

Schedule WPD-28  
Schumacher Consulting LLC,  
Area Labor Study  
02/13/06

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**INDUSTRIAL CONSTRUCTION & TURNAROUND CONSULTANT**

**Prepared for:**

**Burns & McDonnell Engineering**

**Area Labor Study  
for  
KCPL Iatan Unit 2 Project**

**February 13<sup>th</sup>, 2006**

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## KCPL Iatan Unit 2 Project Area Labor Study

### Table of Contents

1.0	Overview
Attachment #1	5-10's Cost Summary
Attachment #2	Labor Rate Summary
2.0	Iatan Project Preliminary Schedule
3.0	Current and Future Area Workload
4.0	Other Workload
5.0	Critical Craft Manpower Requirements

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## 1.0 Overview

The period of 2006 through 2012 will see unprecedented amounts of new industrial construction and retrofits in the Midwest and gulf coast states. In addition, the rebuilding from hurricane damage will add to the strain on skilled manpower supply. It is reported that it will take 43,000 crafts to rebuild housing alone in the New Orleans area and predictions are for a 35% shortage of skilled workers overall in the gulf coast region.

The result of this high demand for skilled workers will be higher wages and incentive pay. The non union sector has not been successful in attracting and maintaining a skilled workforce in recent years. Existing skilled manpower is estimated to be 25,000 people in the gulf coast region.

Wages have been flat for 20 years, benefits are lagging other occupations, all resulting in a 75% drop in enrollment at NCCER, the ABC training center for construction crafts. The gulf coast private sector is very concerned about stability in the non union construction area regarding costs, schedules, and supply of workers.

Only recently, a non union welder on the gulf coast is paid \$29 per hour in wages plus \$3.50 per hour in fringes, \$70 per day Per Diem, and up to \$2.00 per hour in incentives. The standard work week is 5-10's.

The oil refining work load requirements add pressure to the Pipefitter, Boilermaker, and Electrician manpower problems. In addition, the \$100 Billion dollar Tar Sands Project in Canada will preclude the use of Canadian workers on US work.

The Iatan Project will have reasonable success in attracting tradesmen due to the union's high wage and fringe packages (see attachment 2). For example, the Pipefitter wage in Kansas City is \$34.83 per hour plus \$15.00 per hour in fringes, compared to the Pipefitter union wage in Houston and Tulsa of \$23 per hour and \$10 per hour in fringes. It is significant to note that now the union fringe benefits are accrued to the workers home local. In the past the fringes stayed in the local where the work was performed.

The Kansas City Building trades enjoy a good reputation with the contractors for productive work and jobsite harmony when compared to many other parts of the country.

The International unions are interested in keeping their existing clients such as KCPL and expanding market share. Progressive activities are ongoing with the national building trades, such as the establishment of the Mechanical Trades Alliance, headed up by UA General President Bill Hite. This alliance is focusing on shared resources for the training of workers, productivity enhancements, and seamless jurisdiction between the trades. Other initiatives involve competitive agreements for use in low density union areas.

I recommend the NMAPC (National Maintenance Agreement) for this project (See paragraph 1.4). This agreement is administered by equal numbers of international union representatives, contractors, and a very competent staff. The application of the agreement is consistent among all crafts. All trades are bound to the agreement including the carpenters and teamsters even though those particular crafts have disaffiliated themselves with the AFL/CIO.

My review for information herein included inquiries of the following;

- Kansas City Building Trades

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- UA, BM, IW International Representatives
- Four National Contractors
- NACBE
- NMAPC
- UA, BM, & IW Kansas City Locals
- BM Locals in surrounding areas
- Director of Pride Inc. of St. Louis
- Burns & McDonnell Sales and Marketing information

#### 1.1 BEST PRACTICES

Approximately 30% of this projects costs will be construction labor therefore productivity enhancement is a must.

The ability to attain good productivity results requires the following practices at a minimum;

- 1). The contractor must be committed to the zero injury culture and techniques.
- 2). Detailed planning and scheduling by the contractor. This must be a serious effort. The plan must run the job. The contractor must have these resources.
- 3). Timely delivery of materials and equipment.
- 4). Minimize engineering and fabrication changes.
- 5). Substance abuse testing, including random.
- 6). Timely delivery of engineering and technical information.
- 7). The contractors must provide ample tools and equipment.
- 8). The contractor must have experienced and competent staff and supervision.
- 9). The contractor must control the labor on site. Utilize and understand the labor agreement management article to its fullest extent.
- 10). Control work jurisdiction between the crafts.
- 11). Negotiate a crew mix within the crafts using apprentices.
- 12). Avoid saturated manning and high work density.
- 13). Avoid shift work and overtime.
- 14). Promote craft ownership in the project. This begins with the safety initiative.
- 15). Minimize worker turnover. A 10% increase in turnover results in a 2.5% increase in labor costs plus productivity and safety impacts.

#### 1.2 SAFETY/WORKER COMPENSATION

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Training and orientation should be centered around the Zero Injury Techniques. (RE: Zero Employee Injury, Nelson Consulting).

The top high impact techniques are:

- Pre project / Pre task planning.
- Safety orientation and training. The quality of the training is much more effective than the quantity of training.
- Safety incentive, recognition and rewards program.
- Substance abuse program.
- Staffing for safety.
- Accident investigation.
- Worker participation and empowerment.
- A demonstrated management commitment.

Safety excellence is top driven; the owner, construction manager, and contractor executives and staff must actively support its commitment to having a zero injury work site. I also believe that the union business manager must become an active participant. I have a concern that they are not totally involved today.

Substance abuse testing on union projects has been somewhat more difficult to accomplish because the NLRB has ruled random testing of an employee must be negotiated or included in the collective bargaining agreement. I believe this could be negotiated through the NMAPC and the International Unions. Another method for accomplishing random testing would be to have an owner's drug policy for all contractors on their site.

#### 1.3 QUALITY

Welder quality is excellent for pipefitters and boilermakers, however it is recommended to test each welder prior to start of work.

The NMA agreement allows 4 hours of pay if the welder passes the test.

The contractor on the Council Bluffs Project expressed that he has never had to perform as much on site training for any one project in the company's history. In particular the skill level of the Ironworkers, Carpenters, and Certified Operators was a serious problem. Most had very little industrial experience.

#### 1.4 LABOR AGREEMENT

Attached is a copy of the NMAPC agreement and a summary of the agreement.

It is recommended that this project be done under the NMAPC agreement.

All crafts will be under the same agreement, therefore application of the articles are consistent among all.

The management clause is strong but it requires the contractor to use it effectively.

All trades are signatory including the Carpenters and Teamsters.

Consistent application of the agreement will minimize grievances and other HR issues which tend to take management time away from execution of the work.

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Likewise, it is important the contractors enforce the work rules and agreement from day one on the project.

On reimbursable work I would consider placing a portion of the contractors fee at risk and use the management of the agreement as an incentive.

There is a "book of decisions" covering interpretation resulting from past issues and grievances which were ruled upon by the policy committee.

Even though the agreement is defined as maintenance, there have been broad interpretations of the agreement to include new construction.

The agreement is a stand alone national program without local administration. The only part of a local agreement is wages, fringe benefit trusts, and referral rules.

One may conclude that voting on issues and grievances, with the makeup of the policy committee being 14 management and 14 international union representatives to be along party lines, but as a member of the committee for many years, I have never seen a close vote, which says a great deal about the NMA

The vehicle is the NMAPC program, a labor- management organization that can reduce labor costs by at least 16% over local agreements. Some of these advantages include:

- \*No strikes clause- including substantial penalties
- \*Mandated pre-job conferences
- \*Alternate dispute resolution to reduce workmen's compensation insurance costs
- \*All overtime @ 1 1/2x except for Sundays and holidays
- \*All crafts observe the same 7 unpaid holidays
- \*Flexibility in scheduling
- \*Commitment to drug free workplace
- \*Contractor determines crew size needed
- \*Welder certification cost control
- \*Only 1 foreman per craft on any shift is guaranteed 40 hours pay
- \*Provision to enable participants to respond to changing needs

The Facts: \*Over 1.6 billion man-hours worked since 1971

The Committee: The NMAPC is the construction industry's first incorporated labor management committee. It's members are 14 national maintenance contractors and 14 representatives from the participating International Unions of Building and Construction Trades Department, AFL-CIO. The office of the Impartial Secretary administers the NMAPC Program with a full time staff located in Arlington, Virginia. The Committee is a proactive entity which

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meets regularly to administer the NMAPC Program and provide a national forum to promote labor management cooperative efforts in construction.

#### 1.4 LABOR AGREEMENT (Cont.)

NMAPC, Inc.  
1501 Lee Highway, Suite 202  
Arlington, Virginia 22209-1109  
Web: [www.nmapc.org](http://www.nmapc.org)  
Email: [info@nea-nmapc.org](mailto:info@nea-nmapc.org)  
Phone: 703-841-9707  
Fax: 703-524-3364  
Founded: 1971

#### 1.5 MANPOWER

The compiling of manpower only focuses on the critical crafts of Boilermakers, Pipefitters, Ironworkers, and Electricians.

Membership rosters are as follows:

Pipefitters - 600 members  
Boilermakers - 500 Members (200 live in the Kansas City Metro area)  
Electricians - 1200 Members  
Ironworkers - 1200 Members (covers western Missouri and eastern Kansas)

##### Boilermakers:

It is quite evident that the Boilermaker union feels an overwhelming responsibility to service KCPL work.

Local 83 covers Kansas, Iowa, Nebraska, and Western Missouri. The Boilermaker work through 2007, 2008, and 2009 in the four state area will average 1100 men with estimated peaks at 1600 men. The St. Louis and Southern Illinois locals have approximately 200 men working in local 83 presently but due to their upcoming workload these locals will not be a source of workers.

Local 83, with its wage and fringe structure plus a 5-10's work week will be in a position to man the latan project. They have had up to 900 boilermaker travelers in the past on work around the Kansas City metro area.

In the event the manpower during the project becomes a critical issue, even more so than we know now, consideration should be made for paying subsistence rather than increasing overtime hours of work due to the inefficiency encountered with overtime.

Additional workload on power projects in Wisconsin, Minnesota, and Michigan are going to exceed manpower availability in those respective locals by 1000 to 1200 Boilermakers in the 2007 through 2009 period. (1400 members, 2600 required). Currently there are 500 Boilermakers working 6-10's on the Council Bluffs project.

Nationally the Boilermaker Union has 26,000 active construction members which in my view will likely be exceeded by 5000 during the 2008/2009 period.



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We must keep in mind the labor contract expires 12/31/07 and could see wage increases at \$2.00 to \$3.00 per hour.

## Pipefitters:

The Kansas City Local has Jurisdiction over the Iatan and Norborne projects. The peak loading will occur during 2009 at 800 men for the two projects when the schedules overlap. A fairly steady requirement of 200 to 250 Pipefitters will be required on other work during the same time period.

This totals approximately 1000 men required where the local availability is 600. Presently they have 150 men out of work.

Again with the high wage and fringe in local 533, plus 5-10's work schedules, additional manpower will be available from Texas, Oklahoma, Louisiana, and Arkansas. Presently the Council Bluffs project has 600 Pipefitter travelers.

The Pipefitter contract expires 5/31/08.

## Ironworkers:

Local 10 covers western Missouri and eastern Kansas and has 1200 active members with about 600 available in the Kansas City Metro area. Presently they have full employment; however, the commercial workload will decline somewhat by mid 2007.

The Ironworkers fringe package is the highest of all the trades which includes a \$5.35 per hour annuity. This is an attraction for out of town workers.

The Ironworker's skill level is reasonably good for setting heavy and high steel.

Manning of Iatan does not appear to be a problem with a 5-10's schedule.

## Electricians:

This local has approximately 1200 members and presently does not have full employment. Most members are employed on commercial work.

The IBEW has a major effort ongoing nationally in training and innovative labor contracts in the low density union areas. Ed Hill, IBEW General President, is one of the building trades most progressive leaders on issues such as hours worked for hours paid, quality, safety, and training.

Their labor contract expires on 9/2/07 and I would expect to see \$2.00 to \$3.00 per hour settlements.

## 1.6 Summary

Solely for skilled labor attraction it is recommended the Iatan project work 5-10's when the critical crafts of Boilermakers and Pipefitters are required. This is approximately mid 2007. Obviously the entire project must work the 5-10's, not just the critical crafts, to keep labor harmony.

The total cost calculation for the project to work 5-10's from the start of civil / site work to completion is \$35,524,000. If started only when critical crafts are required in mid 2007 that cost would be reduced by \$5,000,000. When considering overtime work I would never consider

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hours greater than 10 hours per day or 6 days per week. For Example, the inefficiency for 7-12's is in excess of 30% and the premium pay adds 40% to labor costs.

I would consider a worker subsistence / Per Diem before increasing overtime beyond the 5-10's schedule. 6-10's, for example, only yields 8.2 hours of work per day after applying an inefficiency factor.

Labor escalation is expected to be 8-10% per year. See Attachment 2 for contract expiration dates and existing wage and fringe packages.

The average cost rate (Wage, fringe, Insurance, and taxes) is \$53.45 per hour. A crew mix with apprentices will lower the overall rate. The contractor must request apprentices and give them meaningful work on the site. It is reasonable to expect 25% of the crew on work of this type could be apprentices.

Employees should be expected to be "work ready" when they arrive at the site. This would include safety training, site orientation, substance abuse testing, and all certification to be completed prior to signing up for employment.

A serious "Zero Injury" safety program must be in place prior to the start of work. I recommend Emmitt Nelson of Nelson Consulting in Houston, Texas for this endeavor.

A substance abuse policy with pre-employment, for cause, and random testing is a must. The pre-employment failure rate at Council Bluffs was an average of 10%. A recent power project in Northern Iowa had a 35% failure rate.

The NMAPC labor agreement is an agreement the Kansas City Building trades are familiar with and is very cost effective. It does require the contractor to manage the agreement for good results. The expectations for the project must be made clear to the labor organizations early on. This will also minimize turnover. In addition to the direct costs of turnover there is a high correlation between productivity and turnover. A turnover rate of 30% could result in a productivity factor of 1.5.

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Attachment 1  
Cost to Work 5-10's

- Basis is Burns & McDonnell Manhour Summary 3,864,327 Mhs

- Factors:

- Premium Time 20% of manhours at half time
- Inefficiency 8% of manhours at full rate

- Cost Calculations:

Premium time	3,864,327 Mhs
	<u>X 20%</u>
	772,865 Mhs
	<u>X \$22.00</u>
	\$17,000,000

Inefficiency	3,864,327 Mhs
	<u>X 8%</u>
	309,146 Mhs
	<u>X \$53.45</u>
	\$16,524,000

- Total cost for 5-10's:

Premium time	\$17,000,000
Inefficiency	<u>\$16,524,000</u>
Total	\$33,524,000

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Attachment 2  
Craft Labor Rates

Craft	% of Job	JM Wage	Through	JM Wage	Through	JM Wage	Through	JM Wage	Through	Fringes**	Contract Expiration
Insulator	1.2	29.64	9/30/07	31.64	9/30/08					18.80	9/30/08
Boilermaker	20.2	29.85	9/1/07	30.55	12/31/07					17.26	12/31/07
Carpenter / MW	10.2	31.85	4/1/07	33.70	4/1/08			35.55	3/31/09	9.66	3/31/09
Cement Finisher	.7	26.23	4/1/07	28.23	4/1/08			29.83	3/31/09	10.87	3/31/09
Electrician	11.2	31.53	9/2/07							14.31	9/2/07
Operators	10.7	32.31	3/31/07							9.98	3/31/07
Ironworkers	8.7	26.95	4/1/07	28.80	4/1/08			30.65	3/31/09	16.65	3/31/09
Laborer	10.4	23.05	3/31/07							9.76	3/31/07
Pipefitter	24.3	34.83	6/1/07	36.93	5/31/08					15.00	5/31/08
Sheetmetal	.9	35.87	6/30/07							13.41	6/30/07
Teamster	1.5	26.55	3/31/07							8.86	3/31/07
Avg.	100	30.73								13.81	

\*\* Some Fringes calculated on paid hours

Payroll taxes and Insurance:

- W/C 6.8 % @ EMR of 1
  - General Liability 5.0 %
  - FICA 7.65 %
  - FUI .8 %
  - SUI 8.8 %
- 29.05 % x Wages

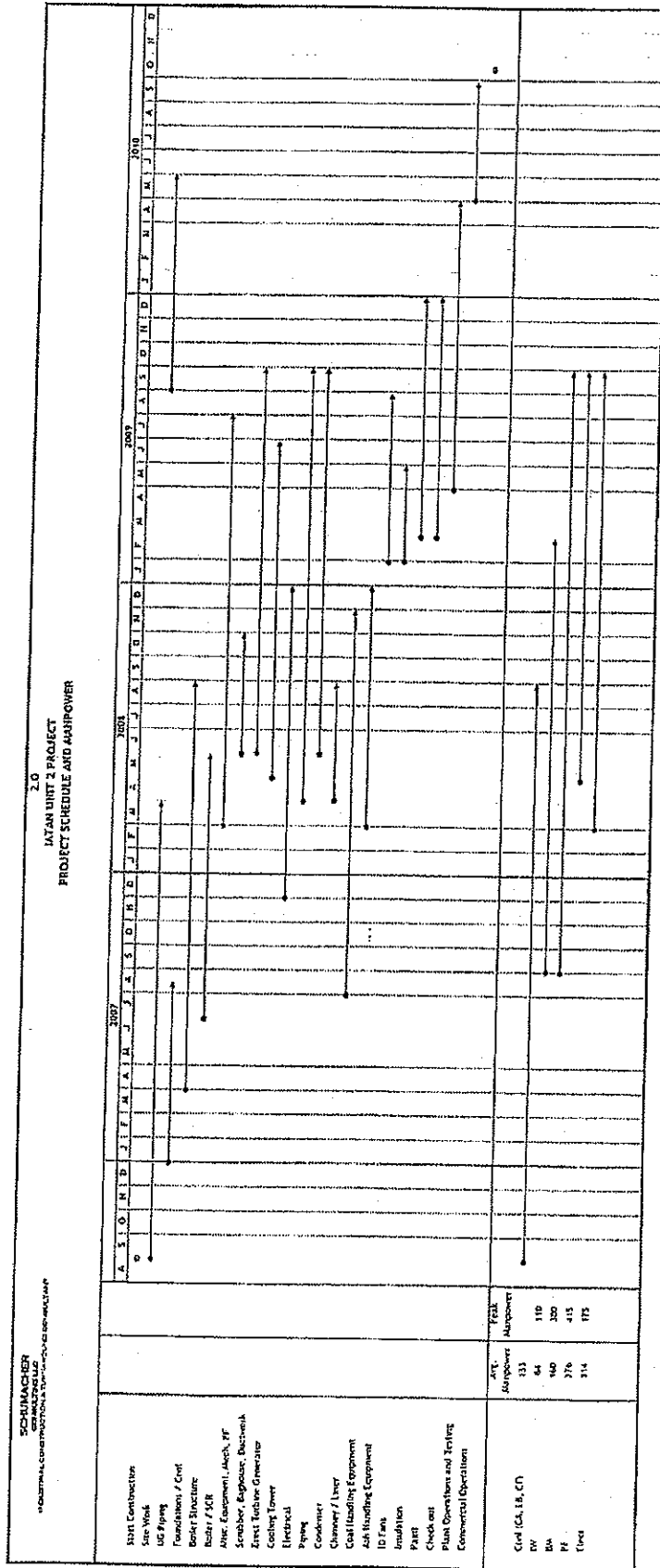
Overtime:

- Time & ½ after 8 hours / day & Saturday
- Double Time Sunday & Holidays

Example:

Boilermaker Wage	\$29.85
Fringes	\$17.26
T & I (29.05%)	\$ 8.67
Total Cost	\$55.78 Per Hour

Average Cost Rate:	SI	2T Add
Wage	\$30.73	15.37
Fringes	\$13.81	4.00
T & I	\$ 8.91	2.65
Total Cost	\$53.45	\$22.00
		\$44.00



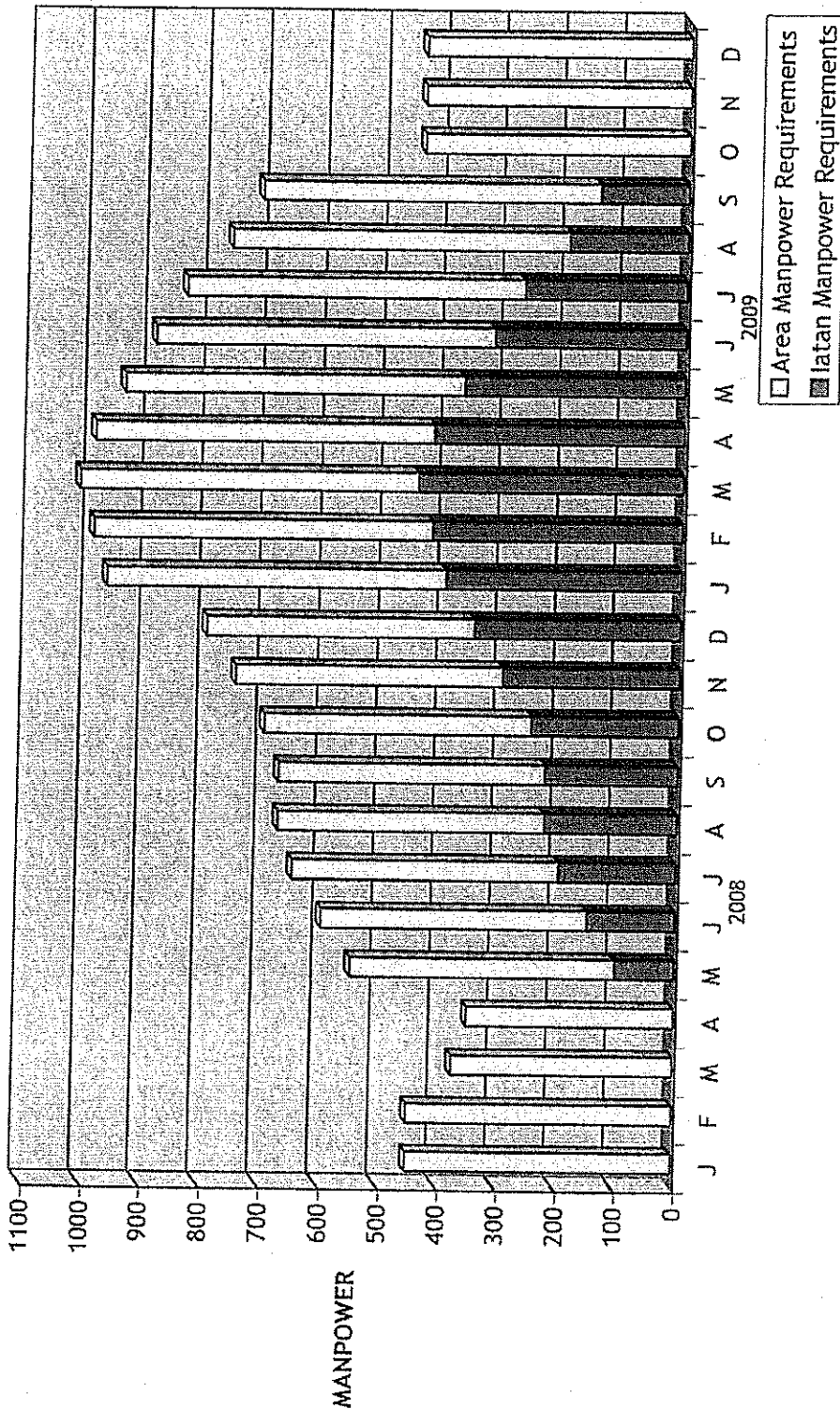




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# PIPEFITTERS L533

600 Active members available w/o travelers

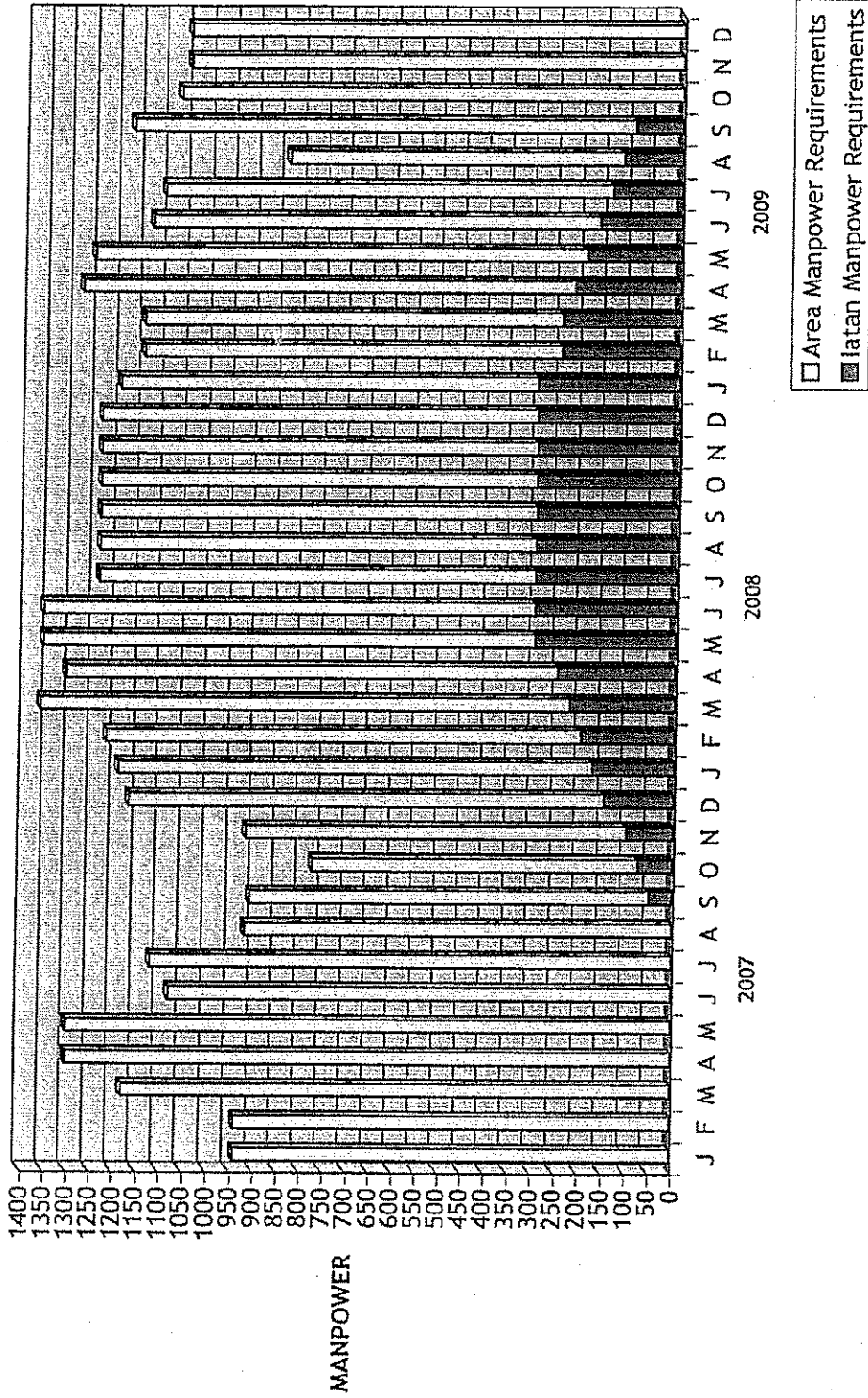




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# BOILERMAKERS L83

500 Active members available w/o travelers



PIPEFITTERS

Date	2008												2009											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Area Manpower	450	450	375	350	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	
atan Manpower	0	0	0	0	100	150	200	225	225	250	300	350	400	425	450	475	500	525	550	570	570	570	450	

