  
Cutting, Punching & Press Machine Oprs  
Engine & Other Machine Assemblers

Mechanical Door Repairers  
Molding & Casting Machine Oprs

#### **Mixing & Blending Machine Oprs**

Cementing & Gluing Machine Oprs  
Cleaning, Washing & Metal Pickling Equip. Oprs  
Coating, Painting & Spraying Machine Oprs  
Coil Winders, Tapers & Finishers

Cutting & Slicing Machine Oprs  
Molding & Casting Machine Oprs  
Multiple Machine Tool Oprs  
Welding, Soldering & Brazing Machine Oprs

#### **Petroleum Engineers**

Aerospace Engineers  
Electrical & Electronics Drafters  
Geoscientists  
Industrial Engineering Technicians

Marine Engineers & Naval Architects  
Materials Engineers  
Mechanical Engineering Technicians  
Mining & Geological Engineers

#### **Control & Valve Installers & Repairers**

Elec. Repairers: Powerhouse, Substation & Relay  
Electric Motor, Power Tool & Related Repairers  
Helpers--Electricians  
Home Appliance Repairers  
Locksmiths & Safe Repairers  
Mechanical Door Repairers

Mobile Heavy Equipment Mechanics  
Motorboat Mechanics  
Motorcycle Mechanics  
Outdoor Power Equipment & Small Engine Mechanics  
Rail Car Repairers

## **Attachment D**

### **Related Occupations for "Fair-to-Difficult" and "Difficult" Reemployment Prospects**

#### **Crushing, Grinding & Polishing Machine Oprs**

Cementing & Gluing Machine Oprs	Cutting & Slicing Machine Oprs
Cleaning, Washing & Metal Pickling Equip. Oprs	Molding & Casting Machine Oprs
Coating, Painting & Spraying Machine Oprs	Multiple Machine Tool Oprs
Coil Winders, Tapers & Finishers	Welding, Soldering & Brazing Machine Oprs

#### **Petroleum Pump System & Refinery Oprs**

Bindery Workers	Gas Compressor & Gas Pumping Station Oprs
Coating, Painting & Spraying Machine Oprs	Gas Plant Oprs
Coil Winders, Tapers & Finishers	Molding & Casting Machine Oprs
Computer-Controlled Machine Tool Oprs	Plating & Coating Machine Oprs
Conveyor Oprs & Tenders	Power Plant Oprs
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	Stationary Engineers & Boiler Oprs

#### **Separating, Filtering, Precipitating & Still Machine Oprs**

Conveyor Oprs & Tenders	Gas Compressor & Gas Pumping Station Oprs
Cutting, Punching & Press Machine Oprs	Plating & Coating Machine Oprs
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	Printing Machine Oprs

#### **Tank Car, Truck & Ship Loaders**

Gas Compressor & Gas Pumping Station Oprs	Plating & Coating Machine Oprs
Gas Plant Oprs	Welders, Cutters, Solderers & Brazers
Molding & Casting Machine Oprs	

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Chemical Engineers</i></b>							
Agricultural Engineers	N/A	N/A	0	N/A	N/A	66,060	Architectural & Engineering Firms Federal Government Machinery Manufacturers
Conservation Scientists	0	1	4	60,540	49,870	43,250	Federal, State & Local Government
Engineering Managers	1	10	28	120,960	131,720	121,460	Architectural & Engineering Firms Management & Holding Companies Research & Development Firms
Foresters	0	0	4	N/A	75,480	54,830	Federal & State Government Sawmills
Geoscientists	N/A	2	6	N/A	68,030	67,860	Architectural & Engineering Firms Management & Technical Firms State Government
Health & Safety Engineers	1	3	8	49,570	65,900	69,920	Insurance Agencies & Brokerages Local Government Pharmaceutical & Medicine Manufacturers
Nuclear Engineers	N/A	6	12	N/A	N/A	100,350	Electric Companies Research & Development Firms
Nuclear Technicians	N/A	N/A	5	N/A	N/A	68,540	Electric Companies Management & Technical Firms Research & Development Firms
<b><i>Chemical Plant &amp; System Oprs</i></b>							
Etchers & Engravers	N/A	0	1	N/A	34,050	32,730	Metal Coating & Engraving Companies
Extruding, Forming, Pressing and Compacting Machine Oprs	0	3	15	N/A	31,630	35,690	Glass Products Manufacturers Plastic Products Manufacturers Pulp Mills
Furnace, Kiln, Oven, Drier & Kettle Oprs	N/A	2	12	N/A	37,740	36,740	Aluminum Manufacturers Clay Product & Refractory Manufacturers Glass Products Manufacturers
Gas Plant Oprs	0	N/A	10	N/A	52,870	50,370	Pipeline Oprs
Photographic Processing Machine Oprs	0	8	26	19,160	23,290	22,010	Department Stores Drug Stores Photofinishing Laboratories

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Chemical Plant &amp; System Oprs (cont.)</i></b>							
Prepress Technicians & Workers	N/A	4	13	N/A	38,160	37,500	Newspaper & Book Publishers Printing Presses
Pump Oprs	N/A	0	5	N/A	N/A	42,200	Oil & Gas Extraction Companies
Water & Liquid Waste Treatment Plant & System Oprs	1	10	41	47,060	49,400	43,710	Local Government Water & Sewage Plants
<b><i>Geological &amp; Petroleum Technicians</i></b>							
Chemical Equipment Oprs & Tenders	1	12	23	48,450	42,770	41,960	Chemical Manufacturers Pharmaceutical & Medicine Manufacturers
Computer, Automated Teller & Office Machine Repairers	0	5	15	42,230	46,350	41,740	Commercial Equipment Wholesalers Electronic Equipment Repair Shops Electronics & Appliance Stores
Heat Treating Equipment Oprs	0	1	7	N/A	42,260	37,140	Forgings & Stampings Manufacturers Iron & Steel Mills Metal Coating & Engraving Companies
Multiple Machine Tool Oprs	0	6	28	47,390	36,630	33,570	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Ophthalmic Laboratory Technicians	N/A	2	8	N/A	31,350	29,130	Medical Equipment Manufacturers Optical Goods Stores Physician Offices
Power Distributors & Dispatchers	N/A	1	4	N/A	N/A	63,100	Electric Companies
Pump Oprs	N/A	0	5	N/A	N/A	42,200	Oil & Gas Extraction Companies
Ship Engineers	N/A	1	1	N/A	67,840	66,590	Freight Trucking Companies Water Transportation Companies
<b><i>Maintenance Workers, Machinery</i></b>							
Aircraft Structure & Systems Assemblers	N/A	N/A	5	N/A	50,560	50,560	Aerospace Product Manufacturers
Cutting, Punching & Press Machine Oprs	2	14	80	27,800	34,230	32,080	Fabricated Metal Shops Plastic Products Manufacturers
Engine & Other Machine Assemblers	0	1	7	N/A	40,170	37,900	Cutlery & Handtool Manufacturers Machinery Manufacturers

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Maintenance Workers, Machinery (cont.)</i></b>							
Mechanical Door Repairers	N/A	1	3	N/A	41,100	36,240	Building Contractors
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
<b><i>Mixing &amp; Blending Machine Oprs</i></b>							
Cementing & Gluing Machine Oprs	N/A	1	4	N/A	37,550	32,940	Converted Paper Product Manufacturers Printing Presses Wood Product Manufacturers
Cleaning, Washing & Metal Pickling Equip. Oprs	N/A	1	6	N/A	31,590	33,060	Food Manufacturers Pharmaceutical & Medicine Manufacturers
Coating, Painting & Spraying Machine Oprs	1	6	28	37,290	38,190	32,680	Fabricated Metal Shops Furniture Manufacturers Metal Coating & Engraving Companies
Coil Winders, Tapers & Finishers	0	2	5	N/A	N/A	28,410	Electronics Manufacturers Motor Vehicle Parts Manufacturing Railroad Car Manufacturers
Cutting & Slicing Machine Oprs	0	2	10	N/A	35,100	32,850	Converted Paper Product Manufacturers Glass Products Manufacturers Printing Presses
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
Multiple Machine Tool Oprs	0	6	28	47,390	36,630	33,570	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Welding, Soldering & Brazing Machine Oprs	N/A	1	8	46,450	36,820	37,250	Fabricated Metal Shops Machine Shops Steel Product Manufacturers
<b><i>Petroleum Engineers</i></b>							
Aerospace Engineers	2	7	10	90,250	81,240	80,690	Aerospace Product/Parts Manufacturers Air Transportation Companies Architectural & Engineering Firms
Electrical & Electronics Drafters	0	3	9	71,920	57,560	51,570	Architectural & Engineering Firms Electric Companies Electronic Instrument Manufacturers



## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Petroleum Engineers (cont.)</i></b>							
Geoscientists	N/A	2	6	N/A	68,030	67,860	Architectural & Engineering Firms Management & Technical Firms State Government
Industrial Engineering Technicians	0	6	20	66,530	55,820	51,460	Aerospace Product/Parts Manufacturers Computer Systems Design Services Medical Equipment & Supplies Manufacturers
Marine Engineers & Naval Architects	N/A	0	1	N/A	N/A	97,640	Architectural & Engineering Firms Federal Government Water Transportation Companies
Materials Engineers	1	2	8	86,100	84,220	80,520	Iron & Steel Mills Management & Holding Companies Research & Development Firms
Mechanical Engineering Technicians	0	3	9	72,250	49,850	48,940	Architectural & Engineering Firms Personnel Agencies Research & Development Firms
Mining & Geological Engineers	N/A	2	6	N/A	N/A	64,010	Architectural & Engineering Firms Coal Mining Companies State Government
<b><i>Control &amp; Valve Installers &amp; Repairers</i></b>							
Elec. Repairers: Powerhouse, Substation & Relay	N/A	2	10	N/A	N/A	62,410	Electric Companies
Electric Motor, Power Tool & Related Repairers	0	3	10	N/A	48,030	40,060	Building Contractors Commercial Machinery Repair Shops Converted Paper Product Manufacturers
Helpers--Electricians	1	5	14	N/A	30,910	28,030	Building Contractors Construction Firms
Home Appliance Repairers	0	4	11	N/A	36,160	34,310	Electronics & Appliance Stores Household Goods Repair Shops Self-Employed
Locksmiths & Safe Repairers	1	3	6	42,200	38,400	37,250	Investigation & Security Services Self-Employed
Mechanical Door Repairers	N/A	1	3	N/A	41,100	36,240	Building Contractors

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Control &amp; Valve Installers &amp; Repairers (cont.)</i></b>							
Mobile Heavy Equipment Mechanics	0	10	39	50,370	48,450	44,850	Federal & State Government Machinery & Supply Wholesalers
Motorboat Mechanics	N/A	1	3	N/A	34,040	37,250	Commercial Machinery Repair Shops Motorboat Dealers
Motorcycle Mechanics	0	1	5	N/A	37,110	32,230	Motorcycle Dealers
Outdoor Power Equipment & Small Engine Mechanics	0	2	8	N/A	35,620	29,770	Building Material & Supplies Stores Lawn & Garden Stores Self-Employed
Rail Car Repairers	0	0	7	N/A	37,930	46,530	Railroad Car Manufacturers Railroads
<b><i>Crushing, Grinding &amp; Polishing Machine Oprs</i></b>							
Cementing & Gluing Machine Oprs	N/A	1	4	N/A	37,550	32,940	Converted Paper Product Manufacturers Printing Presses Wood Product Manufacturers
Cleaning, Washing & Metal Pickling Equip. Oprs	N/A	1	6	N/A	31,590	33,060	Food Manufacturers Pharmaceutical & Medicine Manufacturers
Coating, Painting & Spraying Machine Oprs	1	6	28	37,290	38,190	32,680	Fabricated Metal Shops Furniture Manufacturers Metal Coating & Engraving Companies
Coil Winders, Tapers & Finishers	0	2	5	N/A	N/A	28,410	Electronics Manufacturers Motor Vehicle Parts Manufacturing Railroad Car Manufacturers
Cutting & Slicing Machine Oprs	0	2	10	N/A	35,100	32,850	Converted Paper Product Manufacturers Glass Products Manufacturers Printing Presses
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
Multiple Machine Tool Oprs	0	6	28	47,390	36,630	33,570	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Welding, Soldering & Brazing Machine Oprs	N/A	1	8	46,450	36,820	37,250	Fabricated Metal Shops Machine Shops Steel Product Manufacturers

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Petroleum Pump System &amp; Refinery Oprs</i></b>							
Bindery Workers	0	3	10	N/A	35,530	32,170	Printing Presses
Coating, Painting & Spraying Machine Oprs	1	6	28	37,290	38,190	32,680	Fabricated Metal Shops Furniture Manufacturers Metal Coating & Engraving Companies
Coil Winders, Tapers & Finishers	0	2	5	N/A	N/A	28,410	Electronics Manufacturers Motor Vehicle Parts Manufacturing Railroad Car Manufacturers
Computer-Controlled Machine Tool Oprs	0	4	24	36,600	43,260	36,650	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Conveyor Oprs & Tenders	2	2	8	33,820	29,280	30,710	Courier Firms Mining Companies Newspaper & Book Publishers
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	N/A	1	6	N/A	32,740	31,530	Fabric Mills Paint & Adhesive Manufacturers Plastic Products Manufacturers
Gas Compressor & Gas Pumping Station Oprs	N/A	0	3	N/A	N/A	51,620	Local Government Pipeline Oprs Utility Line Construction Firms
Gas Plant Oprs	0	N/A	10	N/A	52,870	50,370	Pipeline Oprs
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
Plating & Coating Machine Oprs	0	2	15	39,840	37,180	35,070	Electronics Manufacturers Metal Coating & Engraving Companies
Power Plant Oprs	0	5	20	57,130	60,320	59,860	Electric Companies
Stationary Engineers & Boiler Oprs	0	2	5	52,750	51,200	46,380	Colleges & Universities Hospitals Iron & Steel Mills
<b><i>Separating, Filtering, Precipitating &amp; Still Machine Oprs</i></b>							
Conveyor Oprs & Tenders	2	2	8	33,820	29,280	30,710	Courier Firms Mining Companies Newspaper & Book Publishers

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<i>Separating, Filtering, Precipitating &amp; Still Machine Oprs (cont.)</i>							
Cutting, Punching & Press Machine Oprs	2	14	80	27,800	34,230	32,080	Fabricated Metal Shops Plastic Products Manufacturers
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	N/A	1	6	N/A	32,740	31,530	Fabric Mills Paint & Adhesive Manufacturers Plastic Products Manufacturers
Gas Compressor & Gas Pumping Station Oprs	N/A	0	3	N/A	N/A	51,620	Local Government Pipeline Oprs Utility Line Construction Firms
Plating & Coating Machine Oprs	0	2	15	39,840	37,180	35,070	Electronics Manufacturers Metal Coating & Engraving Companies
Printing Machine Oprs	1	16	52	41,160	41,110	36,330	Printing Presses
<i>Tank Car, Truck &amp; Ship Loaders</i>							
Gas Compressor & Gas Pumping Station Oprs	N/A	0	3	N/A	N/A	51,620	Local Government Pipeline Oprs Utility Line Construction Firms
Gas Plant Oprs	0	N/A	10	N/A	52,870	50,370	Pipeline Oprs
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
Plating & Coating Machine Oprs	0	2	15	39,840	37,180	35,070	Electronics Manufacturers Metal Coating & Engraving Companies
Welders, Cutters, Solderers & Brazers	1	20	97	43,730	40,160	36,250	Fabricated Metal Shops Machinery Manufacturers Motor Vehicle Manufacturers

Sources: Center for Workforce Information & Analysis, Occupational Employment Statistics (OES) Wages, 2010  
Center for Workforce Information & Analysis, Occupational Employment Projections, 2008-2018

## Attachment F

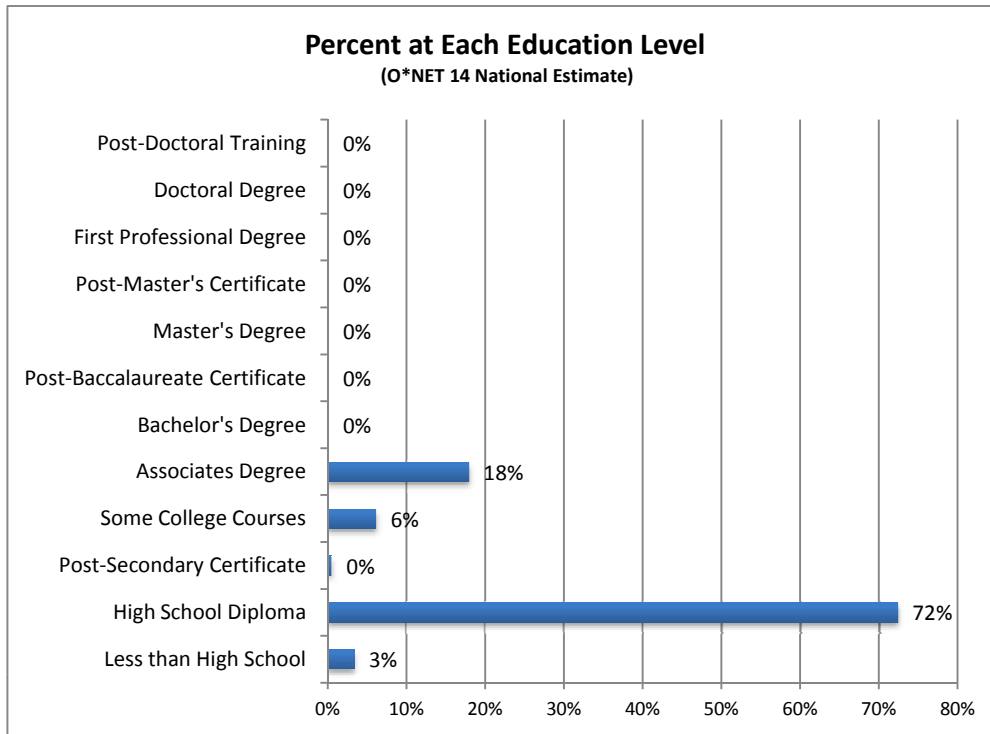
### Educational Requirements and Work Experience for the Dominant Occupation Petroleum Pump System & Refinery Oprs

This chart was obtained from TORQworks, which uses the latest O\*NET data to provide detailed information on occupations.

#### Required Education Level

Job Zone Two: This occupation usually requires a high school diploma.

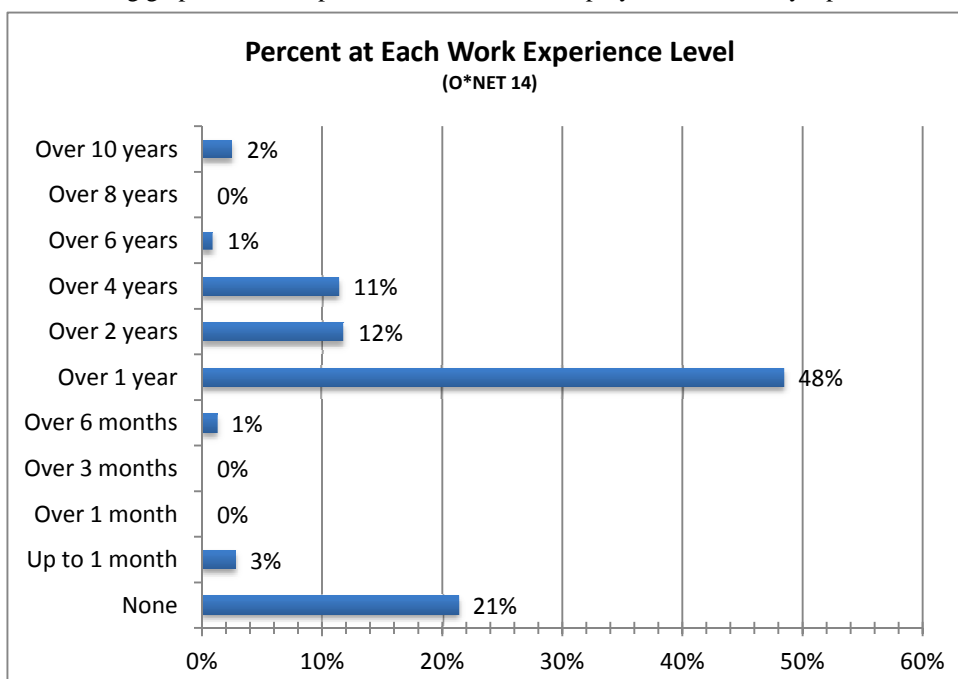
The following graph shows the percent of Petroleum Pump System & Refinery Oprs that are at each education level in the U.S.



#### Required Work Experience

Job Zone Two: Some previous work-related skill, knowledge, or experience is usually needed.

The following graph shows the percent of Petroleum Pump System & Refinery Oprs that are at each work experience level in the U.S.

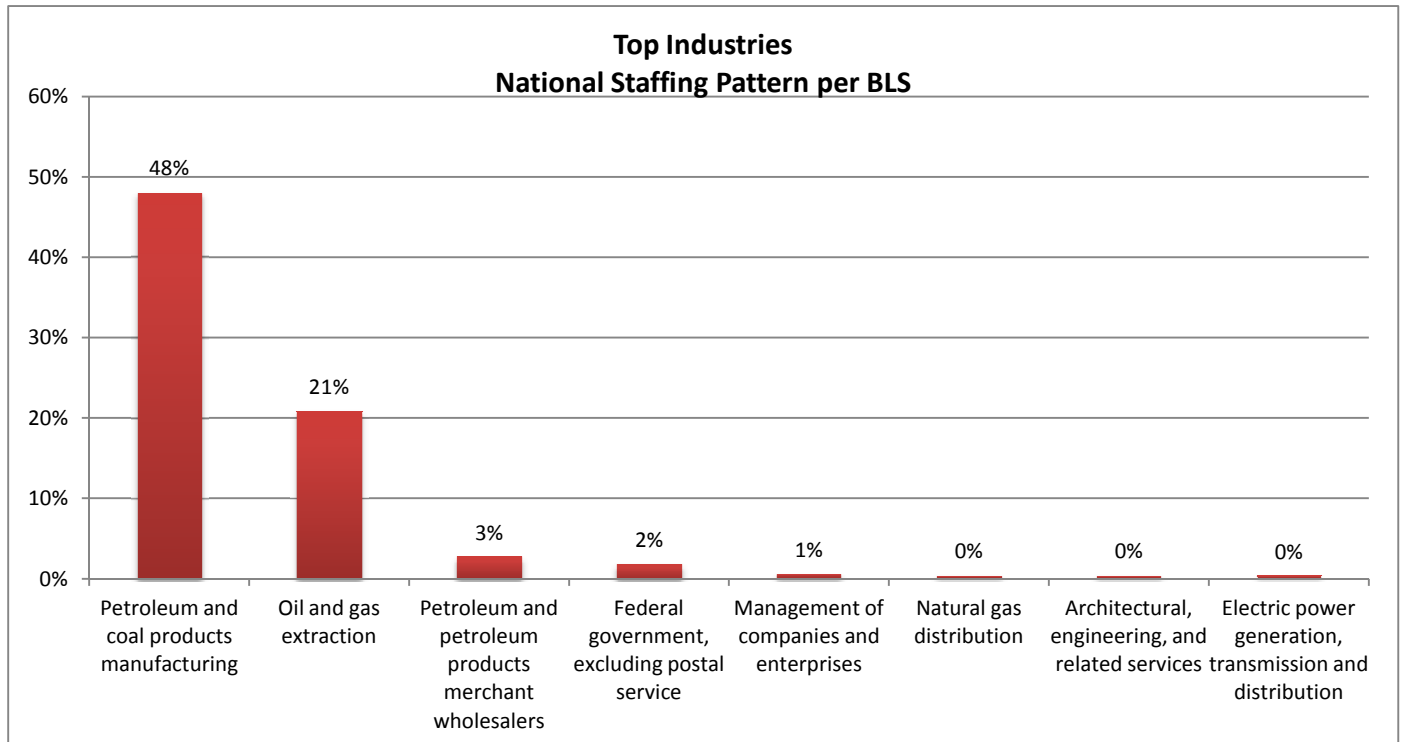




## Attachment G

### Top Industries Employing Petroleum Pump System & Refinery Oprs

This chart was obtained from TORQworks, which uses the latest BLS staffing pattern data to provide detailed information on industries.



Source: TORQworks

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
11-3051	Industrial Production Managers	BD	\$103,250	\$69,720	\$120,020	150	140	-6.7%	5
11-9011	Farm & Agricultural Managers	BD+	N/A	N/A	N/A	90	100	+11.1%	2
11-9021	Construction Managers	BD	\$108,530	\$70,710	\$127,440	380	390	+2.6%	7
13-1031	Claims Adjusters, Examiners & Investigators	LT OJT	\$58,740	\$39,640	\$68,280	800	800	0.0%	20
13-1051	Cost Estimators	BD	\$63,940	\$44,740	\$73,540	450	490	+8.9%	14
13-1073	Training & Development Specialists	BD	\$57,300	\$38,340	\$66,780	300	320	+6.7%	9
13-1111	Management Analysts	BD+	\$104,250	\$60,530	\$126,100	1,680	1,930	+14.9%	54
13-2011	Accountants & Auditors	BD	\$77,480	\$45,290	\$93,570	2,210	2,240	+1.4%	42
13-2051	Financial Analysts	BD	\$88,320	\$49,730	\$107,610	550	600	+9.1%	8
13-2052	Personal Financial Advisors	BD	\$70,720	\$40,220	\$85,970	550	560	+1.8%	6
13-2053	Insurance Underwriters	BD	\$70,260	\$45,290	\$82,750	290	280	-3.4%	8
13-2072	Loan Officers	BD	\$48,380	\$33,390	\$55,880	460	420	-8.7%	5
15-1021	Computer Programmers	BD	\$90,590	\$48,610	\$111,590	510	420	-17.6%	11
15-1031	Computer Software Engineers, Applications	BD	\$92,810	\$64,070	\$107,180	420	510	+21.4%	15
15-1032	Computer Software Engineers, Systems Software	BD	N/A	N/A	N/A	310	350	+12.9%	9
15-1041	Computer Support Specialists	AD	\$42,850	\$29,870	\$49,340	590	600	+1.7%	20
15-1051	Computer Systems Analysts	BD	\$82,710	\$53,870	\$97,130	470	530	+12.8%	19
15-1061	Database Administrators	BD	\$77,160	\$50,960	\$90,260	180	210	+16.7%	5
15-1071	Network & Computer Systems Administrators	BD	\$73,880	\$45,850	\$87,890	350	390	+11.4%	13
15-1081	Network Systems & Data Communications Analysts	BD	\$89,490	\$52,320	\$108,070	260	370	+42.3%	16
17-2051	Civil Engineers	BD	\$85,020	\$57,710	\$98,670	470	490	+4.3%	14
17-2071	Electrical Engineers	BD	\$92,380	\$62,180	\$107,480	150	150	0.0%	3
17-2081	Environmental Engineers	BD	\$83,140	\$55,580	\$96,920	40	40	0.0%	2
17-2112	Industrial Engineers	BD	\$75,580	\$55,920	\$85,410	400	460	+15.0%	16
17-2161	Nuclear Engineers	BD	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17-2199	Energy Engineers	BD	\$92,580	\$65,740	\$106,000	550	550	0.0%	7
17-3011	Architectural & Civil Drafters	PS VOC	\$44,380	\$36,720	\$48,210	50	50	0.0%	2
17-3013	Mechanical Drafters	PS VOC	\$63,650	\$45,200	\$72,870	150	150	0.0%	4
17-3024	Electro-Mechanical Technicians	AD	N/A	N/A	N/A	240	220	-8.3%	5
17-3026	Industrial Engineering Technicians	AD	\$56,050	\$29,030	\$69,560	90	90	0.0%	2
19-1012	Food Scientists & Technologists	BD	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19-1021	Biochemists & Biophysicists	PhD	\$82,640	\$50,140	\$98,880	10	10	0.0%	0
19-1042	Medical Scientists	PhD	\$81,980	\$47,580	\$99,180	40	40	0.0%	2
19-2031	Chemists	BD	\$67,570	\$43,510	\$79,600	50	50	0.0%	1
19-4021	Biological Technicians	AD	\$42,470	\$30,710	\$48,340	110	130	+18.2%	6
21-1011	Substance Abuse & Behavioral Disorder Counselors	MD	\$35,940	\$28,270	\$39,780	240	300	+25.0%	11
21-1012	Educational, Vocational & School Counselors	MD	\$52,650	\$33,710	\$62,120	850	930	+9.4%	25
21-1014	Mental Health Counselors	MD	\$32,650	\$23,180	\$37,380	550	650	+18.2%	21

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
21-1021	Child, Family & School Social Workers	BD	\$39,170	\$26,530	\$45,490	740	780	+5.4%	20
21-1022	Medical & Public Health Social Workers	BD	\$48,080	\$34,270	\$54,990	550	600	+9.1%	17
21-1023	Mental Health & Substance Abuse Social Workers	MD	\$35,870	\$28,050	\$39,780	450	550	+22.2%	19
23-2011	Paralegals & Legal Assistants	AD	\$47,000	\$37,390	\$51,800	70	80	+14.3%	2
25-1042	Biological Science Teachers, Postsecondary	PhD	\$72,070	\$42,850	\$86,680	280	340	+21.4%	11
25-1071	Health Specialties Teachers, Postsecondary	PhD	\$109,390	\$49,310	\$139,430	580	700	+20.7%	22
25-1072	Nursing Instructors & Teachers, Postsecondary	MD (MSN)*	\$69,920	\$43,210	\$83,280	140	170	+21.4%	5
25-1194	Vocational Education Teachers, Postsecondary	WK EXP	\$52,880	\$34,040	\$62,300	290	330	+13.8%	8
25-2011	Preschool Teachers	BD	\$25,370	\$19,430	\$28,340	790	900	+13.9%	23
25-2012	Kindergarten Teachers	BD	\$57,570	\$38,610	\$67,050	330	380	+15.2%	11
25-2021	Elementary School Teachers	BD	\$58,470	\$39,190	\$68,110	3,140	3,610	+15.0%	116
25-2022	Middle School Teachers	BD	\$53,920	\$33,560	\$64,100	N/A	N/A	N/A	N/A
25-2031	Secondary School Teachers	BD	\$53,660	\$35,970	\$62,510	N/A	N/A	N/A	N/A
25-2032	Vocational Education Teachers, Secondary School	BD	\$58,260	\$43,730	\$65,530	180	170	-5.6%	5
25-2041	Special Education Teachers, Pre-, Kindergarten & Elem.	BD	\$56,680	\$36,630	\$66,710	440	530	+20.5%	19
25-2042	Special Education Teachers, Middle School	BD	\$65,320	\$42,060	\$76,940	300	350	+16.7%	12
25-2043	Special Education Teachers, Secondary School	BD	\$54,980	\$33,770	\$65,590	220	240	+9.1%	7
25-3011	Adult Literacy, Remedial Education & GED Teachers	BD	\$47,220	\$35,390	\$53,140	190	200	+5.3%	3
27-1024	Graphic Designers	BD	\$42,830	\$30,150	\$49,160	390	390	0.0%	10
27-2012	Producers & Directors	BD+	\$62,250	\$36,710	\$75,020	110	120	+9.1%	4
27-2022	Coaches & Scouts	LT OJT	\$37,130	\$19,470	\$45,960	340	370	+8.8%	12
27-4021	Photographers	LT OJT	\$37,280	\$25,450	\$43,190	310	330	+6.5%	9
27-4031	Camera Oprs: TV, Video & Motion Picture	MT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27-4032	Film & Video Editors	BD	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29-1051	Pharmacists	PROF	\$93,650	\$85,630	\$97,660	760	940	+23.7%	31
29-1062	Family & General Practitioners	PROF	\$132,150	\$51,410	\$172,520	480	490	+2.1%	10
29-1111	Registered Nurses	AD	\$68,840	\$52,030	\$77,240	4,840	5,690	+17.6%	165
29-1122	Occupational Therapists	BD	\$70,890	\$52,550	\$80,050	250	300	+20.0%	9
29-1123	Physical Therapists	MD	\$67,800	\$47,960	\$77,720	420	500	+19.0%	14
29-1126	Respiratory Therapists	AD	\$61,900	\$53,440	\$66,130	160	190	+18.8%	5
29-1127	Speech-Language Pathologists	MD	\$65,690	\$57,400	\$69,830	170	180	+5.9%	4
29-1131	Veterinarians	PROF	\$136,590	\$93,580	\$158,100	100	140	+40.0%	6
29-2011	Medical & Clinical Laboratory Technologists	BD	\$56,280	\$37,600	\$65,620	280	280	0.0%	4
29-2012	Medical & Clinical Laboratory Technicians	AD	\$45,280	\$29,710	\$53,070	330	360	+9.1%	8
29-2021	Dental Hygienists	AD	\$62,910	\$51,750	\$68,490	330	380	+15.2%	11
29-2031	Cardiovascular Technologists & Technicians	AD	\$53,370	\$34,130	\$62,990	100	120	+20.0%	3
29-2034	Radiologic Technologists & Technicians	AD	\$46,130	\$28,950	\$54,720	650	710	+9.2%	15
29-2041	Emergency Medical Technicians & Paramedics	PS VOC	\$37,820	\$27,730	\$42,860	600	640	+6.7%	11

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
29-2052	Pharmacy Technicians	MT OJT	\$24,850	\$17,200	\$28,680	450	590	+31.1%	28
29-2055	Surgical Technologists	PS VOC	\$38,900	\$31,390	\$42,650	100	120	+20.0%	5
29-2056	Veterinary Technologists & Technicians	AD	\$34,590	\$28,300	\$37,740	110	160	+45.5%	8
29-2061	Licensed Practical & Licensed Vocational Nurses	PS VOC	\$46,640	\$35,970	\$51,980	1,590	1,810	+13.8%	66
29-2071	Medical Records & Health Information Technicians	AD	\$33,560	\$21,620	\$39,530	300	330	+10.0%	11
31-1011	Home Health Aides	ST OJT	\$23,000	\$18,830	\$25,090	2,910	3,630	+24.7%	98
31-1012	Nursing Aides, Orderlies & Attendants	ST OJT	\$25,300	\$21,050	\$27,430	3,050	3,430	+12.5%	65
31-1013	Psychiatric Aides	ST OJT	N/A	N/A	N/A	70	80	+14.3%	2
31-2011	Occupational Therapist Assistants	AD	\$50,170	\$37,220	\$56,650	30	30	0.0%	1
31-2021	Physical Therapist Assistants	AD	\$42,590	\$29,390	\$49,200	160	200	+25.0%	6
31-9091	Dental Assistants	MT OJT	\$41,490	\$29,410	\$47,520	520	600	+15.4%	17
31-9092	Medical Assistants	MT OJT	\$30,070	\$23,620	\$33,300	1,330	1,610	+21.1%	45
31-9094	Medical Transcriptionists	PS VOC	\$33,190	\$25,560	\$37,000	200	210	+5.0%	4
31-9096	Veterinary Assistants	ST OJT	N/A	N/A	N/A	190	230	+21.1%	6
31-9099	Phlebotomists	N/A	\$31,600	\$27,740	\$33,530	160	180	+12.5%	4
33-3051	Police & Sheriff's Patrol Officers	LT OJT	\$57,720	\$40,630	\$66,260	1,060	1,060	0.0%	29
35-1012	Supervisors - Food Preparation & Serving Workers	WK EXP	\$37,010	\$23,040	\$43,990	1,200	1,270	+5.8%	17
39-5012	Hairdressers & Hairstylists	PS VOC	\$24,550	\$16,060	\$28,790	1,270	1,510	+18.9%	39
39-9011	Child Care Workers	ST OJT	\$19,410	\$16,790	\$20,710	1,330	1,490	+12.0%	53
41-3011	Advertising Sales Agents	MT OJT	\$50,240	\$23,540	\$63,580	N/A	N/A	N/A	N/A
41-3021	Insurance Sales Agents	BD	\$63,280	\$32,390	\$78,730	980	1,020	+4.1%	25
41-3031	Securities, Commodities & Financial Services Sales Agents	BD	\$96,010	\$40,450	\$123,780	380	350	-7.9%	10
41-4011	Sales Representatives, Scientific & Technical	MT OJT	\$80,320	\$45,990	\$97,490	730	710	-2.7%	16
41-4012	Sales Representatives	MT OJT	\$67,960	\$39,030	\$82,420	3,480	3,400	-2.3%	77
41-9022	Real Estate Sales Agents	PS VOC	\$44,060	\$25,720	\$53,230	800	780	-2.5%	13
43-1011	Supervisors - Office & Administrative Support Workers	WK EXP	\$53,210	\$32,930	\$63,350	1,710	1,630	-4.7%	35
43-3011	Bill & Account Collectors	ST OJT	\$33,300	\$24,770	\$37,560	1,010	990	-2.0%	15
43-3021	Billing & Posting Clerks & Machine Oprs	ST OJT	\$33,830	\$25,610	\$37,940	910	860	-5.5%	12
43-3031	Bookkeeping, Accounting & Auditing Clerks	MT OJT	\$36,210	\$25,720	\$41,460	2,710	2,810	+3.7%	53
43-4051	Customer Service Representatives	MT OJT	\$32,150	\$22,480	\$36,980	3,070	3,420	+11.4%	121
43-5011	Cargo & Freight Agents	MT OJT	\$35,240	\$27,950	\$38,880	330	320	-3.0%	9
43-5061	Production, Planning & Expediting Clerks	ST OJT	\$42,960	\$28,050	\$50,420	520	520	0.0%	15
43-5071	Shipping, Receiving & Traffic Clerks	ST OJT	\$35,110	\$22,960	\$41,190	1,000	940	-6.0%	24
43-6011	Executive Secretaries & Administrative Assistants	MT OJT	\$44,960	\$31,890	\$51,490	1,500	1,590	+6.0%	33
43-6012	Legal Secretaries	PS VOC	\$42,530	\$34,060	\$46,760	500	540	+8.0%	12
43-6013	Medical Secretaries	PS VOC	\$34,330	\$26,290	\$38,350	850	900	+5.9%	19
43-6014	Secretaries	MT OJT	\$31,070	\$23,100	\$35,050	3,440	3,220	-6.4%	55
43-9041	Insurance Claims & Policy Processing Clerks	MT OJT	\$34,350	\$24,950	\$39,050	460	420	-8.7%	6

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
43-9061	Office Clerks	ST OJT	\$29,830	\$18,920	\$35,280	6,160	6,420	+4.2%	139
45-1011	Farm & Forestry Worker Supervisors	MT OJT	N/A	N/A	N/A	20	20	0.0%	0
45-2092	Farmworkers & Laborers: Crop, Nursery & Greenhouse	LT OJT	\$20,230	\$16,690	\$22,010	270	300	+11.1%	10
47-1011	Supervisors - Construction Trades & Extraction Workers	WK EXP	\$77,860	\$56,510	\$88,540	810	830	+2.5%	13
47-2021	Brickmasons & Blockmasons	LT OJT	\$57,490	\$33,450	\$69,500	210	210	0.0%	4
47-2031	Carpenters	LT OJT	\$46,420	\$28,180	\$55,540	2,540	2,600	+2.4%	39
47-2051	Cement Masons & Concrete Finishers	LT OJT	\$37,750	\$26,310	\$43,470	140	140	0.0%	4
47-2061	Construction Laborers	MT OJT	\$35,230	\$21,520	\$42,090	830	860	+3.6%	9
47-2073	Operating Engineers	MT OJT	\$56,720	\$42,580	\$63,790	240	250	+4.2%	6
47-2111	Electricians	LT OJT	\$66,100	\$39,030	\$79,640	2,030	2,080	+2.5%	57
47-2132	Insulation Workers, Mechanical	MT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
47-2141	Painters, Construction & Maintenance	MT OJT	\$40,360	\$33,980	\$43,540	580	580	0.0%	10
47-2152	Plumbers, Pipefitters & Steamfitters	LT OJT	\$56,250	\$40,250	\$64,260	380	400	+5.3%	10
47-2181	Roofers	MT OJT	\$44,420	\$35,710	\$48,770	210	220	+4.8%	6
47-2211	Sheet Metal Workers	MT OJT	\$40,680	\$26,250	\$47,900	60	50	-16.7%	1
49-1011	Supervisors - Mechanics, Installers & Repairers	WK EXP	\$68,480	\$51,120	\$77,150	470	470	0.0%	11
49-2022	Telecommunications Equipment Installers & Repairers	PS VOC	\$49,920	\$32,880	\$58,450	90	100	+11.1%	3
49-2095	Elec. Repairers, Powerhouse & Substation	PS VOC	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49-3011	Aircraft Mechanics & Service Technicians	PS VOC	\$53,970	\$40,620	\$60,650	250	320	+28.0%	10
49-3021	Automotive Body & Related Repairers	LT OJT	\$45,230	\$33,650	\$51,020	340	330	-2.9%	8
49-3023	Automotive Service Technicians & Mechanics	PS VOC	\$43,620	\$29,380	\$50,740	1,640	1,650	+0.6%	34
49-3031	Bus, Truck & Diesel Engine Mechanics	PS VOC	\$44,720	\$34,730	\$49,710	180	190	+5.6%	5
49-3041	Farm Equipment Mechanics	PS VOC	N/A	N/A	N/A	20	20	0.0%	0
49-9021	Heating, A/C & Refrigeration Mechanics & Installers	LT OJT	\$46,990	\$35,060	\$52,960	680	700	+2.9%	14
49-9041	Industrial Machinery Mechanics	LT OJT	\$50,020	\$34,280	\$57,880	490	530	+8.2%	12
49-9042	Maintenance & Repair Workers, General	LT OJT	\$39,160	\$26,580	\$45,450	2,100	2,170	+3.3%	12
49-9043	Maintenance Workers, Machinery	LT OJT	\$54,840	\$46,460	\$59,030	80	70	-12.5%	1
49-9051	Electrical Power-Line Installers & Repairers	LT OJT	N/A	N/A	N/A	400	360	-10.0%	13
49-9052	Telecommunications Line Installers & Repairers	LT OJT	\$55,940	\$45,540	\$61,140	370	400	+8.1%	13
49-9064	Watch Repairers	LT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49-9099	Renewable Energy Technicians	LT OJT	\$58,880	\$53,300	\$61,670	50	50	0.0%	0
51-1011	Supervisors - Production & Operating Workers	WK EXP	\$63,220	\$41,720	\$73,970	690	640	-7.2%	12
51-2022	Electrical & Electronic Equipment Assemblers	ST OJT	\$30,320	\$23,760	\$33,600	440	320	-27.3%	8
51-2092	Team Assemblers	MT OJT	\$37,900	\$24,370	\$44,660	770	780	+1.3%	16
51-3011	Bakers	LT OJT	\$27,500	\$21,760	\$30,370	250	270	+8.0%	7
51-3021	Butchers & Meat Cutters	LT OJT	\$33,110	\$26,810	\$36,260	150	150	0.0%	5
51-3092	Food Batchmakers	ST OJT	\$26,840	\$18,580	\$30,980	120	150	+25.0%	6
51-4011	Computer-Controlled Machine Tool Oprs, Metal & Plastic	LT OJT	\$39,900	\$30,090	\$44,810	150	140	-6.7%	2

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
51-4012	Numerical Tool & Process Control Programmers	LT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
51-4021	Extruding & Drawing Machine Oprs, Metal & Plastic	MT OJT	N/A	N/A	N/A	20	20	0.0%	1
51-4031	Cutting, Punching & Press Machine Oprs, Metal & Plastic	MT OJT	\$30,980	\$23,070	\$34,930	240	200	-16.7%	6
51-4041	Machinists	LT OJT	\$43,190	\$29,370	\$50,090	700	690	-1.4%	11
51-4072	Molding & Casting Machine Oprs, Metal & Plastic	MT OJT	\$27,390	\$19,010	\$31,580	430	380	-11.6%	10
51-4081	Multiple Machine Tool Oprs, Metal & Plastic	MT OJT	\$35,300	\$31,900	\$37,000	50	50	0.0%	1
51-4111	Tool & Die Makers	LT OJT	\$62,910	\$46,290	\$71,220	100	100	0.0%	1
51-4121	Welders, Cutters, Solderers & Brazers	PS VOC	\$38,730	\$32,980	\$41,610	260	260	0.0%	5
51-7011	Cabinetmakers & Bench Carpenters	LT OJT	N/A	N/A	N/A	80	60	-25.0%	2
51-7042	Woodworking Machine Setters/Oprs/Tenders	MT OJT	\$49,280	\$42,160	\$52,840	50	60	+20.0%	1
51-8031	Water & Liquid Waste Treatment Plant & System Oprs	LT OJT	\$38,350	\$28,530	\$43,260	240	250	+4.2%	5
51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	MT OJT	\$48,660	\$30,240	\$57,880	650	610	-6.2%	10
51-9081	Dental Laboratory Technicians	LT OJT	N/A	N/A	N/A	100	100	0.0%	2
51-9082	Medical Appliance Technicians	LT OJT	N/A	N/A	N/A	50	50	0.0%	2
51-9111	Packaging & Filling Machine Oprs/Tenders	ST OJT	\$27,100	\$18,930	\$31,180	470	390	-17.0%	9
51-9196	Paper Goods Machine Setters/Oprs/Tenders	MT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53-1031	Supervisors - Transportation & Vehicle Oprs	WK EXP	\$40,720	\$29,430	\$46,360	380	360	-5.3%	8
53-3031	Driver/Sales Workers	ST OJT	\$25,240	\$16,480	\$29,630	320	300	-6.3%	6
53-3032	Truck Drivers, Heavy & Tractor-Trailer	MT OJT	\$43,120	\$29,920	\$49,710	1,450	1,550	+6.9%	37
53-3033	Truck Drivers, Light or Delivery Services	ST OJT	\$34,030	\$20,490	\$40,800	1,860	1,820	-2.2%	33
53-7051	Industrial Truck & Tractor Oprs	ST OJT	\$36,790	\$25,530	\$42,430	340	310	-8.8%	9
53-7081	Refuse & Recyclable Material Collectors	ST OJT	\$31,300	\$21,140	\$36,380	260	270	+3.8%	9

Footnotes:

<sup>1</sup> Educational Attainment Abbreviations:

Short-term, Moderate-term and Long-term training (**ST OJT**, **MT OJT** and **LT OJT**) – basic tasks and skills are learned through a period of on-the-job training.

Work experience in a related occupation (**WK EXP**) – training is gained through hands-on work in a similar occupation.

Postsecondary vocational award (**PS VOC**) – training is gained through a vocational training program.

Associate Degree (**AD** or **AD\***) – degree completed after two years of full-time schooling beyond high school.

Bachelor's Degree (**BD**) – degree completed after four years of full-time schooling beyond high school.

Bachelor's Degree plus experience (**BD+**) – a four-year bachelor's degree plus experience gained through hands-on experience.

Master's (**MD**), Master's in Nursing (**MD (MSN)**), Doctoral (**PhD**) or First Professional Degree (**PROF**) – training at the college or university level beyond a four-year bachelor's degree.

Sources: Center for Workforce Information & Analysis, Occupational Employment Statistics (OES) Wages, 2009

Center for Workforce Information & Analysis, Occupational Employment Projections, 2008-2018

## Attachment I

### Help Wanted Online Ads (HWOL)

The Conference Board Help Wanted OnLine data set provides real-time insight into the employment marketplace through the world's largest database of online job ads. The underlying data for The Conference Board HWOL are provided by Wanted Technologies Corporation.

#### Location of Production Jobs listed in the Last 30 days in PA:

<b>Pennsylvania</b>	<b>1,292</b>
<b>Allegheny County</b>	<b>136</b>
Pittsburgh, PA	84
Verona, PA	14
Bridgeville, PA	7
<b>Montgomery County</b>	<b>108</b>
West Point, PA	21
Horsham, PA	18
King of Prussia, PA	13
<b>Philadelphia County</b>	<b>91</b>
Philadelphia, PA	91
<b>Delaware County</b>	<b>40</b>
Chester, PA	10
Chadds Ford, PA	5
Newton Square, PA	5
& Others	

Note: Data as of January 5, 2012

#### Potential Employer Names:

JoS. A. BANK
Merck
Catalent Pharma Solutions
Whole Foods Market
Veolia Transportation
Peopleshare Inc
NCO
Cintas
LexisNexis
Synerfac Technical Staffing
& Others

#### Sources that HWOL pulls from:

After College
Monster
CareerBuilder
Jobing
BestLocalJobs
SnagAJob
Careers in Food
Work in Retail
& Others

Source: Help Wanted Online Ads (HWOL)

To further explore real time job postings, visit CWIA's website at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us) then click on "**Job Spidering**".

# **Reemployment Assessment Report for Sunoco**

Center for Workforce Information & Analysis  
January 9, 2012



## Reemployment Assessment Request for Sunoco

Sunoco has announced layoffs at its facility in Delaware County. The geographical areas affected by these layoffs are the Delaware County Workforce Investment Area (WIA), which includes Delaware county, and the Philadelphia Metropolitan Statistical Area (MSA), which includes Bucks, Chester, Delaware, Montgomery and Philadelphia counties. Five hundred ninety workers are expected to be affected at this time. Since a complete list of job titles was unavailable at the time of this report, a staffing pattern for the industry was used to estimate the level of layoffs for each occupation. This listing of 51 unique Standard Occupational Classification (SOC) codes is shown in Attachment A. Average wage data for the Delaware County WIA, the Philadelphia MSA and the commonwealth are provided in Attachment B for the SOC occupations projected to be impacted by this layoff.

Attachment C classifies the prospects for reemployment in the 51 SOC occupations into four categories and shows projected 6-month openings in the Delaware County WIA, the Philadelphia MSA and the entire commonwealth.

- Thirty-nine occupations representing 340 employees, or 58 percent, are classified as having “Good” or “Fair” reemployment prospects. Workers in these categories should find sufficient job openings within the Delaware County WIA or Philadelphia MSA.
- “Fair to Difficult” prospects exist for 5 occupations. The 55 employees in these occupations may have difficulty finding work in their current occupation within their immediate geographical area. However, prospects for reemployment improve if the dislocated employees are willing to relocate elsewhere in the state.
- The remaining 7 occupations represent 195 employees. Reemployment prospects for these workers are classified as “Difficult.” These dislocated employees can expect **substantial** difficulty finding reemployment in their current occupation within their current region and throughout the commonwealth.
- Forty-two percent of Sunoco employees work in the occupations that fall into the “Fair to Difficult” and “Difficult” categories. For these occupations, lists of jobs that require similar skills have been provided in Attachment D, and additional information on these related occupations is included in Attachment E.
- Attachment F shows typical educational requirements and work experience, obtained through TORQworks, for the occupation classified as “Difficult” with the greatest number of affected employees – Petroleum Pump System & Refinery Operators.
- The top-employing industries for Petroleum Pump System & Refinery Operators are shown in Attachment G, also taken from TORQworks. Prospects for workers in this occupation may improve if they look outside of the Petroleum & Gas Products Manufacturing industry and consider jobs in the Oil & Gas Extraction industry. Jobs in this industry may exist in the Marcellus Shale region of Pennsylvania; for more information, visit CWIA’s website at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us) then click on “Marcellus Shale Fast Facts.”
- Attachment H is the 2011 High Priority Occupations listing for the Delaware County WIA. Workforce development funding in the commonwealth may be available for training programs required to enter these occupations.
- A real-time look at current job prospects for Production jobs can be found in Attachment I. Help Wanted Online Ads (HWOL) shows counts of online job listings in this field throughout the state within the past month, along with locations and sources. To further explore real-time job postings, visit CWIA’s website at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us) then click on “Job Spidering.”

Some additional characteristics of Delaware County were gathered from the November 2011 edition of the Pennsylvania Civilian Labor Force Packet, available at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us).

- Delaware County had a seasonally adjusted unemployment rate of 8.0 percent in November 2011, up from 7.8 in October 2011. Delaware's current rate is slightly higher than the state (7.9 percent), but lower than the nation (8.6 percent).
- In November 2011, the labor force in Delaware County totaled 275,300. This accounts for about 14 percent of the labor force in the five Philly-area counties that same month (1,941,200).

## Attachment A

### Listing of Potential Layoffs in Sunoco

SOC Code	SOC Title	Layoffs
13-2011	Accountants & Auditors	7
43-3031	Bookkeeping, Accounting & Auditing Clerks	12
17-2041	Chemical Engineers	9
51-9011	Chemical Equipment Oprs & Tenders	4
51-8091	Chemical Plant & System Oprs	17
19-4031	Chemical Technicians	10
19-2031	Chemists	5
13-1072	Compensation, Benefits & Job Analysis Specialists	4
49-9012	Control & Valve Installers & Repairers	9
51-9021	Crushing, Grinding & Polishing Machine Oprs	18
47-2111	Electricians	6
2608503	Engineering Managers	5
43-6011	Executive Secretaries & Administrative Assistants	3
51-9051	Furnace, Kiln, Oven, Drier & Kettle Oprs	1
11-1021	General & Operations Managers	10
19-4041	Geological & Petroleum Technicians	3
51-9198	Helpers--Production Workers	13
17-2112	Industrial Engineers	3
49-9041	Industrial Machinery Mechanics	18
420700	Industrial Production Managers	3
53-7051	Industrial Truck & Tractor Oprs	21
51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	16
53-7062	Laborers & Freight, Stock & Material Movers, Hand	18
51-4041	Machinists	22
49-9042	Maintenance & Repair Workers, General	12
49-9043	Maintenance Workers, Machinery	5
17-2141	Mechanical Engineers	6
51-9023	Mixing & Blending Machine Oprs	18
29-9011	Occupational Health & Safety Specialists	2
43-9061	Office Clerks, General	12
47-2073	Operating Engineers	3
51-9111	Packaging & Filling Machine Oprs	9
43-3051	Payroll & Timekeeping Clerks	1
17-2171	Petroleum Engineers	1
51-8093	Petroleum Pump System & Refinery Oprs	112
13-1023	Purchasing Agents, Other	3
41-4012	Sales Representatives	10
41-4011	Sales Representatives, Technical & Scientific Products	5
43-6014	Secretaries	3
51-9012	Separating, Filtering, Precipitating & Still Machine Oprs	27
43-5071	Shipping, Receiving & Traffic Clerks	10
47-1011	Supervisors - Construction Trades & Extraction Workers	7
53-1021	Supervisors - Helpers & Laborers	4
49-1011	Supervisors - Mechanics, Installers & Repairers	9
43-1011	Supervisors - Office & Administrative Support Workers	5
51-1011	Supervisors - Production & Operating Workers	30
53-1031	Supervisors - Transp. & Material-Moving Machine Oprs	2
53-7121	Tank Car, Truck & Ship Loaders	9
51-2092	Team Assemblers	14
53-3032	Truck Drivers, Heavy & Tractor-Trailer	28
51-4121	Welders, Cutters, Solderers & Brazers	6
Total		<b>590</b>

## Attachment B

### Average Wages for SOC Occupations within Sunoco

SOC Code	SOC Title	2010 Annual Average Wages (\$)					
		WIA		MSA		Pennsylvania	
		Hourly	Annual	Hourly	Annual	Hourly	Annual
11-1021	General & Operations Managers	55.99	116,460	59.55	123,860	51.05	106,180
11-3051	Industrial Production Managers	50.83	105,730	48.96	101,840	43.01	89,470
11-9041	Engineering Managers	58.15	120,960	63.32	131,720	58.39	121,460
13-1023	Purchasing Agents, Other	33.68	70,060	30.80	64,060	28.34	58,940
13-1072	Compensation, Benefits & Job Analysis Specialists	30.67	63,790	30.72	63,890	28.16	58,570
13-2011	Accountants & Auditors	37.09	77,150	37.51	78,020	32.98	68,610
17-2041	Chemical Engineers	47.19	98,150	44.28	92,090	43.87	91,260
17-2112	Industrial Engineers	38.34	79,740	40.28	83,780	37.17	77,310
17-2141	Mechanical Engineers	45.06	93,720	40.82	84,910	37.12	77,210
17-2171	Petroleum Engineers	N/A	N/A	N/A	N/A	62.26	129,510
19-2031	Chemists	30.00	62,400	36.52	75,960	33.15	68,950
19-4031	Chemical Technicians	19.05	39,620	23.17	48,200	22.01	45,780
19-4041	Geological & Petroleum Technicians	N/A	N/A	25.15	52,310	23.89	49,700
29-9011	Occupational Health & Safety Specialists	38.78	80,650	32.74	68,090	29.14	60,620
41-4011	Sales Representatives, Technical & Scientific Products	41.92	87,190	44.45	92,460	41.88	87,120
41-4012	Sales Representatives	32.71	68,050	33.44	69,550	30.70	63,850
43-1011	Supervisors - Office & Administrative Support Workers	29.42	61,190	27.43	57,060	24.87	51,720
43-3031	Bookkeeping, Accounting & Auditing Clerks	19.29	40,120	19.21	39,960	17.08	35,540
43-3051	Payroll & Timekeeping Clerks	18.76	39,010	19.52	40,600	17.61	36,620
43-5071	Shipping, Receiving & Traffic Clerks	17.21	35,800	16.50	34,320	15.55	32,350
43-6011	Executive Secretaries & Administrative Assistants	22.74	47,300	24.00	49,920	21.67	45,080
43-6014	Secretaries	16.49	34,300	16.32	33,940	14.74	30,650
43-9061	Office Clerks, General	14.91	31,020	14.98	31,150	13.83	28,760
47-1011	Supervisors - Construction Trades & Extraction Workers	39.43	82,000	36.51	75,940	31.07	64,630
47-2073	Operating Engineers	28.04	58,330	26.08	54,250	21.03	43,740
47-2111	Electricians	37.98	79,000	33.60	69,900	26.89	55,940
49-1011	Supervisors - Mechanics, Installers & Repairers	34.54	71,850	33.16	68,970	30.67	63,800
49-9012	Control & Valve Installers & Repairers	N/A	N/A	25.95	53,980	23.24	48,350
49-9041	Industrial Machinery Mechanics	22.73	47,270	22.94	47,720	21.61	44,940

## Attachment B

### Average Wages for SOC Occupations within Sunoco

SOC Code	SOC Title	2010 Annual Average Wages (\$)					
		WIA		MSA		Pennsylvania	
		Hourly	Annual	Hourly	Annual	Hourly	Annual
49-9042	Maintenance & Repair Workers, General	18.85	39,200	18.88	39,280	17.49	36,390
49-9043	Maintenance Workers, Machinery	12.31	25,610	18.88	39,270	18.51	38,500
51-1011	Supervisors - Production & Operating Workers	31.11	64,710	30.14	62,690	26.82	55,800
51-2092	Team Assemblers	17.00	35,360	15.49	32,230	14.50	30,160
51-4041	Machinists	21.91	45,570	21.01	43,690	18.88	39,270
51-4121	Welders, Cutters, Solderers & Brazers	21.02	43,730	19.31	40,160	17.43	36,250
51-8091	Chemical Plant & System Oprs	25.32	52,670	26.26	54,630	25.04	52,090
51-8093	Petroleum Pump System & Refinery Oprs	28.04	58,320	27.47	57,140	26.52	55,160
51-9011	Chemical Equipment Oprs & Tenders	23.29	48,450	20.56	42,770	20.17	41,960
51-9012	Separating, Filtering, Precipitating & Still Machine Oprs	N/A	N/A	19.64	40,850	19.58	40,720
51-9021	Crushing, Grinding & Polishing Machine Oprs	18.25	37,960	16.65	34,630	17.15	35,670
51-9023	Mixing & Blending Machine Oprs	24.88	51,740	18.26	37,990	17.86	37,160
51-9051	Furnace, Kiln, Oven, Drier & Kettle Oprs	N/A	N/A	18.15	37,740	17.67	36,740
51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	24.60	51,160	19.50	40,570	17.57	36,540
51-9111	Packaging & Filling Machine Oprs	16.77	34,870	14.62	30,410	14.93	31,060
51-9198	Helpers--Production Workers	12.65	26,320	12.92	26,870	12.57	26,140
53-1021	Supervisors - Helpers & Laborers	28.88	60,080	27.68	57,580	24.38	50,720
53-1031	Supervisors - Transp. & Material-Moving Machine Oprs	32.89	68,410	30.57	63,590	28.17	58,600
53-3032	Truck Drivers, Heavy & Tractor-Trailer	23.46	48,800	21.63	45,000	19.88	41,360
53-7051	Industrial Truck & Tractor Oprs	20.10	41,820	17.29	35,970	15.93	33,130
53-7062	Laborers & Freight, Stock & Material Movers, Hand	14.43	30,010	13.83	28,760	13.30	27,650
53-7121	Tank Car, Truck & Ship Loaders	N/A	N/A	N/A	N/A	20.19	42,000

Source: Center for Workforce Information & Analysis, Occupational Employment Statistics (OES) Wages, 2010

## Attachment C

### Reemployment Assessment for Sunoco

#### Good Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Accountants & Auditors	7	10	100	314
Bookkeeping, Accounting & Auditing Clerks	12	13	110	373
Electricians	6	14	58	170
Executive Secretaries & Administrative Assistants	3	8	65	194
Industrial Engineers	3	4	28	88
Laborers & Freight, Stock & Material Movers, Hand	18	33	248	886
Office Clerks, General	12	35	246	815
Payroll & Timekeeping Clerks	1	2	20	60
Sales Representatives	10	19	134	502
Secretaries	3	14	119	374
Supervisors - Office & Administrative Support Workers	5	9	86	267
Supervisors - Transp. & Material-Moving Machine Oprs	2	2	14	55
	82			

#### Fair Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Chemical Equipment Oprs & Tenders	4	1	12	23
Chemical Technicians	10	1	17	42
Chemists	5	0	18	38
Compensation, Benefits & Job Analysis Specialists	4	1	12	36
Engineering Managers	5	1	10	28
Furnace, Kiln, Oven, Drier & Kettle Oprs	1	N/A	2	12
General & Operations Managers	10	8	79	242
Helpers--Production Workers	13	2	38	173
Industrial Machinery Mechanics	18	3	22	100
Industrial Production Managers	3	1	15	56
Industrial Truck & Tractor Oprs	21	2	41	208
Inspectors, Testers, Sorters, Samplers & Weighers	16	2	20	86
Maintenance & Repair Workers, General	12	3	14	54
Mechanical Engineers	6	2	14	50
Occupational Health & Safety Specialists	2	0	5	12
Operating Engineers	3	2	22	93
Packaging & Filling Machine Oprs	9	2	23	88
Purchasing Agents, Other	3	2	21	71
Sales Representatives, Technical & Scientific Products	5	4	36	103
Shipping, Receiving & Traffic Clerks	10	6	47	174
Supervisors - Construction Trades & Extraction Workers	7	3	24	82
Supervisors - Helpers & Laborers	4	1	9	37
Supervisors - Mechanics, Installers & Repairers	9	3	25	88
Supervisors - Production & Operating Workers	30	3	30	129
Team Assemblers	14	4	52	244
Truck Drivers, Heavy & Tractor-Trailer	28	9	89	468
Welders, Cutters, Solderers & Brazers	6	1	20	97
	258			

## Attachment C

### Reemployment Assessment for Sunoco

#### Fair to Difficult Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Chemical Engineers	9	0	4	10
Machinists	22	3	19	80
Maintenance Workers, Machinery	5	0	2	10
Mixing & Blending Machine Oprs	18	0	8	26
Petroleum Engineers	1	0	N/A	1
	55			

#### Difficult Reemployment Prospects

	Company Layoffs	6 Month Openings		
		WIA	MSA	PA
Chemical Plant & System Oprs	17	N/A	6	14
Control & Valve Installers & Repairers	9	N/A	0	4
Crushing, Grinding & Polishing Machine Oprs	18	0	1	10
Geological & Petroleum Technicians	3	N/A	0	2
Petroleum Pump System & Refinery Oprs*	112	3	4	14
Separating, Filtering, Precipitating & Still Machine Oprs	27	0	3	9
Tank Car, Truck & Ship Loaders	9	0	0	2
	195			

\* Dominant Occupation

Source: Center for Workforce Information & Analysis, Occupational Employment Projections, 2008-2018

## **Attachment D**

### **Related Occupations for "Fair-to-Difficult" and "Difficult" Reemployment Prospects**

#### **Chemical Engineers**

Agricultural Engineers  
Conservation Scientists  
Engineering Managers  
Foresters

Geoscientists  
Health & Safety Engineers  
Nuclear Engineers  
Nuclear Technicians

#### **Machinists**

Aircraft Structure & Systems Assemblers  
Engine & Other Machine Assemblers  
Inspectors, Testers, Sorters, Samplers & Weighers  
Mechanical Engineering Technicians

Millwrights  
Model Makers, Metal & Plastic  
Welders, Cutters, Solderers & Brazers

#### **Maintenance Workers, Machinery**

Aircraft Structure & Systems Assemblers  
Cutting, Punching & Press Machine Oprs  
Engine & Other Machine Assemblers

Mechanical Door Repairers  
Molding & Casting Machine Oprs

#### **Mixing & Blending Machine Oprs**

Cementing & Gluing Machine Oprs  
Cleaning, Washing & Metal Pickling Equip. Oprs  
Coating, Painting & Spraying Machine Oprs  
Coil Winders, Tapers & Finishers

Cutting & Slicing Machine Oprs  
Molding & Casting Machine Oprs  
Multiple Machine Tool Oprs  
Welding, Soldering & Brazing Machine Oprs

#### **Petroleum Engineers**

Aerospace Engineers  
Electrical & Electronics Drafters  
Geoscientists  
Industrial Engineering Technicians

Marine Engineers & Naval Architects  
Materials Engineers  
Mechanical Engineering Technicians  
Mining & Geological Engineers

#### **Chemical Plant & System Oprs**

Etchers & Engravers  
Extruding, Forming, Pressing and Compacting Machine Oprs  
Furnace, Kiln, Oven, Drier & Kettle Oprs  
Gas Plant Oprs

Photographic Processing Machine Oprs  
Prepress Technicians & Workers  
Pump Oprs  
Water & Liquid Waste Treatment Plant & System Oprs

#### **Control & Valve Installers & Repairers**

Elec. Repairers: Powerhouse, Substation & Relay  
Electric Motor, Power Tool & Related Repairers  
Helpers--Electricians  
Home Appliance Repairers  
Locksmiths & Safe Repairers  
Mechanical Door Repairers

Mobile Heavy Equipment Mechanics  
Motorboat Mechanics  
Motorcycle Mechanics  
Outdoor Power Equipment & Small Engine Mechanics  
Rail Car Repairers



## **Attachment D**

### **Related Occupations for "Fair-to-Difficult" and "Difficult" Reemployment Prospects**

#### **Crushing, Grinding & Polishing Machine Oprs**

Cementing & Gluing Machine Oprs	Cutting & Slicing Machine Oprs
Cleaning, Washing & Metal Pickling Equip. Oprs	Molding & Casting Machine Oprs
Coating, Painting & Spraying Machine Oprs	Multiple Machine Tool Oprs
Coil Winders, Tapers & Finishers	Welding, Soldering & Brazing Machine Oprs

#### **Geological & Petroleum Technicians**

Chemical Equipment Oprs & Tenders	Ophthalmic Laboratory Technicians
Computer, Automated Teller & Office Machine Repairers	Power Distributors & Dispatchers
Heat Treating Equipment Oprs	Pump Oprs
Multiple Machine Tool Oprs	Ship Engineers

#### **Petroleum Pump System & Refinery Oprs**

Bindery Workers	Gas Compressor & Gas Pumping Station Oprs
Coating, Painting & Spraying Machine Oprs	Gas Plant Oprs
Coil Winders, Tapers & Finishers	Molding & Casting Machine Oprs
Computer-Controlled Machine Tool Oprs	Plating & Coating Machine Oprs
Conveyor Oprs & Tenders	Power Plant Oprs
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	Stationary Engineers & Boiler Oprs

#### **Separating, Filtering, Precipitating & Still Machine Oprs**

Conveyor Oprs & Tenders	Gas Compressor & Gas Pumping Station Oprs
Cutting, Punching & Press Machine Oprs	Plating & Coating Machine Oprs
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	Printing Machine Oprs

#### **Tank Car, Truck & Ship Loaders**

Gas Compressor & Gas Pumping Station Oprs	Plating & Coating Machine Oprs
Gas Plant Oprs	Welders, Cutters, Solderers & Brazers
Molding & Casting Machine Oprs	

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Chemical Engineers</i></b>							
Agricultural Engineers	N/A	N/A	0	N/A	N/A	66,060	Architectural & Engineering Firms Federal Government Machinery Manufacturers
Conservation Scientists	0	1	4	60,540	49,870	43,250	Federal, State & Local Government
Engineering Managers	1	10	28	120,960	131,720	121,460	Architectural & Engineering Firms Management & Holding Companies Research & Development Firms
Foresters	0	0	4	N/A	75,480	54,830	Federal & State Government Sawmills
Geoscientists	N/A	2	6	N/A	68,030	67,860	Architectural & Engineering Firms Management & Technical Firms State Government
Health & Safety Engineers	1	3	8	49,570	65,900	69,920	Insurance Agencies & Brokerages Local Government Pharmaceutical & Medicine Manufacturers
Nuclear Engineers	N/A	6	12	N/A	N/A	100,350	Electric Companies Research & Development Firms
Nuclear Technicians	N/A	N/A	5	N/A	N/A	68,540	Electric Companies Management & Technical Firms Research & Development Firms
<b><i>Machinists</i></b>							
Aircraft Structure & Systems Assemblers	N/A	N/A	5	N/A	50,560	50,560	Aerospace Product Manufacturers
Engine & Other Machine Assemblers	0	1	7	N/A	40,170	37,900	Cutlery & Handtool Manufacturers Machinery Manufacturers
Inspectors, Testers, Sorters, Samplers & Weighers	2	20	86	51,160	40,570	36,540	Architectural & Engineering Firms Glass Products Manufacturers Plastic Products Manufacturers
Mechanical Engineering Technicians	0	3	9	72,250	49,850	48,940	Architectural & Engineering Firms Personnel Agencies Research & Development Firms
Millwrights	0	2	5	N/A	52,500	48,820	Building Contractors Iron & Steel Mills

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Machinists (cont.)</i></b>							
Model Makers, Metal & Plastic	0	0	4	N/A	62,370	44,350	Plastic Products Manufacturers
Welders, Cutters, Solderers & Brazers	1	20	97	43,730	40,160	36,250	Fabricated Metal Shops Machinery Manufacturers Motor Vehicle Manufacturers
<b><i>Maintenance Workers, Machinery</i></b>							
Aircraft Structure & Systems Assemblers	N/A	N/A	5	N/A	50,560	50,560	Aerospace Product Manufacturers
Cutting, Punching & Press Machine Oprs	2	14	80	27,800	34,230	32,080	Fabricated Metal Shops Plastic Products Manufacturers
Engine & Other Machine Assemblers	0	1	7	N/A	40,170	37,900	Cutlery & Handtool Manufacturers Machinery Manufacturers
Mechanical Door Repairers	N/A	1	3	N/A	41,100	36,240	Building Contractors
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
<b><i>Mixing &amp; Blending Machine Oprs</i></b>							
Cementing & Gluing Machine Oprs	N/A	1	4	N/A	37,550	32,940	Converted Paper Product Manufacturers Printing Presses Wood Product Manufacturers
Cleaning, Washing & Metal Pickling Equip. Oprs	N/A	1	6	N/A	31,590	33,060	Food Manufacturers Pharmaceutical & Medicine Manufacturers
Coating, Painting & Spraying Machine Oprs	1	6	28	37,290	38,190	32,680	Fabricated Metal Shops Furniture Manufacturers Metal Coating & Engraving Companies
Coil Winders, Tapers & Finishers	0	2	5	N/A	N/A	28,410	Electronics Manufacturers Motor Vehicle Parts Manufacturing Railroad Car Manufacturers
Cutting & Slicing Machine Oprs	0	2	10	N/A	35,100	32,850	Converted Paper Product Manufacturers Glass Products Manufacturers Printing Presses
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Mixing &amp; Blending Machine Oprs (cont.)</i></b>							
Multiple Machine Tool Oprs	0	6	28	47,390	36,630	33,570	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Welding, Soldering & Brazing Machine Oprs	N/A	1	8	46,450	36,820	37,250	Fabricated Metal Shops Machine Shops Steel Product Manufacturers
<b><i>Petroleum Engineers</i></b>							
Aerospace Engineers	2	7	10	90,250	81,240	80,690	Aerospace Product/Parts Manufacturers Air Transportation Companies Architectural & Engineering Firms
Electrical & Electronics Drafters	0	3	9	71,920	57,560	51,570	Architectural & Engineering Firms Electric Companies Electronic Instrument Manufacturers
Geoscientists	N/A	2	6	N/A	68,030	67,860	Architectural & Engineering Firms Management & Technical Firms State Government
Industrial Engineering Technicians	0	6	20	66,530	55,820	51,460	Aerospace Product/Parts Manufacturers Computer Systems Design Services Medical Equipment & Supplies Manufacturers
Marine Engineers & Naval Architects	N/A	0	1	N/A	N/A	97,640	Architectural & Engineering Firms Federal Government Water Transportation Companies
Materials Engineers	1	2	8	86,100	84,220	80,520	Iron & Steel Mills Management & Holding Companies Research & Development Firms
Mechanical Engineering Technicians	0	3	9	72,250	49,850	48,940	Architectural & Engineering Firms Personnel Agencies Research & Development Firms
Mining & Geological Engineers	N/A	2	6	N/A	N/A	64,010	Architectural & Engineering Firms Coal Mining Companies State Government
<b><i>Chemical Plant &amp; System Oprs</i></b>							
Etchers & Engravers	N/A	0	1	N/A	34,050	32,730	Metal Coating & Engraving Companies

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Chemical Plant &amp; System Oprs (cont.)</i></b>							
Extruding, Forming, Pressing and Compacting Machine Oprs	0	3	15	N/A	31,630	35,690	Glass Products Manufacturers Plastic Products Manufacturers Pulp Mills
Furnace, Kiln, Oven, Drier & Kettle Oprs	N/A	2	12	N/A	37,740	36,740	Aluminum Manufacturers Clay Product & Refractory Manufacturers Glass Products Manufacturers
Gas Plant Oprs	0	N/A	10	N/A	52,870	50,370	Pipeline Oprs
Photographic Processing Machine Oprs	0	8	26	19,160	23,290	22,010	Department Stores Drug Stores Photofinishing Laboratories
Prepress Technicians & Workers	N/A	4	13	N/A	38,160	37,500	Newspaper & Book Publishers Printing Presses
Pump Oprs	N/A	0	5	N/A	N/A	42,200	Oil & Gas Extraction Companies
Water & Liquid Waste Treatment Plant & System Oprs	1	10	41	47,060	49,400	43,710	Local Government Water & Sewage Plants
<b><i>Control &amp; Valve Installers &amp; Repairers</i></b>							
Elec. Repairers: Powerhouse, Substation & Relay	N/A	2	10	N/A	N/A	62,410	Electric Companies
Electric Motor, Power Tool & Related Repairers	0	3	10	N/A	48,030	40,060	Building Contractors Commercial Machinery Repair Shops Converted Paper Product Manufacturers
Helpers--Electricians	1	5	14	N/A	30,910	28,030	Building Contractors Construction Firms
Home Appliance Repairers	0	4	11	N/A	36,160	34,310	Electronics & Appliance Stores Household Goods Repair Shops Self-Employed
Locksmiths & Safe Repairers	1	3	6	42,200	38,400	37,250	Investigation & Security Services Self-Employed
Mechanical Door Repairers	N/A	1	3	N/A	41,100	36,240	Building Contractors
Mobile Heavy Equipment Mechanics	0	10	39	50,370	48,450	44,850	Federal & State Government Machinery & Supply Wholesalers

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Control &amp; Valve Installers &amp; Repairers (cont.)</i></b>							
Motorboat Mechanics	N/A	1	3	N/A	34,040	37,250	Commercial Machinery Repair Shops Motorboat Dealers
Motorcycle Mechanics	0	1	5	N/A	37,110	32,230	Motorcycle Dealers
Outdoor Power Equipment & Small Engine Mechanics	0	2	8	N/A	35,620	29,770	Building Material & Supplies Stores Lawn & Garden Stores Self-Employed
Rail Car Repairers	0	0	7	N/A	37,930	46,530	Railroad Car Manufacturers Railroads
<b><i>Crushing, Grinding &amp; Polishing Machine Oprs</i></b>							
Cementing & Gluing Machine Oprs	N/A	1	4	N/A	37,550	32,940	Converted Paper Product Manufacturers Printing Presses Wood Product Manufacturers
Cleaning, Washing & Metal Pickling Equip. Oprs	N/A	1	6	N/A	31,590	33,060	Food Manufacturers Pharmaceutical & Medicine Manufacturers
Coating, Painting & Spraying Machine Oprs	1	6	28	37,290	38,190	32,680	Fabricated Metal Shops Furniture Manufacturers Metal Coating & Engraving Companies
Coil Winders, Tapers & Finishers	0	2	5	N/A	N/A	28,410	Electronics Manufacturers Motor Vehicle Parts Manufacturing Railroad Car Manufacturers
Cutting & Slicing Machine Oprs	0	2	10	N/A	35,100	32,850	Converted Paper Product Manufacturers Glass Products Manufacturers Printing Presses
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
Multiple Machine Tool Oprs	0	6	28	47,390	36,630	33,570	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Welding, Soldering & Brazing Machine Oprs	N/A	1	8	46,450	36,820	37,250	Fabricated Metal Shops Machine Shops Steel Product Manufacturers

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Geological &amp; Petroleum Technicians</i></b>							
Chemical Equipment Oprs & Tenders	1	12	23	48,450	42,770	41,960	Chemical Manufacturers Pharmaceutical & Medicine Manufacturers
Computer, Automated Teller & Office Machine Repairers	0	5	15	42,230	46,350	41,740	Commercial Equipment Wholesalers Electronic Equipment Repair Shops Electronics & Appliance Stores
Heat Treating Equipment Oprs	0	1	7	N/A	42,260	37,140	Forgings & Stampings Manufacturers Iron & Steel Mills Metal Coating & Engraving Companies
Multiple Machine Tool Oprs	0	6	28	47,390	36,630	33,570	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Ophthalmic Laboratory Technicians	N/A	2	8	N/A	31,350	29,130	Medical Equipment Manufacturers Optical Goods Stores Physician Offices
Power Distributors & Dispatchers	N/A	1	4	N/A	N/A	63,100	Electric Companies
Pump Oprs	N/A	0	5	N/A	N/A	42,200	Oil & Gas Extraction Companies
Ship Engineers	N/A	1	1	N/A	67,840	66,590	Freight Trucking Companies Water Transportation Companies
<b><i>Petroleum Pump System &amp; Refinery Oprs</i></b>							
Bindery Workers	0	3	10	N/A	35,530	32,170	Printing Presses
Coating, Painting & Spraying Machine Oprs	1	6	28	37,290	38,190	32,680	Fabricated Metal Shops Furniture Manufacturers Metal Coating & Engraving Companies
Coil Winders, Tapers & Finishers	0	2	5	N/A	N/A	28,410	Electronics Manufacturers Motor Vehicle Parts Manufacturing Railroad Car Manufacturers
Computer-Controlled Machine Tool Oprs	0	4	24	36,600	43,260	36,650	Fabricated Metal Shops Machine Shops Plastic Products Manufacturers
Conveyor Oprs & Tenders	2	2	8	33,820	29,280	30,710	Courier Firms Mining Companies Newspaper & Book Publishers

## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Petroleum Pump System &amp; Refinery Oprs (cont.)</i></b>							
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	N/A	1	6	N/A	32,740	31,530	Fabric Mills Paint & Adhesive Manufacturers Plastic Products Manufacturers
Gas Compressor & Gas Pumping Station Oprs	N/A	0	3	N/A	N/A	51,620	Local Government Pipeline Oprs Utility Line Construction Firms
Gas Plant Oprs	0	N/A	10	N/A	52,870	50,370	Pipeline Oprs
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
Plating & Coating Machine Oprs	0	2	15	39,840	37,180	35,070	Electronics Manufacturers Metal Coating & Engraving Companies
Power Plant Oprs	0	5	20	57,130	60,320	59,860	Electric Companies
Stationary Engineers & Boiler Oprs	0	2	5	52,750	51,200	46,380	Colleges & Universities Hospitals Iron & Steel Mills
<b><i>Separating, Filtering, Precipitating &amp; Still Machine Oprs</i></b>							
Conveyor Oprs & Tenders	2	2	8	33,820	29,280	30,710	Courier Firms Mining Companies Newspaper & Book Publishers
Cutting, Punching & Press Machine Oprs	2	14	80	27,800	34,230	32,080	Fabricated Metal Shops Plastic Products Manufacturers
Extruding & Forming Machine Oprs, Synthetic & Glass Fibers	N/A	1	6	N/A	32,740	31,530	Fabric Mills Paint & Adhesive Manufacturers Plastic Products Manufacturers
Gas Compressor & Gas Pumping Station Oprs	N/A	0	3	N/A	N/A	51,620	Local Government Pipeline Oprs Utility Line Construction Firms
Plating & Coating Machine Oprs	0	2	15	39,840	37,180	35,070	Electronics Manufacturers Metal Coating & Engraving Companies
Printing Machine Oprs	1	16	52	41,160	41,110	36,330	Printing Presses



## Attachment E

### Job Openings, Annual Wages & Employing Industry Data for the Related Occupations

Related Occupations	6 month openings			2010 Average Wages (\$)			Examples of Dominant Employers
	WIA	MSA	PA	WIA	MSA	PA	
<b><i>Tank Car, Truck &amp; Ship Loaders</i></b>							
Gas Compressor & Gas Pumping Station Oprs	N/A	0	3	N/A	N/A	51,620	Local Government Pipeline Oprs Utility Line Construction Firms
Gas Plant Oprs	0	N/A	10	N/A	52,870	50,370	Pipeline Oprs
Molding & Casting Machine Oprs	2	8	47	32,710	31,720	30,550	Plastic Products Manufacturers
Plating & Coating Machine Oprs	0	2	15	39,840	37,180	35,070	Electronics Manufacturers Metal Coating & Engraving Companies
Welders, Cutters, Solderers & Brazers	1	20	97	43,730	40,160	36,250	Fabricated Metal Shops Machinery Manufacturers Motor Vehicle Manufacturers

Sources: Center for Workforce Information & Analysis, Occupational Employment Statistics (OES) Wages, 2010  
Center for Workforce Information & Analysis, Occupational Employment Projections, 2008-2018

## Attachment F

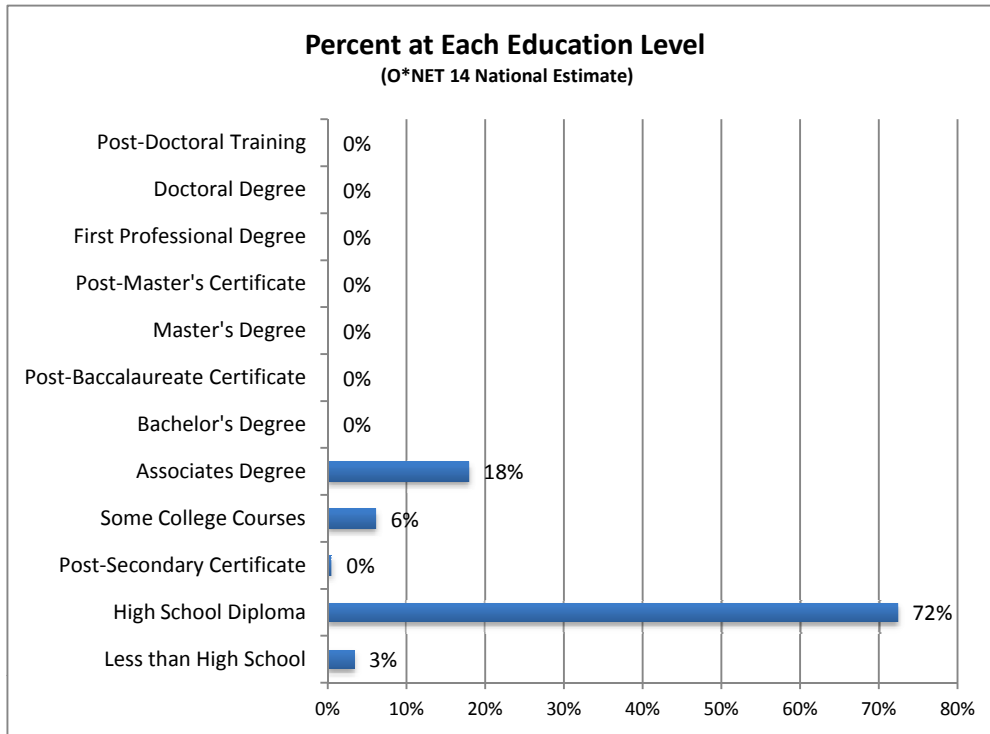
### Educational Requirements and Work Experience for the Dominant Occupation Petroleum Pump System & Refinery Oprs

This chart was obtained from TORQworks, which uses the latest O\*NET data to provide detailed information on occupations.

#### Required Education Level

Job Zone Two: This occupation usually requires a high school diploma.

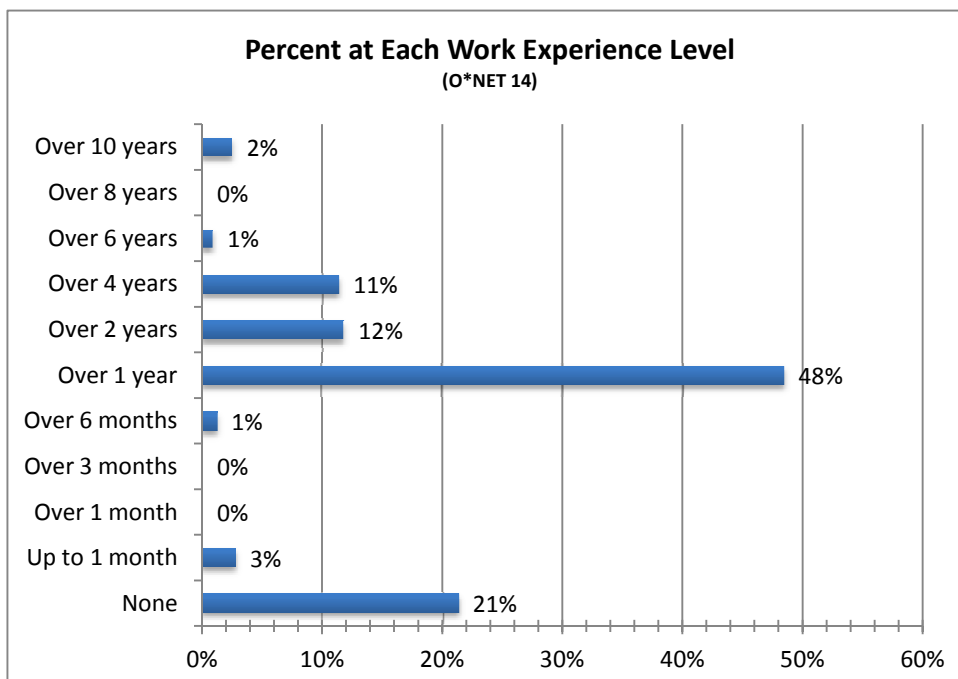
The following graph shows the percent of Petroleum Pump System & Refinery Oprs that are at each education level in the U.S.



#### Required Work Experience

Job Zone Two: Some previous work-related skill, knowledge, or experience is usually needed.

The following graph shows the percent of Petroleum Pump System & Refinery Oprs that are at each work experience level in the U.S.

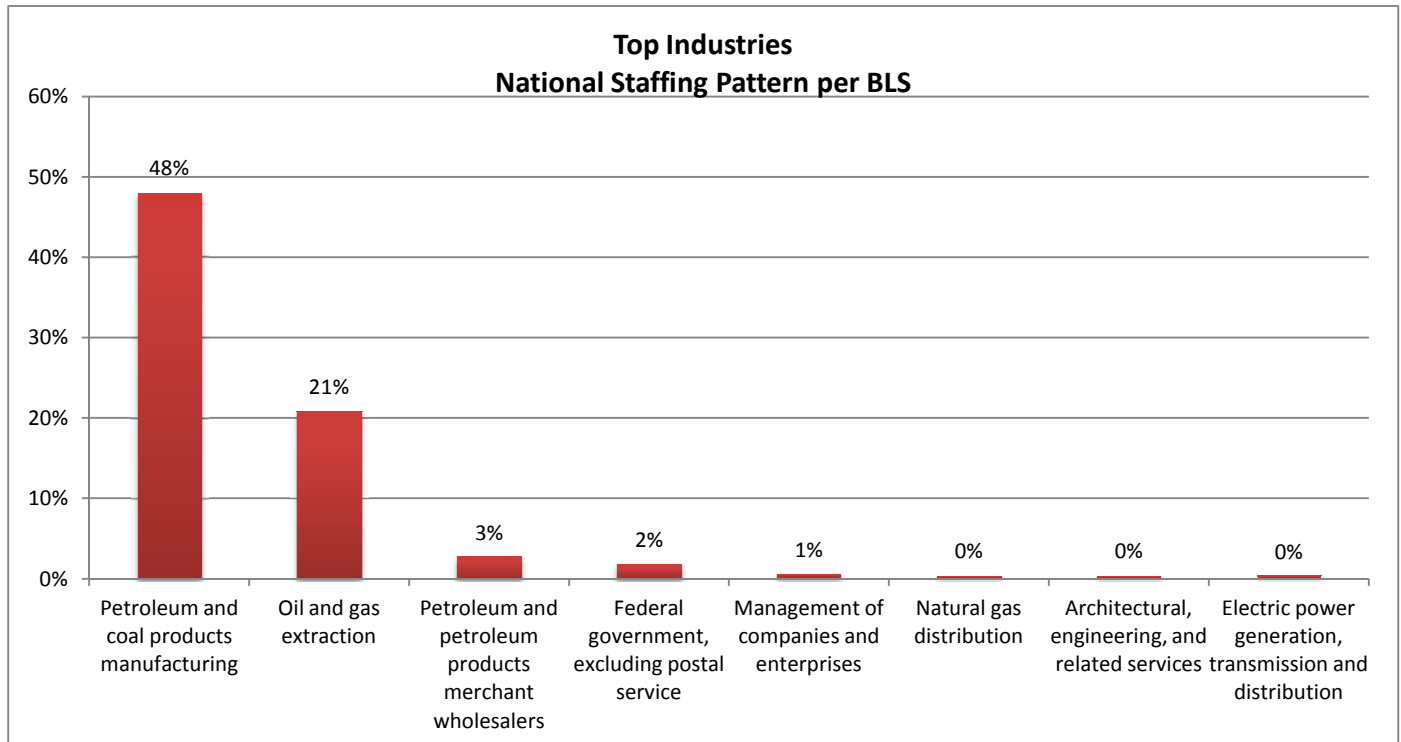


Source: TORQworks

## Attachment G

### Top Industries Employing Petroleum Pump System & Refinery Oprs

This chart was obtained from TORQworks, which uses the latest BLS staffing pattern data to provide detailed information on industries.



Source: TORQworks

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
11-3051	Industrial Production Managers	BD	\$103,250	\$69,720	\$120,020	150	140	-6.7%	5
11-9011	Farm & Agricultural Managers	BD+	N/A	N/A	N/A	90	100	+11.1%	2
11-9021	Construction Managers	BD	\$108,530	\$70,710	\$127,440	380	390	+2.6%	7
13-1031	Claims Adjusters, Examiners & Investigators	LT OJT	\$58,740	\$39,640	\$68,280	800	800	0.0%	20
13-1051	Cost Estimators	BD	\$63,940	\$44,740	\$73,540	450	490	+8.9%	14
13-1073	Training & Development Specialists	BD	\$57,300	\$38,340	\$66,780	300	320	+6.7%	9
13-1111	Management Analysts	BD+	\$104,250	\$60,530	\$126,100	1,680	1,930	+14.9%	54
13-2011	Accountants & Auditors	BD	\$77,480	\$45,290	\$93,570	2,210	2,240	+1.4%	42
13-2051	Financial Analysts	BD	\$88,320	\$49,730	\$107,610	550	600	+9.1%	8
13-2052	Personal Financial Advisors	BD	\$70,720	\$40,220	\$85,970	550	560	+1.8%	6
13-2053	Insurance Underwriters	BD	\$70,260	\$45,290	\$82,750	290	280	-3.4%	8
13-2072	Loan Officers	BD	\$48,380	\$33,390	\$55,880	460	420	-8.7%	5
15-1021	Computer Programmers	BD	\$90,590	\$48,610	\$111,590	510	420	-17.6%	11
15-1031	Computer Software Engineers, Applications	BD	\$92,810	\$64,070	\$107,180	420	510	+21.4%	15
15-1032	Computer Software Engineers, Systems Software	BD	N/A	N/A	N/A	310	350	+12.9%	9
15-1041	Computer Support Specialists	AD	\$42,850	\$29,870	\$49,340	590	600	+1.7%	20
15-1051	Computer Systems Analysts	BD	\$82,710	\$53,870	\$97,130	470	530	+12.8%	19
15-1061	Database Administrators	BD	\$77,160	\$50,960	\$90,260	180	210	+16.7%	5
15-1071	Network & Computer Systems Administrators	BD	\$73,880	\$45,850	\$87,890	350	390	+11.4%	13
15-1081	Network Systems & Data Communications Analysts	BD	\$89,490	\$52,320	\$108,070	260	370	+42.3%	16
17-2051	Civil Engineers	BD	\$85,020	\$57,710	\$98,670	470	490	+4.3%	14
17-2071	Electrical Engineers	BD	\$92,380	\$62,180	\$107,480	150	150	0.0%	3
17-2081	Environmental Engineers	BD	\$83,140	\$55,580	\$96,920	40	40	0.0%	2
17-2112	Industrial Engineers	BD	\$75,580	\$55,920	\$85,410	400	460	+15.0%	16
17-2161	Nuclear Engineers	BD	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17-2199	Energy Engineers	BD	\$92,580	\$65,740	\$106,000	550	550	0.0%	7
17-3011	Architectural & Civil Drafters	PS VOC	\$44,380	\$36,720	\$48,210	50	50	0.0%	2
17-3013	Mechanical Drafters	PS VOC	\$63,650	\$45,200	\$72,870	150	150	0.0%	4
17-3024	Electro-Mechanical Technicians	AD	N/A	N/A	N/A	240	220	-8.3%	5
17-3026	Industrial Engineering Technicians	AD	\$56,050	\$29,030	\$69,560	90	90	0.0%	2
19-1012	Food Scientists & Technologists	BD	N/A	N/A	N/A	N/A	N/A	N/A	N/A
19-1021	Biochemists & Biophysicists	PhD	\$82,640	\$50,140	\$98,880	10	10	0.0%	0
19-1042	Medical Scientists	PhD	\$81,980	\$47,580	\$99,180	40	40	0.0%	2
19-2031	Chemists	BD	\$67,570	\$43,510	\$79,600	50	50	0.0%	1
19-4021	Biological Technicians	AD	\$42,470	\$30,710	\$48,340	110	130	+18.2%	6
21-1011	Substance Abuse & Behavioral Disorder Counselors	MD	\$35,940	\$28,270	\$39,780	240	300	+25.0%	11
21-1012	Educational, Vocational & School Counselors	MD	\$52,650	\$33,710	\$62,120	850	930	+9.4%	25
21-1014	Mental Health Counselors	MD	\$32,650	\$23,180	\$37,380	550	650	+18.2%	21

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
21-1021	Child, Family & School Social Workers	BD	\$39,170	\$26,530	\$45,490	740	780	+5.4%	20
21-1022	Medical & Public Health Social Workers	BD	\$48,080	\$34,270	\$54,990	550	600	+9.1%	17
21-1023	Mental Health & Substance Abuse Social Workers	MD	\$35,870	\$28,050	\$39,780	450	550	+22.2%	19
23-2011	Paralegals & Legal Assistants	AD	\$47,000	\$37,390	\$51,800	70	80	+14.3%	2
25-1042	Biological Science Teachers, Postsecondary	PhD	\$72,070	\$42,850	\$86,680	280	340	+21.4%	11
25-1071	Health Specialties Teachers, Postsecondary	PhD	\$109,390	\$49,310	\$139,430	580	700	+20.7%	22
25-1072	Nursing Instructors & Teachers, Postsecondary	MD (MSN)*	\$69,920	\$43,210	\$83,280	140	170	+21.4%	5
25-1194	Vocational Education Teachers, Postsecondary	WK EXP	\$52,880	\$34,040	\$62,300	290	330	+13.8%	8
25-2011	Preschool Teachers	BD	\$25,370	\$19,430	\$28,340	790	900	+13.9%	23
25-2012	Kindergarten Teachers	BD	\$57,570	\$38,610	\$67,050	330	380	+15.2%	11
25-2021	Elementary School Teachers	BD	\$58,470	\$39,190	\$68,110	3,140	3,610	+15.0%	116
25-2022	Middle School Teachers	BD	\$53,920	\$33,560	\$64,100	N/A	N/A	N/A	N/A
25-2031	Secondary School Teachers	BD	\$53,660	\$35,970	\$62,510	N/A	N/A	N/A	N/A
25-2032	Vocational Education Teachers, Secondary School	BD	\$58,260	\$43,730	\$65,530	180	170	-5.6%	5
25-2041	Special Education Teachers, Pre-, Kindergarten & Elem.	BD	\$56,680	\$36,630	\$66,710	440	530	+20.5%	19
25-2042	Special Education Teachers, Middle School	BD	\$65,320	\$42,060	\$76,940	300	350	+16.7%	12
25-2043	Special Education Teachers, Secondary School	BD	\$54,980	\$33,770	\$65,590	220	240	+9.1%	7
25-3011	Adult Literacy, Remedial Education & GED Teachers	BD	\$47,220	\$35,390	\$53,140	190	200	+5.3%	3
27-1024	Graphic Designers	BD	\$42,830	\$30,150	\$49,160	390	390	0.0%	10
27-2012	Producers & Directors	BD+	\$62,250	\$36,710	\$75,020	110	120	+9.1%	4
27-2022	Coaches & Scouts	LT OJT	\$37,130	\$19,470	\$45,960	340	370	+8.8%	12
27-4021	Photographers	LT OJT	\$37,280	\$25,450	\$43,190	310	330	+6.5%	9
27-4031	Camera Oprs: TV, Video & Motion Picture	MT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
27-4032	Film & Video Editors	BD	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29-1051	Pharmacists	PROF	\$93,650	\$85,630	\$97,660	760	940	+23.7%	31
29-1062	Family & General Practitioners	PROF	\$132,150	\$51,410	\$172,520	480	490	+2.1%	10
29-1111	Registered Nurses	AD	\$68,840	\$52,030	\$77,240	4,840	5,690	+17.6%	165
29-1122	Occupational Therapists	BD	\$70,890	\$52,550	\$80,050	250	300	+20.0%	9
29-1123	Physical Therapists	MD	\$67,800	\$47,960	\$77,720	420	500	+19.0%	14
29-1126	Respiratory Therapists	AD	\$61,900	\$53,440	\$66,130	160	190	+18.8%	5
29-1127	Speech-Language Pathologists	MD	\$65,690	\$57,400	\$69,830	170	180	+5.9%	4
29-1131	Veterinarians	PROF	\$136,590	\$93,580	\$158,100	100	140	+40.0%	6
29-2011	Medical & Clinical Laboratory Technologists	BD	\$56,280	\$37,600	\$65,620	280	280	0.0%	4
29-2012	Medical & Clinical Laboratory Technicians	AD	\$45,280	\$29,710	\$53,070	330	360	+9.1%	8
29-2021	Dental Hygienists	AD	\$62,910	\$51,750	\$68,490	330	380	+15.2%	11
29-2031	Cardiovascular Technologists & Technicians	AD	\$53,370	\$34,130	\$62,990	100	120	+20.0%	3
29-2034	Radiologic Technologists & Technicians	AD	\$46,130	\$28,950	\$54,720	650	710	+9.2%	15
29-2041	Emergency Medical Technicians & Paramedics	PS VOC	\$37,820	\$27,730	\$42,860	600	640	+6.7%	11

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
29-2052	Pharmacy Technicians	MT OJT	\$24,850	\$17,200	\$28,680	450	590	+31.1%	28
29-2055	Surgical Technologists	PS VOC	\$38,900	\$31,390	\$42,650	100	120	+20.0%	5
29-2056	Veterinary Technologists & Technicians	AD	\$34,590	\$28,300	\$37,740	110	160	+45.5%	8
29-2061	Licensed Practical & Licensed Vocational Nurses	PS VOC	\$46,640	\$35,970	\$51,980	1,590	1,810	+13.8%	66
29-2071	Medical Records & Health Information Technicians	AD	\$33,560	\$21,620	\$39,530	300	330	+10.0%	11
31-1011	Home Health Aides	ST OJT	\$23,000	\$18,830	\$25,090	2,910	3,630	+24.7%	98
31-1012	Nursing Aides, Orderlies & Attendants	ST OJT	\$25,300	\$21,050	\$27,430	3,050	3,430	+12.5%	65
31-1013	Psychiatric Aides	ST OJT	N/A	N/A	N/A	70	80	+14.3%	2
31-2011	Occupational Therapist Assistants	AD	\$50,170	\$37,220	\$56,650	30	30	0.0%	1
31-2021	Physical Therapist Assistants	AD	\$42,590	\$29,390	\$49,200	160	200	+25.0%	6
31-9091	Dental Assistants	MT OJT	\$41,490	\$29,410	\$47,520	520	600	+15.4%	17
31-9092	Medical Assistants	MT OJT	\$30,070	\$23,620	\$33,300	1,330	1,610	+21.1%	45
31-9094	Medical Transcriptionists	PS VOC	\$33,190	\$25,560	\$37,000	200	210	+5.0%	4
31-9096	Veterinary Assistants	ST OJT	N/A	N/A	N/A	190	230	+21.1%	6
31-9099	Phlebotomists	N/A	\$31,600	\$27,740	\$33,530	160	180	+12.5%	4
33-3051	Police & Sheriff's Patrol Officers	LT OJT	\$57,720	\$40,630	\$66,260	1,060	1,060	0.0%	29
35-1012	Supervisors - Food Preparation & Serving Workers	WK EXP	\$37,010	\$23,040	\$43,990	1,200	1,270	+5.8%	17
39-5012	Hairdressers & Hairstylists	PS VOC	\$24,550	\$16,060	\$28,790	1,270	1,510	+18.9%	39
39-9011	Child Care Workers	ST OJT	\$19,410	\$16,790	\$20,710	1,330	1,490	+12.0%	53
41-3011	Advertising Sales Agents	MT OJT	\$50,240	\$23,540	\$63,580	N/A	N/A	N/A	N/A
41-3021	Insurance Sales Agents	BD	\$63,280	\$32,390	\$78,730	980	1,020	+4.1%	25
41-3031	Securities, Commodities & Financial Services Sales Agents	BD	\$96,010	\$40,450	\$123,780	380	350	-7.9%	10
41-4011	Sales Representatives, Scientific & Technical	MT OJT	\$80,320	\$45,990	\$97,490	730	710	-2.7%	16
41-4012	Sales Representatives	MT OJT	\$67,960	\$39,030	\$82,420	3,480	3,400	-2.3%	77
41-9022	Real Estate Sales Agents	PS VOC	\$44,060	\$25,720	\$53,230	800	780	-2.5%	13
43-1011	Supervisors - Office & Administrative Support Workers	WK EXP	\$53,210	\$32,930	\$63,350	1,710	1,630	-4.7%	35
43-3011	Bill & Account Collectors	ST OJT	\$33,300	\$24,770	\$37,560	1,010	990	-2.0%	15
43-3021	Billing & Posting Clerks & Machine Oprs	ST OJT	\$33,830	\$25,610	\$37,940	910	860	-5.5%	12
43-3031	Bookkeeping, Accounting & Auditing Clerks	MT OJT	\$36,210	\$25,720	\$41,460	2,710	2,810	+3.7%	53
43-4051	Customer Service Representatives	MT OJT	\$32,150	\$22,480	\$36,980	3,070	3,420	+11.4%	121
43-5011	Cargo & Freight Agents	MT OJT	\$35,240	\$27,950	\$38,880	330	320	-3.0%	9
43-5061	Production, Planning & Expediting Clerks	ST OJT	\$42,960	\$28,050	\$50,420	520	520	0.0%	15
43-5071	Shipping, Receiving & Traffic Clerks	ST OJT	\$35,110	\$22,960	\$41,190	1,000	940	-6.0%	24
43-6011	Executive Secretaries & Administrative Assistants	MT OJT	\$44,960	\$31,890	\$51,490	1,500	1,590	+6.0%	33
43-6012	Legal Secretaries	PS VOC	\$42,530	\$34,060	\$46,760	500	540	+8.0%	12
43-6013	Medical Secretaries	PS VOC	\$34,330	\$26,290	\$38,350	850	900	+5.9%	19
43-6014	Secretaries	MT OJT	\$31,070	\$23,100	\$35,050	3,440	3,220	-6.4%	55
43-9041	Insurance Claims & Policy Processing Clerks	MT OJT	\$34,350	\$24,950	\$39,050	460	420	-8.7%	6

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
43-9061	Office Clerks	ST OJT	\$29,830	\$18,920	\$35,280	6,160	6,420	+4.2%	139
45-1011	Farm & Forestry Worker Supervisors	MT OJT	N/A	N/A	N/A	20	20	0.0%	0
45-2092	Farmworkers & Laborers: Crop, Nursery & Greenhouse	LT OJT	\$20,230	\$16,690	\$22,010	270	300	+11.1%	10
47-1011	Supervisors - Construction Trades & Extraction Workers	WK EXP	\$77,860	\$56,510	\$88,540	810	830	+2.5%	13
47-2021	Brickmasons & Blockmasons	LT OJT	\$57,490	\$33,450	\$69,500	210	210	0.0%	4
47-2031	Carpenters	LT OJT	\$46,420	\$28,180	\$55,540	2,540	2,600	+2.4%	39
47-2051	Cement Masons & Concrete Finishers	LT OJT	\$37,750	\$26,310	\$43,470	140	140	0.0%	4
47-2061	Construction Laborers	MT OJT	\$35,230	\$21,520	\$42,090	830	860	+3.6%	9
47-2073	Operating Engineers	MT OJT	\$56,720	\$42,580	\$63,790	240	250	+4.2%	6
47-2111	Electricians	LT OJT	\$66,100	\$39,030	\$79,640	2,030	2,080	+2.5%	57
47-2132	Insulation Workers, Mechanical	MT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
47-2141	Painters, Construction & Maintenance	MT OJT	\$40,360	\$33,980	\$43,540	580	580	0.0%	10
47-2152	Plumbers, Pipefitters & Steamfitters	LT OJT	\$56,250	\$40,250	\$64,260	380	400	+5.3%	10
47-2181	Roofers	MT OJT	\$44,420	\$35,710	\$48,770	210	220	+4.8%	6
47-2211	Sheet Metal Workers	MT OJT	\$40,680	\$26,250	\$47,900	60	50	-16.7%	1
49-1011	Supervisors - Mechanics, Installers & Repairers	WK EXP	\$68,480	\$51,120	\$77,150	470	470	0.0%	11
49-2022	Telecommunications Equipment Installers & Repairers	PS VOC	\$49,920	\$32,880	\$58,450	90	100	+11.1%	3
49-2095	Elec. Repairers, Powerhouse & Substation	PS VOC	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49-3011	Aircraft Mechanics & Service Technicians	PS VOC	\$53,970	\$40,620	\$60,650	250	320	+28.0%	10
49-3021	Automotive Body & Related Repairers	LT OJT	\$45,230	\$33,650	\$51,020	340	330	-2.9%	8
49-3023	Automotive Service Technicians & Mechanics	PS VOC	\$43,620	\$29,380	\$50,740	1,640	1,650	+0.6%	34
49-3031	Bus, Truck & Diesel Engine Mechanics	PS VOC	\$44,720	\$34,730	\$49,710	180	190	+5.6%	5
49-3041	Farm Equipment Mechanics	PS VOC	N/A	N/A	N/A	20	20	0.0%	0
49-9021	Heating, A/C & Refrigeration Mechanics & Installers	LT OJT	\$46,990	\$35,060	\$52,960	680	700	+2.9%	14
49-9041	Industrial Machinery Mechanics	LT OJT	\$50,020	\$34,280	\$57,880	490	530	+8.2%	12
49-9042	Maintenance & Repair Workers, General	LT OJT	\$39,160	\$26,580	\$45,450	2,100	2,170	+3.3%	12
49-9043	Maintenance Workers, Machinery	LT OJT	\$54,840	\$46,460	\$59,030	80	70	-12.5%	1
49-9051	Electrical Power-Line Installers & Repairers	LT OJT	N/A	N/A	N/A	400	360	-10.0%	13
49-9052	Telecommunications Line Installers & Repairers	LT OJT	\$55,940	\$45,540	\$61,140	370	400	+8.1%	13
49-9064	Watch Repairers	LT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
49-9099	Renewable Energy Technicians	LT OJT	\$58,880	\$53,300	\$61,670	50	50	0.0%	0
51-1011	Supervisors - Production & Operating Workers	WK EXP	\$63,220	\$41,720	\$73,970	690	640	-7.2%	12
51-2022	Electrical & Electronic Equipment Assemblers	ST OJT	\$30,320	\$23,760	\$33,600	440	320	-27.3%	8
51-2092	Team Assemblers	MT OJT	\$37,900	\$24,370	\$44,660	770	780	+1.3%	16
51-3011	Bakers	LT OJT	\$27,500	\$21,760	\$30,370	250	270	+8.0%	7
51-3021	Butchers & Meat Cutters	LT OJT	\$33,110	\$26,810	\$36,260	150	150	0.0%	5
51-3092	Food Batchmakers	ST OJT	\$26,840	\$18,580	\$30,980	120	150	+25.0%	6
51-4011	Computer-Controlled Machine Tool Oprs, Metal & Plastic	LT OJT	\$39,900	\$30,090	\$44,810	150	140	-6.7%	2

## Attachment H

### 2011 High Priority Occupations for Delaware County Workforce Investment Area

SOC Code	SOC Title	Educational Attainment	Wages (2009)			Employment			
			Annual Average	Entry Level	Exper. Level	Estimated 2008	Projected 2018	Percent Change	Annual Openings
51-4012	Numerical Tool & Process Control Programmers	LT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
51-4021	Extruding & Drawing Machine Oprs, Metal & Plastic	MT OJT	N/A	N/A	N/A	20	20	0.0%	1
51-4031	Cutting, Punching & Press Machine Oprs, Metal & Plastic	MT OJT	\$30,980	\$23,070	\$34,930	240	200	-16.7%	6
51-4041	Machinists	LT OJT	\$43,190	\$29,370	\$50,090	700	690	-1.4%	11
51-4072	Molding & Casting Machine Oprs, Metal & Plastic	MT OJT	\$27,390	\$19,010	\$31,580	430	380	-11.6%	10
51-4081	Multiple Machine Tool Oprs, Metal & Plastic	MT OJT	\$35,300	\$31,900	\$37,000	50	50	0.0%	1
51-4111	Tool & Die Makers	LT OJT	\$62,910	\$46,290	\$71,220	100	100	0.0%	1
51-4121	Welders, Cutters, Solderers & Brazers	PS VOC	\$38,730	\$32,980	\$41,610	260	260	0.0%	5
51-7011	Cabinetmakers & Bench Carpenters	LT OJT	N/A	N/A	N/A	80	60	-25.0%	2
51-7042	Woodworking Machine Setters/Oprs/Tenders	MT OJT	\$49,280	\$42,160	\$52,840	50	60	+20.0%	1
51-8031	Water & Liquid Waste Treatment Plant & System Oprs	LT OJT	\$38,350	\$28,530	\$43,260	240	250	+4.2%	5
51-9061	Inspectors, Testers, Sorters, Samplers & Weighers	MT OJT	\$48,660	\$30,240	\$57,880	650	610	-6.2%	10
51-9081	Dental Laboratory Technicians	LT OJT	N/A	N/A	N/A	100	100	0.0%	2
51-9082	Medical Appliance Technicians	LT OJT	N/A	N/A	N/A	50	50	0.0%	2
51-9111	Packaging & Filling Machine Oprs/Tenders	ST OJT	\$27,100	\$18,930	\$31,180	470	390	-17.0%	9
51-9196	Paper Goods Machine Setters/Oprs/Tenders	MT OJT	N/A	N/A	N/A	N/A	N/A	N/A	N/A
53-1031	Supervisors - Transportation & Vehicle Oprs	WK EXP	\$40,720	\$29,430	\$46,360	380	360	-5.3%	8
53-3031	Driver/Sales Workers	ST OJT	\$25,240	\$16,480	\$29,630	320	300	-6.3%	6
53-3032	Truck Drivers, Heavy & Tractor-Trailer	MT OJT	\$43,120	\$29,920	\$49,710	1,450	1,550	+6.9%	37
53-3033	Truck Drivers, Light or Delivery Services	ST OJT	\$34,030	\$20,490	\$40,800	1,860	1,820	-2.2%	33
53-7051	Industrial Truck & Tractor Oprs	ST OJT	\$36,790	\$25,530	\$42,430	340	310	-8.8%	9
53-7081	Refuse & Recyclable Material Collectors	ST OJT	\$31,300	\$21,140	\$36,380	260	270	+3.8%	9

Footnotes:

<sup>1</sup> Educational Attainment Abbreviations:

Short-term, Moderate-term and Long-term training (**ST OJT**, **MT OJT** and **LT OJT**) – basic tasks and skills are learned through a period of on-the-job training.

Work experience in a related occupation (**WK EXP**) – training is gained through hands-on work in a similar occupation.

Postsecondary vocational award (**PS VOC**) – training is gained through a vocational training program.

Associate Degree (**AD** or **AD\***) – degree completed after two years of full-time schooling beyond high school.

Bachelor's Degree (**BD**) – degree completed after four years of full-time schooling beyond high school.

Bachelor's Degree plus experience (**BD+**) – a four-year bachelor's degree plus experience gained through hands-on experience.

Master's (**MD**), Master's in Nursing (**MD (MSN)**), Doctoral (**PhD**) or First Professional Degree (**PROF**) – training at the college or university level beyond a four-year bachelor's degree.

Sources: Center for Workforce Information & Analysis, Occupational Employment Statistics (OES) Wages, 2009

Center for Workforce Information & Analysis, Occupational Employment Projections, 2008-2018



## Attachment I

### Help Wanted Online Ads (HWOL)

The Conference Board Help Wanted OnLine data set provides real-time insight into the employment marketplace through the world's largest database of online job ads. The underlying data for The Conference Board HWOL are provided by Wanted Technologies Corporation.

#### Location of Production Jobs listed in the Last 30 days in PA:

<b>Pennsylvania</b>	<b>1,292</b>
<b>Allegheny County</b>	<b>136</b>
Pittsburgh, PA	84
Verona, PA	14
Bridgeville, PA	7
<b>Montgomery County</b>	<b>108</b>
West Point, PA	21
Horsham, PA	18
King of Prussia, PA	13
<b>Philadelphia County</b>	<b>91</b>
Philadelphia, PA	91
<b>Delaware County</b>	<b>40</b>
Chester, PA	10
Chadds Ford, PA	5
Newton Square, PA	5
& Others	

Note: Data as of January 5, 2012

#### Potential Employer Names:

JoS. A. BANK
Merck
Catalent Pharma Solutions
Whole Foods Market
Veolia Transportation
Peopleshare Inc
NCO
Cintas
LexisNexis
Synerfac Technical Staffing
& Others

#### Sources that HWOL pulls from:

After College
Monster
CareerBuilder
Jobing
BestLocalJobs
SnagAJob
Careers in Food
Work in Retail
& Others

Source: Help Wanted Online Ads (HWOL)

To further explore real time job postings, visit CWIA's website at [www.paworkstats.state.pa.us](http://www.paworkstats.state.pa.us) then click on "**Job Spidering**".

# **Economic Impact of ConocoPhillips and Sunoco Closings**

Center for Workforce Information & Analysis  
January 9, 2012

## **Economic Impact of ConocoPhillips and Sunoco Closings**

The following tables show the potential effects of the layoffs at the ConocoPhillips and Sunoco facilities in southeastern Pennsylvania. The first table illustrates the estimated impact on sales, employment, income and tax revenue. The data are categorized by the types of industries that will be adversely affected. The first is the industry in which the ConocoPhillips and Sunoco facilities are found (direct). The second are related industries or suppliers to or customers of the direct industry (indirect). The third are industries such as retail trade and health care that are impacted due decreased spending because of lost jobs and less income (induced).

The second table depicts all the industries that may suffer employment losses due to the closing of the ConocoPhillips and Sunoco facilities. Data in this table are also categorized by direct, indirect and induced jobs.

The data in both tables are based on 100 job losses. The total job loss for these two companies is expected to be about 1000.

The employment multiplier for these layoffs in southeastern Pennsylvania is substantial. An estimated 18.3 jobs will be lost for each layoff. The employment multipliers in this industry for the state and the nation are 22 jobs and 61 jobs, respectively. In comparison, Iron and Steel Foundries, which has a significant economic tie to several industries, only has a multiplier of 6.5 jobs for Pennsylvania and 12 jobs for the nation.

Economic Impact Analysis is most useful as an indicator of severity and inter-industry linkages. Impact analysis is generally a worst case scenario in which the effects of substitution in the supply or demand chain of the closing plant are not considered.

### Overall Economic Impact from 100 Jobs lost at the ConocoPhillips and Sunoco facilities

Enter Jobs Lost

100

	Impact Totals (Lost)			
	Direct <sup>1/</sup>	Indirect <sup>2/</sup>	Induced <sup>3/</sup>	Total
Output (Sales)	-\$907,367,111	-\$389,148,954	-\$96,672,190	<b>-\$1,393,188,255</b>
Employment	-100	-1,072	-659	<b>-1,831</b>
Labor Income	-\$20,616,479	-\$81,045,599	-\$33,100,881	<b>-\$134,762,959</b>
State and Local Tax	-----	-----	-----	<b>-\$28,317,361</b>

Source: IMPLAN

<sup>1/</sup>The Direct impact is the output or number of employees lost within the specific industry (the ConocoPhillips and Sunoco industry).

<sup>2/</sup>The Indirect impact is the output or number of employees lost in related industries (suppliers/customers of the ConocoPhillips and Sunoco industry) caused by the increase in spending by the direct industry.

<sup>3/</sup>The Induced impact is the output or number of employees lost by other industries due to extraneous spending decreases by those having lost jobs (direct and indirect) and decreased available household income, such as less retail spending, health care, etc.

**Enter Jobs Lost at the ConocoPhillips and Sunoco facilities**

**100 Jobs**

Industry	Estimated Jobs Gained			
	Direct <sup>1/</sup>	Indirect <sup>2/</sup>	Induced <sup>3/</sup>	Total
Wholesale trade businesses	0	-164	-18	-182
ConocoPhillips and Sunoco industry	-100	-21	0	-121
Food services and drinking places	0	-53	-60	-113
Real estate establishments	0	-38	-46	-84
Services to buildings and dwellings	0	-72	-11	-83
Management of companies and enterprises	0	-67	-4	-71
Maintenance and repair construction of nonresidential structures	0	-47	-3	-49
Private hospitals	0	0	-39	-39
Employment services	0	-30	-9	-39
Offices of physicians, dentists, and other health practitioners	0	0	-38	-38
Retail Stores - Food and beverage	0	-9	-24	-33
Transport by truck	0	-29	-3	-32
Accounting, tax preparation, bookkeeping, and payroll services	0	-27	-5	-32
Legal services	0	-21	-8	-29
Automotive repair and maintenance, except car washes	0	-22	-6	-28
Civic, social, professional, and similar organizations	0	-17	-10	-27
Business support services	0	-24	-3	-27
Scientific research and development services	0	-24	-1	-25
Other state and local government enterprises	0	-20	-5	-25
Architectural, engineering, and related services	0	-21	-3	-24
Management, scientific, and technical consulting services	0	-20	-4	-24
Nursing and residential care facilities	0	0	-23	-23
Monetary authorities and depository credit intermediation activities	0	-12	-10	-22
Retail Stores - General merchandise	0	-7	-15	-22
US Postal Service	0	-18	-3	-21
Securities, commodity contracts, investments, and related activities	0	-9	-11	-20
Investigation and security services	0	-15	-4	-19
Scenic and sightseeing transportation and support activities for transportation	0	-17	-1	-18
Private junior colleges, colleges, universities, and professional schools	0	-1	-15	-16
Retail Stores - Clothing and clothing accessories	0	-4	-12	-16
Retail Stores - Miscellaneous	0	-5	-10	-15
Computer systems design services	0	-13	-1	-15
Insurance carriers	0	-4	-10	-14
Individual and family services	0	0	-14	-14
Retail Stores - Motor vehicle and parts	0	-4	-10	-14
Retail Stores - Health and personal care	0	-4	-9	-13
Private household operations	0	0	-13	-13
Electric power generation, transmission, and distribution	0	-11	-1	-13
Telecommunications	0	-8	-4	-13
Advertising and related services	0	-10	-3	-12
Couriers and messengers	0	-10	-2	-12
Medical and diagnostic labs and outpatient and other ambulatory care services	0	0	-12	-12
Commercial and industrial machinery and equipment repair and maintenance	0	-11	-1	-12
Other support services	0	-10	-2	-12
Private elementary and secondary schools	0	0	-11	-11
Extraction of oil and natural gas	0	-11	0	-11
Warehousing and storage	0	-9	-1	-11
Child day care services	0	0	-10	-10
All Other Industries	0	-154	-149	-302
<b>Totals</b>	<b>-100</b>	<b>-1,072</b>	<b>-659</b>	<b>-1,831</b>

<sup>1/</sup>The Direct impact is the output or number of employees lost within the specific industry (the ConocoPhillips and Sunoco industry).

<sup>2/</sup>The Indirect impact is the output or number of employees lost in related industries (suppliers/customers of the ConocoPhillips and Sunoco industry) caused by the increase in spending by the direct industry.

<sup>3/</sup>The Induced impact is the output or number of employees lost by other industries due to extraneous spending decreases by those having lost jobs (direct and indirect) and decreased available household income, such as less retail spending, health care, etc.