



# Plant Operations Work Management

## FY 2009 Annual Report

Published: September 2009



## Introduction

Work Management is the central point of contact for Plant Operations and the campus community. The primary responsibilities of Work Management include:

- Plant Operations Call Center (POCC)
- Preventive Maintenance (PM) Planning
- Estimate Coordination
- Project Coordination
- Shutdown Coordination
- Quality Assurance Inspection Program
- Performance Measures Reporting
- Plant Operations Web Site
- Special Projects
  - Work Codes
  - Facilities Services Building Photo Board
  - Service Guide
  - Supervisors Toolbox
  - Employee Emergency Hotline

The Plant Operations Call Center (POCC) receives requests from campus in a variety of forms – by phone, fax, email, the internet and directly through our Facilities Management System. In addition to our central responsibility of communication, Work Management is responsible for the distribution of all estimate requests. Coordination and notification of Building Equipment Shutdowns is also handled by Work Management. Our Project Coordination efforts continue to grow as customers become accustomed to this service and we continue to support coordination for a variety of projects throughout Plant Operations. The Preventive Maintenance (PM) Planning program is another major responsibility of Work Management which also continues to grow as numerous items are added to the program. Finally, our Quality Assurance Inspection program, which was initiated in recent years, supports Plant Operations effort to continually improve our services to the University of Michigan community.

In fiscal year 2009, Work Management made a few staff changes. New to Plant Operations was Kevin Fraley, who filled the position of Associate Director, Tristan Trafford and Abe Smith who filled positions as Call Center Representatives. Work Management also saw the retirement of Alan Stevens and Sandy Paterson.

**Significant Events in Work Management this past year include:**

- ✦ POCC began to utilize lean management tools 5S and Result Focus Board in their work area
- ✦ PlantOps computerized maintenance management system was upgraded to a web-based environment
- ✦ Shutdowns communication greatly enhanced utilizing open access calendar program
- ✦ Support of Facilities Maintenance restructuring effort
- ✦ Quality Assurance Group makes significant productivity improvements
- ✦ Support of Plant Operations initiatives for communication improvements and boundary clarity

As we anticipate continuous improvement throughout Plant Operations this coming year, we look forward to providing quality service to the University of Michigan community.

Kevin Fraley  
Associate Director

**FY 09 Financial Summary**

Work Management under-spent our planned budget by \$94,230. This was mostly due to staffing transitions, retirements and transfers.

<b>FY2009 Work Management Budget and Operating Results</b>			
	<b>Total</b>	<b>Final Budget</b>	<b>Variance</b>
<b>Total Revenue</b>	<b>\$48,490</b>	<b>\$42,600</b>	<b>\$5,890</b>
<b>Subtotal Compensation &amp; Benefits</b>	<b>\$1,492,978</b>	<b>\$1,587,500</b>	<b>\$94,522</b>
<b>Subtotal - Other Expenses</b>	<b>(\$122,081)</b>	<b>(\$122,373)</b>	<b>(\$292)</b>
<b>Total Expenses</b>	<b>\$1,370,897</b>	<b>\$1,465,127</b>	<b>\$94,230</b>
<b>Net Income before Transfers</b>	<b>(\$1,322,407)</b>	<b>(\$1,422,527)</b>	<b>\$100,120</b>
Net Expense Transfers (in)	(\$1,322,407)	(\$42,008)	(\$1,280,399)
<b>Total Transfers</b>	<b>(\$1,322,407)</b>	<b>(\$42,008)</b>	<b>(\$1,280,399)</b>
<b>Net Income Change After Transfers</b>	<b>0</b>	<b>(\$1,380,519)</b>	<b>\$1,380,519</b>
<b>Ending Fund Balance</b>	<b>0</b>	<b>(\$1,380,519)</b>	

**Year-End Operational Highlights**

**Plant Operations Call Center**

The Plant Operations Call Center (POCC) is staffed by a Manager, Supervisor, and 12 Call Center Representatives. It is in operation 24 hours a day, seven days a week. The POCC acts as the central point-of-contact throughout the University for emergency maintenance, repairs, and other facility and grounds issues that arise. The Call Center Representatives receive phone calls, faxes, and online work requests. They dispatch maintenance mechanics, grounds crews, emergency clean-up crews, pest management staff, and other Plant Operations staff as needed. The POCC continues a committed partnership with Housing Maintenance and Parking Maintenance to dispatch after hours emergencies for their properties as well.

In FY09 POCC initiated a “result focus board” to facilitate process issue resolutions. A process issue is stated in the problem statement and it is written on a whiteboard located in the POCC work area. A board meeting is held once a week to acknowledge the problems and assign a

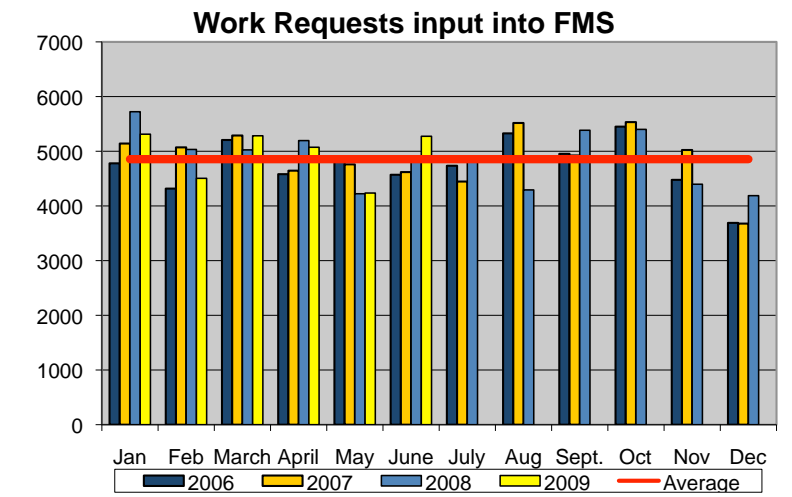
person or persons to the identifying tasks to resolve the problem, target dates for completion are agreed upon and updates are given.

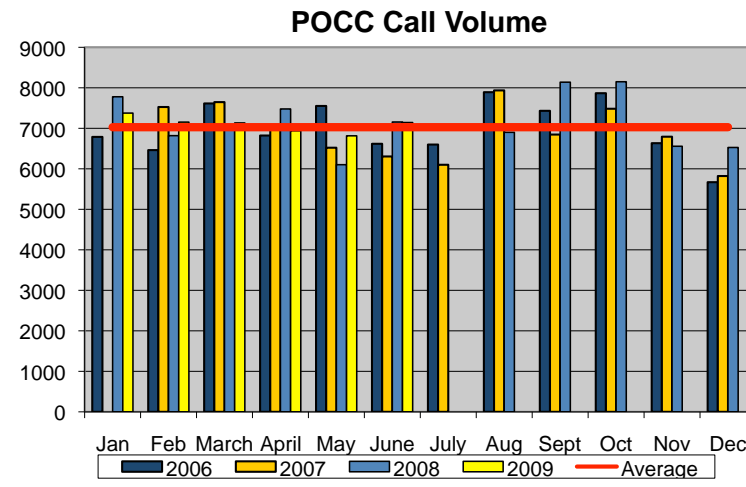
The POCC continued job shadowing with the various Plant Operations shops and we have received good feedback from the shops and the Call Center representatives. The representatives are gaining knowledge to help them in their daily jobs and in turn contributing to the effective communication with our customers (both internal and external).

POCC has been heavily involved with the implementation of the new FMAX Facility Management System which went live in February. A new front end to the system was created due to issues with quick and accurate data entry in a web based system. POCC worked with our Data Information Systems department to program this front end screen. The new FMAX system has been well-received and provides a significant advantage of accessibility by internal and external stakeholders and customization of how data can be displayed.

The POCC staff supported the communication and boundary initiatives in FY09 which led to multiple process improvements for Plant Operations. POCC and Work Management supported the Facilities Maintenance restructuring effort through data validation and analysis. Many meetings were held with the Trios data consultant. A benchmarking project was started in order to identify call center best practices and is scheduled for completion in late FY10.

Work flow volume is illustrated in the following graphs and trended consistently to historic levels.





## Preventive Maintenance

PM planners handle the planning of preventive maintenance schedules and implementation of new equipment and customers into our Facility Maintenance System (FMS). They are responsible for the implementation, updates, and streamlining of preventive maintenance procedures within Plant Operations. Duties include monitoring the accuracy of the PM database, writing Crystal Reports, PM work request generation and data input. Field duties include information gathering and updating, new equipment write-up, equipment verification, note-taking and mechanic feedback.

We generated PM work requests for the elevator shop in a different manner. [The system](#) provided one work request per elevator with varying phases for the month and state-mandated testing. The elevator shop manually changed the dates on each phase so that they could be used by the mechanics. This reduced the number of work requests and appears to have reduced timecard errors - its effectiveness will continue to be monitored.

kcpars 11/24/09 12:53 PM  
Deleted: It

The PM verification project continued from FY08 and is the result of a recommendation that the building equipment be verified after the PM program was initiated. The PM planners supported the FMAX rollout by data validation, error correction and report modification.

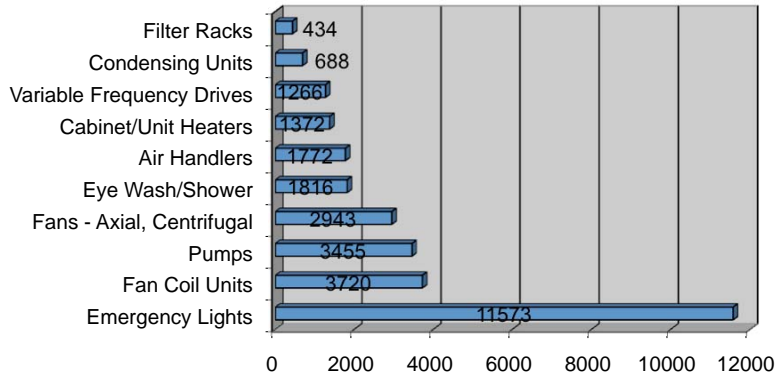
Information gathering continues to be a key aspect of the PM Planning process as there have been thousands of notes taken and entered into FMS. Hundreds of new pieces of equipment [were](#) also added through new buildings or renovations such as: Ross School of Business, Museum of Art, Newberry Hall, Student Activities Building and the Medical Science Facilities.

kcpars 11/24/09 12:54 PM  
Deleted: a

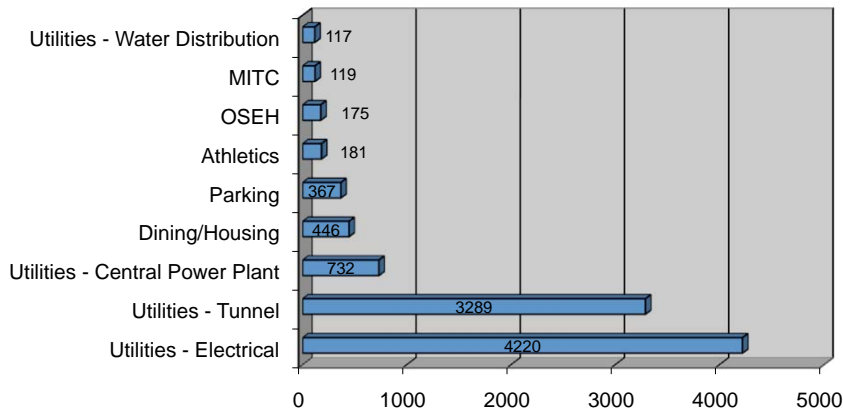
Crystal report writing services continue to be provided by PM Planning and many customizable and detailed crystal reports are created upon request from mechanics and administrative personnel. A continued focus for PM planning is the number of pieces of equipment in the

inventory and the source of funding for that equipment. The PM inventory contains 46,425 pieces of equipment in total (does not include removed or replaced equipment). The following two graphs break down the inventory even further.

This graph shows the top ten pieces of equipment in the inventory on which PM is being performed:



The next graph shows the top nine funding sources after MGF which is responsible for 33,185 pieces of equipment (does not include removed or replaced equipment):



Campus-wide PM work request completion rate is 91% with 18 shops out of 28 completing over 90% of their assigned PM work. Please review the following pages labeled “**Campus PM Completion Percentages**” to see a more detailed breakdown for Fiscal Year 2009.

- The first page details a breakdown of PM completion percentages based on each shop on campus.
- The second page is a bar chart of the data provided on the first page.



**Campus PM Completion**  
**PM Due from 7/1/2008 through 6/30/2009**

	Phases Opened		Cancelled		Non-Compliant		Not Done		Completed Complete with charges	% Complete	
E7800	359	4	5	0	0	0	0	1	18	331	93.24
M2001	285	16	0	0	0	0	6	6	12	251	93.31
M2050	242	4	3	5	4	0	2	2	12	216	90.76
M2100	4,122	51	27	44	0	0	31	31	46	3,923	96.36
M2200	2,904	14	16	0	0	0	6	6	99	2,769	95.81
M2250	4,180	2	0	0	0	0	0	0	33	4,145	99.21
M2300	3,156	183	31	0	0	0	17	22	2,903	97.65	
M2400	2,234	27	1	0	0	0	13	13	57	2,226	96.91
M2500	4,182	14	0	0	0	0	0	0	44	4,124	98.54
M2600	3,209	55	60	0	0	0	53	86	2,955	93.69	
M2800	2,169	46	0	0	0	0	1	9	2,113	99.53	
M3100	196	25	9	26	0	0	22	15	101	98.28	
M3200	1,294	45	25	5	0	0	3	83	1,133	90.71	
M3400	525	2	83	18	20	0	1	38	363	69.41	
M3500	2,709	371	113	185	0	0	17	110	1,913	81.82	
M3600	97	0	0	0	0	0	0	0	97	100.00	
M3700	12	0	0	0	0	0	0	0	12	100.00	
M3100	329	3	92	0	0	0	8	14	212	65.03	
M3300	166	0	0	0	0	0	0	10	156	93.98	
M3400	204	0	0	0	0	0	0	5	199	97.55	
M6500	5,219	1,598	26	614	2	2	3	360	2,616	72.25	
M6600	2,383	136	0	28	0	0	0	44	2,175	96.80	
M8200	137	0	4	0	0	0	10	4	119	86.86	
U1200	1,905	26	65	0	0	0	33	319	1,462	77.81	
U1201	1,746	2	36	0	0	0	47	271	1,390	79.70	
U1500	596	4	0	3	0	0	0	26	563	95.10	
U2000	45	1	2	0	0	0	6	5	31	70.45	
U6300	1,498	33	71	157	3	3	48	65	1,121	76.52	
	<b>46,193</b>	<b>2,660</b>	<b>669</b>	<b>1,085</b>	<b>25</b>	<b>328</b>	<b>1,807</b>	<b>39,619</b>	<b>91.01</b>		

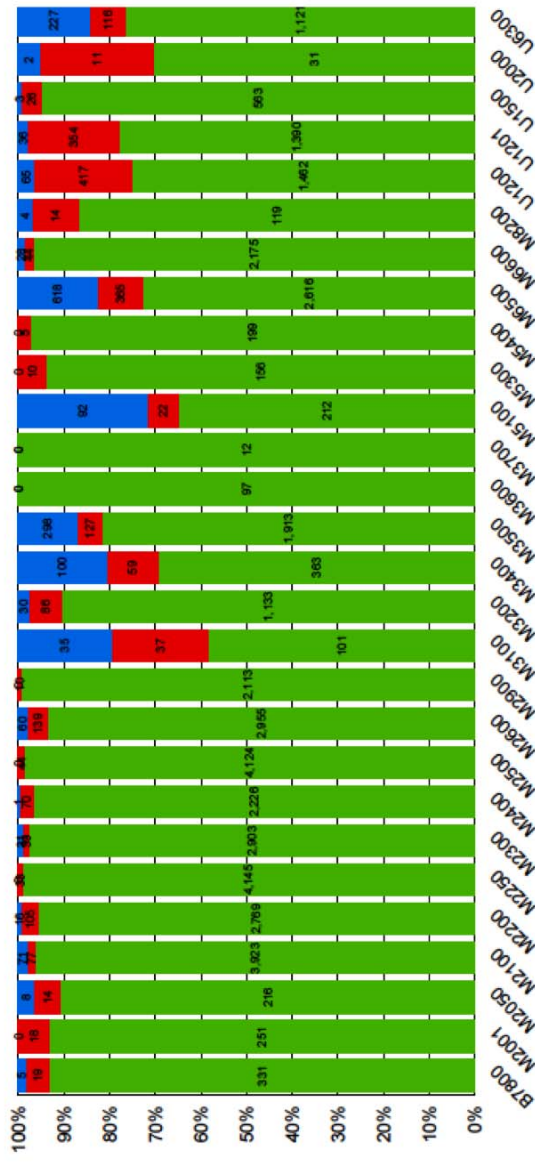
**Report Definitions:**

**Cancelled:** W.R. phase is cancelled (92) and W.R. has no labor or material charges.  
**Non-Compliant:** W.R. phase is in progress (60) and W.R. has no labor or material charges by estimated end date/ W.R. phase is non-compliant (94).  
**Not Done:** W.R. is in scheduling (52)/ W.R. is in progress (60) with labor or material charges and not completed (80) / W.R. is completed (80) without labor or material charges.  
**Completed:** W.R. phase has satisfied the definition of complete - W.R. phase has labor or material charges and W.R. phase is complete (80).





**Campus PM Completion**  
**PM Due from 7/1/2008 through 6/30/2009**



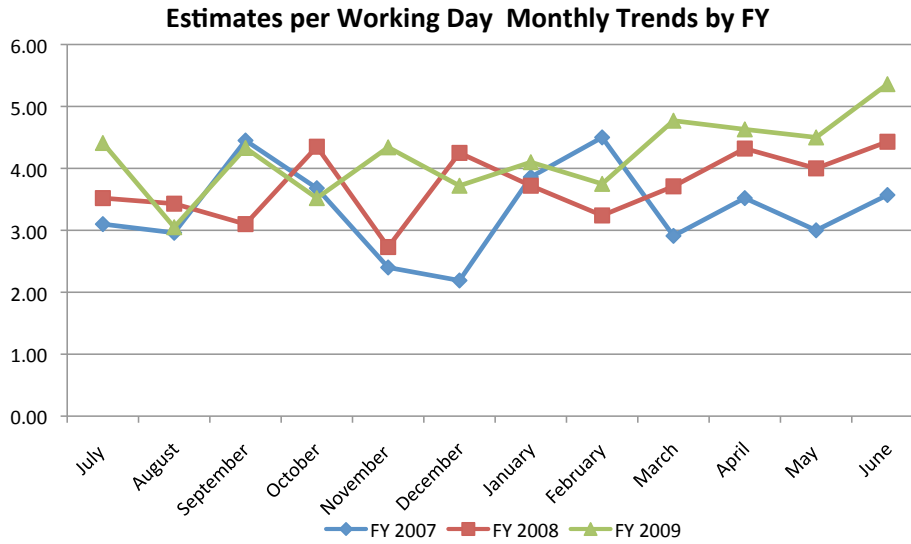
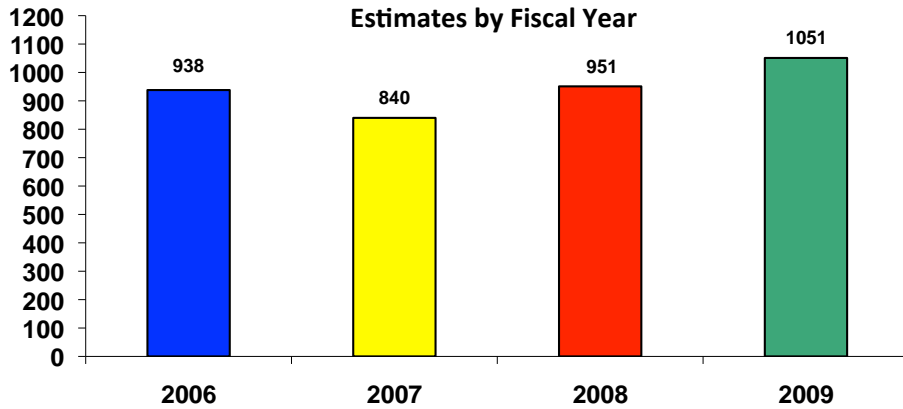
■ Non-Compliant ■ Not Done ■ Completed

**Report Definitions:**  
**Cancelled:** W.R. phase is cancelled (92) and W.R. has no labor or material charges.  
**Non-Compliant:** W.R. phase is in progress (60) and W.R. has no labor or material charges by estimated end date/ W.R. phase is non-compliant (94).  
**Not Done:** W.R. is in scheduling (52)/ W.R. is in progress (60) with labor or material charges and not completed (80) / W.R. is completed (80) without labor or material charges.  
**Completed:** W.R. phase has satisfied the definition of complete - W.R. phase has labor or material charges and W.R. phase is complete (80).

**Estimating**

Work Management estimating is responsible for the evaluation, assignment, and return of all estimate requests received from customers.

Work Management processed 1,051 estimates in FY09. Of those estimates, a total of 43.3% were approved by customers. The following graphs detail the number of estimates produced through Work Management in FY09 and the average number of new estimate requests per working day in FY09.



## **Project Coordination**

The Project Coordinator's responsibility is to work in conjunction with the shop foremen, plant engineers, trades people, suppliers, and clients to plan, schedule, coordinate, and communicate the activities of various Plant Operations maintenance, repair and replacement projects.

One of the duties of the Project Coordinator is to work with customers on campus to help resolve any issues they may have with projects that Plant Operations is involved with. One way this is achieved is to meet with customers on a regular basis to discuss and resolve issues and to maintain good communication.

The Project Coordinator assists in sending out shutdown notices when the Shutdown Coordinator is out of the office and coordinates estimates when the Estimate Coordinator is out of the office.

A primary task of the Project Coordinator is to assist in bringing projects in on-time and on-budget. This has resulted in a benefit to both the customer and the shops involved. Savings in both time and money are realized when the shops and the Project Coordinator work together and communicate with each other during the project. Any unforeseen obstacles discovered during the project are documented and communicated to the customer to gain approval for increasing the cost. This avoids any confusion at the end of the project when the cost may be more than originally quoted. Several projects have had very tight time frames for completion. Having the Project Coordinator involved from start to finish has resulted in completing projects on time.

The Project Coordinator has been involved in many different types of projects this year. Several projects have been major maintenance repair issues. The campus wide card reader project began in FY09 with the Project Coordinator providing input in the design and bid packages. The Project Coordinator continued to work with the Key Office on multiple card reader projects. Included in the projects in FY09 were the campus wide water meter upgrade, gas line identification, Lurie tower roof repair, multiple plumbing projects, water damage repair in LSI, the conversion of 110 access control panels to the 800/8000 CCure system.

## **Shutdown Coordination**

Shutdown Coordination works in conjunction with the Plant Operations foremen, project managers from Architecture, Engineering and Construction, building facility managers and others, to schedule and coordinate the shutdown of utilities to University buildings.

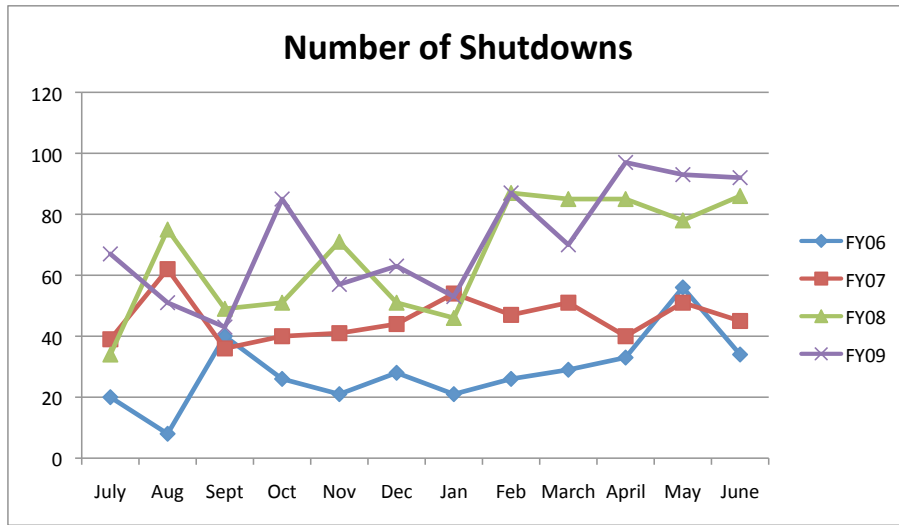
The Shutdown Management System includes all information relating to each building, including building occupants and all building equipment. Each building has equipment specific to their needs, known as critical building equipment. The shutdown information is stored by building, date, and shutdown type.

Throughout FY09, updates were done to the database for Building ID's, Department ID's, Contacts, Zone information, and Critical Areas of buildings. The notification email was completed for University or Campus wide emergencies such as power bumps and outages.

The "Heads Up" web-based feature is also provided as a service allowing customers to notify Plant Operations when special activities are going on in their areas. The Shutdown Coordinator then alerts Plant Operations shops of these activities so that they are aware when scheduling work in that area.

Shutdown communication was significantly improved this year with the activation of a shutdown calendar that allowed for greater access of shutdown information and allows for Plant Operations personnel to perform advance planning and work bundling when a shutdown event occurs.

As illustrated in the following graph the shutdown service has shown a year to year increase in the number of coordinated events.



**Quality Assurance Program**

The Quality Assurance Inspection Program was originally started as an initiative in Plant Building Services and is now being incorporated throughout Plant Operations. Approximately 200 Ann Arbor general fund and customer pay buildings are targeted for inspections. The Quality Assurance Program provides reports which show an overview of building conditions. An important element within the scope of the Quality Assurance Program, as defined by our customers, is that Work Management reports inspection results with the stakeholders. The independent and random nature of the inspection reports describe current building appearances and observed conditions based on agreed upon APPA standards. During an inspection, items found requiring urgent or immediate attention are called into the Plant Operations Call Center. The Quality Assurance program is designed to support Plant Operation’s ability to collect, organize, and distribute data. The results of these reports are being used by Plant Operations staff to make informed decisions.

In FY09 the Quality Assurance Group made significant improvements in productivity, nearly doubling the number of inspections performed. These improvements were made through streamlining administrative processes and providing a manual backup of the inspection software and hardware.

**Performance Measures Reporting**

Work Management produces monthly performance reports for various departments throughout Plant Operations. We meet with DIS on a monthly basis to create new reports and refine existing reports as needed.

Work Management also creates many custom reports for shops and for Plant Operations customers. Several of these reports are produced on a monthly basis and distributed via email, in one-on-one meetings with customers, and through UM Mail Services. In addition, we have been able to provide various reports to customers on a one time basis as they request information for a variety of reasons.

In FY09 Work Management canvassed Facilities Maintenance Foremen on the performance reports efficacy. It was found many of the reports were misunderstood or not being utilized to their full potential. These findings were combined in the restructuring effort with the intention of producing enhanced reports that are dynamic and functional.

## **Plant Operations Web Site**

The Plant Operations Web Site supports the mission, goals and objectives of the department and the University by providing quick access to information and convenience in obtaining our services. Overall responsibility for the content of the Plant Operations web site has been assigned to the Associate Director for Work Management. Working in cooperation with the Plant Operations Web Team and the Plant Operations Webmasters, the Associate Director for Work Management assures the content of items displayed on the Plant Operations web site meets or exceeds the Plant Operations Guiding Principles.

This year the Plant Operations Web Committee (POW) focused on a redesign of the Plant Operations home page. The redesign intent was to update the format to current standards and provide increased clarity on user interface. The new design is targeted to roll out in the 1<sup>st</sup> quarter of 2010.

The Plant Operations Call Center (POCC) continues to receive work requests every day both through our Web FM connection to our FMS system and through a form on our web page that sends the information to our main POCC email list. Our “Make a Comment” and “Get an Answer” features remain popular as we encourage feedback from our customers. We also continue to update our Plant News section as events and happenings occur.

The Plant Operations web site continues [to expand the pages and content accessible to staff, customers, and interested others.](#)

kcpars 11/24/09 1:05 PM

**Deleted:** to expand in the number of pages, in the information presented, and in usage by staff, customers and the world!

## **Facilities Services Building Photo Board**

With over 500 Plant Operations employees in the Facilities Service Building at 326 E. Hoover, it can be difficult to put a name with a face. Addressing this situation is a main purpose of our Photo Board, which is located in the hallway of our Facilities Services Building, near the Sheetmetal Shop. Here, the faces of Plant Operations employees can be matched with their names and departments.

We photographed many new people, took updated photos for other Plant Operations employees and made numerous changes to our board. We continue to schedule photo sessions periodically and update the photo board with changes as needed.

### **Supervisor's Toolbox**

The supervisor's toolbox web interface was reorganized and streamlined this year providing increased usability and access.