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**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, October 12, 2011 3:06 PM  
**To:** 'Joseph Holt'  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Joe,

After playing around in DEV with a combination of depr exp and depr reserve adjustments, I think we finally got it to work. I am going to test it out one more time when DEV refreshes over the weekend to be sure of exactly which procedure I think worked. I will keep you posted. Are you still planning on a fix for the future so this doesn't happen again?

Thanks,  
Angela

---

**From:** Joseph Holt [mailto:jholt@pwrplan.com]  
**Sent:** Wednesday, October 12, 2011 12:01 PM  
**To:** Crescente, Angela  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

I was forgetting something important here: For CPR Depr, individually depreciated assets, Depreciable Base = NBV, in this case, 0\$ cost – 104k reserve = -104K base, and therefore negative expense. I don't believe there should be any reserve for the PPL Purchase Accounting set of books. Therefore, if you adjust the reserve to 0\$ and rerun depreciation, this issue should go away.

Thanks!  
Joe

**Joseph Holt**  
**PowerPlan Consultants**  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 12 October, 2011 10:16 AM  
**To:** Joseph Holt  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** FW: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Joe,



Charnas

It's baaaaack! It doubled the base to get a full month of depr this time, so it's still broken.

Thanks,  
Angela

PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Calc Projects Budgets Assets Depr Tables CR Admin MyPlant Help Calc Print Win

PowerPlant Continuing Property Records

CPR Ledger Detail

CPR Depreciation

Set of Books: PPL Purchase Accounting [Update]

Asset Id: 43494639 Eng In Service Year: 12/2010 [Cancel]

Asset Description: Puic-TC Ash Pond-LGE [Prev Mo]

Company: LOUISVILLE GAS & ELECTRIC COMPANY [Next Mo]

Depr Group: LGE-131707-ARO Coal Steam (Egg)

Accounting Month:	10/2011	Depreciation Base:	(\$104,495.70)	Mid Period Method:	Straight Line
Initial Life(mo):	304	Beginning Reserve:	\$104,495.78	Mid Period Conv.:	0.5
Remaining Life:	303.5	Current Depr Expense:	(\$344.30)	Depreciation Method:	<none>
Monthly Calc Rate:	0.3295%	Input Expense Adj:	\$0.00	Begin Year Reserve:	\$0.00
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	(\$516.45)
Beginning Value:	\$0.00	Reserve Adj:	\$0.00	YTD Expense Adj:	\$0.00
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	\$0.00
Retirements:	\$0.00	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	\$0.00
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Details:	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$0.00	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adjustment
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audits
		*Ending Reserve:	\$104,151.48		

BYON

-----Original Message-----

From: Joseph Holt [mailto:jholt@pwrplan.com]

Sent: Wednesday, October 12, 2011 10:39 AM

To: Crescente, Angela

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

I can connect now if you have a minute. I am on PowerPlant Support 24.

Thank you,  
Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

-----Original Message-----

From: Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
Sent: Wednesday, 12 October, 2011 8:35 AM  
To: Joseph Holt; PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Josh Hirschel  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

OK. Thanks Joel!

-----Original Message-----

From: Joseph Holt [mailto:jholt@pwrplan.com]  
Sent: Wednesday, October 12, 2011 9:34 AM  
To: Crescente, Angela; PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Josh Hirschel  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I will be available at 10:30 Eastern and will send you an email.

Thanks!  
Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

-----Original Message-----

From: Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
Sent: Wednesday, 12 October, 2011 8:32 AM  
To: PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Jim Ogilvie; Josh Hirschel; Jim Dahlby; Joseph Holt  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I can gotoassist whenever you are ready.

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]  
Sent: Wednesday, October 12, 2011 9:30 AM

Charnas

To: Wacker, Diana; Kinder, Debra; Crescente, Angela  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING  
ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

Can you please forward the email below to jholt@pwrplan.com? I am having trouble viewing these pictures.

Also, would it be possible for you to connect me to your PC via gotoassist?

Thank you,  
Joe

----- Original Message -----

From: Crescente, Angela [Angela.Crescente@lge-ku.com]  
Sent: 10/12/2011 8:56 AM  
To: support@pwrplan.com;  
Diana.Wacker@lge-ku.com;  
Debra.Kinder@lge-ku.com  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING  
ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Joe,

You are correct, this problem does not happen with new AROs.

However, due to a situation that we had to fix in September this year with some of our AROs, we needed to settle some older ones and set them up again with a January date so that the cumulative effect would "catch up" accretion and depreciation through September. We also did this in November 2010 due to the acquisition from PPL in order to capture the November accretion. However, the difference is that the purchase accounting set of books was not completed until December 2010. This is the first time we have done a transition ARO since then and although not likely, I cannot say for sure that we will never need to set up transitions again if it is decided that we need to account for the cumulative effect.

Therefore, we still need a fix for this in the event that we have to do something with transitions again. We cannot correct what happened, because there is no purchase accounting cost or asset, only a basis from which depreciation is computed. In the three screenshots below, you can see there is no purchase accounting ending plant in service, only a depreciable base in the depr ledger.

Thanks,

Angela

[cid:image002.jpg@01CC88BC.B0401280]

[cid:image008.jpg@01CC88BC.B0401280]

[cid:image009.jpg@01CC88BC.B0401280]

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]  
Sent: Tuesday, October 11, 2011 11:26 PM  
To: Wacker, Diana; Kinder, Debra  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com; Crescente, Angela  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING  
ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Debra,

To remove the incorrect depreciation basis, you should be able to perform a standard depreciation adjustment or CPR adjustment for that basis only for the book cost.

My question on the transition piece is why are is the ARO transition module to set up new AROs. The transition module, including the cumulative effective adjustment, was built to help comply with the 2003 adoption of FAS143, but it is no longer generally used as the adoption period has passed.

I believe this problem could be avoided by entering new AROs through the standard ARO module, although this would need to be tested in DEV.

Thanks!

Joe

----- Original Message -----

From: Kinder, Debra [Debra.Kinder@lge-ku.com]

Sent: 10/7/2011 9:15 AM

To: support@pwrplan.com<mailto:support@pwrplan.com>;

Diana.Wacker@lge-ku.com<mailto:Diana.Wacker@lge-ku.com>

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; Angela.Crescente@lge-ku.com<mailto:Angela.Crescente@lge-ku.com>

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Elizabeth,

Our concerns are why this happened with the set up of the ARO transition assets, how to prevent it from happening again and how to get the basis that was created on the Purchase Accounting depreciation ledger removed so depreciation will not be calculated next month. Our DEV instance will be refreshed this weekend if that will help with the research of these issues.

Thanks,

Deb

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]<mailto:[mailto:support@pwrplan.com]>

Sent: Thursday, October 06, 2011 5:16 PM

To: Wacker, Diana

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; Kinder, Debra; Crescente, Angela

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Diana,

You will need to do a depr adjustment to remove the amount from the one set of books.

Thanks,

Elizabeth Cowart

----- Original Message -----

From: Wacker, Diana [Diana.Wacker@lge-ku.com]

Sent: 10/6/2011 4:20 PM

To: support@pwrplan.com<mailto:support@pwrplan.com>

Cc: Debra.Kinder@lge-ku.com<mailto:Debra.Kinder@lge-ku.com>; Angela.Crescente@lge-ku.com<mailto:Angela.Crescente@lge-ku.com>; jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>; jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>; jholt@pwrplan.com<mailto:jholt@pwrplan.com>

Subject: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE

All:

We have a Closing Issue. We set up Transition ARO's on both LGE and KU. Somehow these transition ARO's created a Purchase Accounting Depr Reserve Adjustment, which created entries for depreciation expense. It basically duplicated the financial set of books entry - the financial set of book entry is correct - BUT THE PURCHASE ACCOUNTING SET OF BOOKS IS NOT CORRECT.

There is a fictitious depr basis on the Purchase Accounting Set of Books, which created depreciation entries. I am sending screen shots of the Depr Ledger for the reserve activity for both sets of books.

This is in PRODUCTION only. Please let me know what other information I can provide to help you with getting this corrected.

Thanks,

Diana Wacker

502-627-4054

-----  
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Thanks,

Elizabeth Cowart

PowerPlant Support

770.937.3000

ref:00D6KJDN.5006FE4Ma:ref

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Charnas

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Clark, Ed

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**From:** Joseph Holt <jholt@pwrplan.com>  
**Sent:** Wednesday, October 12, 2011 12:01 PM  
**To:** Crescente, Angela  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

I was forgetting something important here: For CPR Depr, individually depreciated assets, Depreciable Base = NBV, in this case, 0\$ cost – 104k reserve = -104K base, and therefore negative expense. I don't believe there should be any reserve for the PPL Purchase Accounting set of books. Therefore, if you adjust the reserve to 0\$ and rerun depreciation, this issue should go away.

Thanks!  
Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

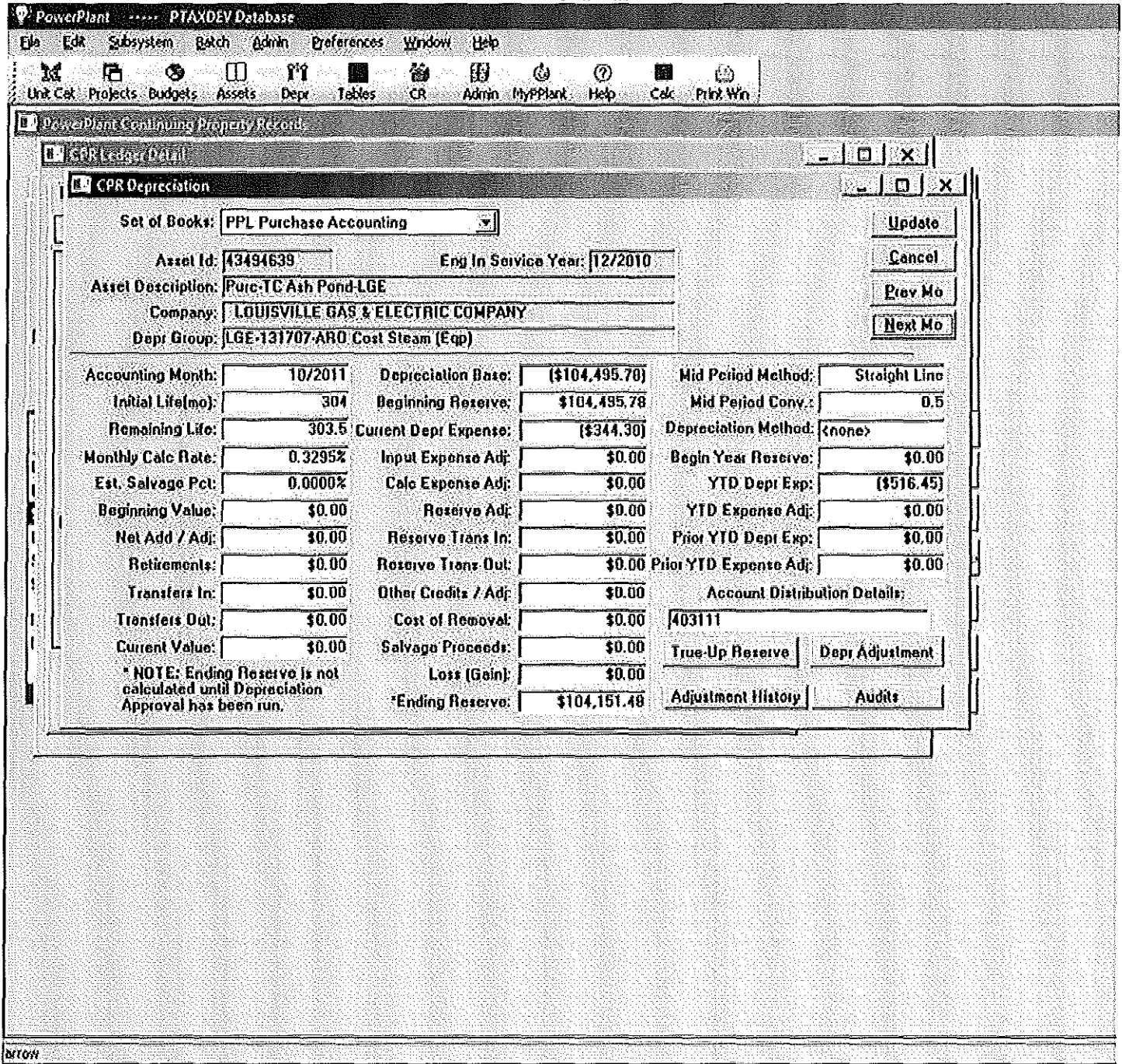
---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 12 October, 2011 10:16 AM  
**To:** Joseph Holt  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** FW: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Joe,

It's baaaaack! It doubled the base to get a full month of depr this time, so it's still broken.

Thanks,  
Angela



-----Original Message-----

From: Joseph Holt [mailto:jholt@pwrplan.com]

Sent: Wednesday, October 12, 2011 10:39 AM

To: Crescente, Angela

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

I can connect now if you have a minute. I am on PowerPlant Support 24.

Thank you,  
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Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

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From: Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
Sent: Wednesday, 12 October, 2011 8:35 AM  
To: Joseph Holt; PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Josh Hirschel  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

OK. Thanks Joel

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From: Joseph Holt [mailto:jholt@pwrplan.com]  
Sent: Wednesday, October 12, 2011 9:34 AM  
To: Crescente, Angela; PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Josh Hirschel  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I will be available at 10:30 Eastern and will send you an email.

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Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
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Atlanta, GA 30339

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Sent: Wednesday, 12 October, 2011 8:32 AM  
To: PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Jim Ogilvie; Josh Hirschel; Jim Dahlby; Joseph Holt  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I can gotoassist whenever you are ready.

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]  
Sent: Wednesday, October 12, 2011 9:30 AM  
To: Wacker, Diana; Kinder, Debra; Crescente, Angela  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

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----- Original Message -----

From: Crescente, Angela [Angela.Crescente@lge-ku.com]  
Sent: 10/12/2011 8:56 AM  
To: support@pwrplan.com;  
Diana.Wacker@lge-ku.com;  
Debra.Kinder@lge-ku.com  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

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Thanks,

Angela

[cid:image002.jpg@01CC88BC.B0401280]

[cid:image008.jpg@01CC88BC.B0401280]

[cid:image009.jpg@01CC88BC.B0401280]

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From: Plant Support [mailto:support@pwrplan.com]  
Sent: Tuesday, October 11, 2011 11:26 PM  
To: Wacker, Diana; Kinder, Debra  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com; Crescente, Angela  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING  
ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Debra,

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I believe this problem could be avoided by entering new AROs through the standard ARO module, although this would need to be tested in DEV.

Thanks!

Joe

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From: Kinder, Debra [Debra.Kinder@lge-ku.com]  
Sent: 10/7/2011 9:15 AM  
To: support@pwrplan.com<mailto:support@pwrplan.com>;  
Diana.Wacker@lge-ku.com<mailto:Diana.Wacker@lge-ku.com>

Charnas

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; Angela.Crescente@lge-ku.com<mailto:Angela.Crescente@lge-ku.com>

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Elizabeth,

Our concerns are why this happened with the set up of the ARO transition assets, how to prevent it from happening again and how to get the basis that was created on the Purchase Accounting depreciation ledger removed so depreciation will not be calculated next month. Our DEV instance will be refreshed this weekend if that will help with the research of these issues.

Thanks,

Deb

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From: Plant Support [mailto:support@pwrplan.com]<mailto:[mailto:support@pwrplan.com]>

Sent: Thursday, October 06, 2011 5:16 PM

To: Wacker, Diana

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; Kinder, Debra; Crescente, Angela

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Diana,

You will need to do a depr adjustment to remove the amount from the one set of books.

Thanks,

Elizabeth Cowart

----- Original Message -----

From: Wacker, Diana [Diana.Wacker@lge-ku.com]

Sent: 10/6/2011 4:20 PM

To: support@pwrplan.com<mailto:support@pwrplan.com>

Cc: Debra.Kinder@lge-ku.com<mailto:Debra.Kinder@lge-ku.com>; Angela.Crescente@lge-ku.com<mailto:Angela.Crescente@lge-ku.com>; jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>; jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>; jholt@pwrplan.com<mailto:jholt@pwrplan.com>

Subject: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE

All:

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This is in PRODUCTION only. Please let me know what other information I can provide to help you with getting this corrected.

Thanks,

Diana Wacker

502-627-4054

-----  
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Thanks,

Elizabeth Cowart

PowerPlant Support

770.937.3000

ref:00D6KJDN.5006FE4Ma:ref

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**Clark, Ed**

---

**From:** Joseph Holt <jholt@pwrplan.com>  
**Sent:** Wednesday, October 12, 2011 11:20 AM  
**To:** Crescente, Angela  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ref:00 [ref:00D6KJDN.5006FE4Ma:ref]

Hmm...I'll see if I can figure out where it might be getting this base and will let you know. I will be back in the office tomorrow and Friday. We'll get this worked out.

Thanks,  
Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

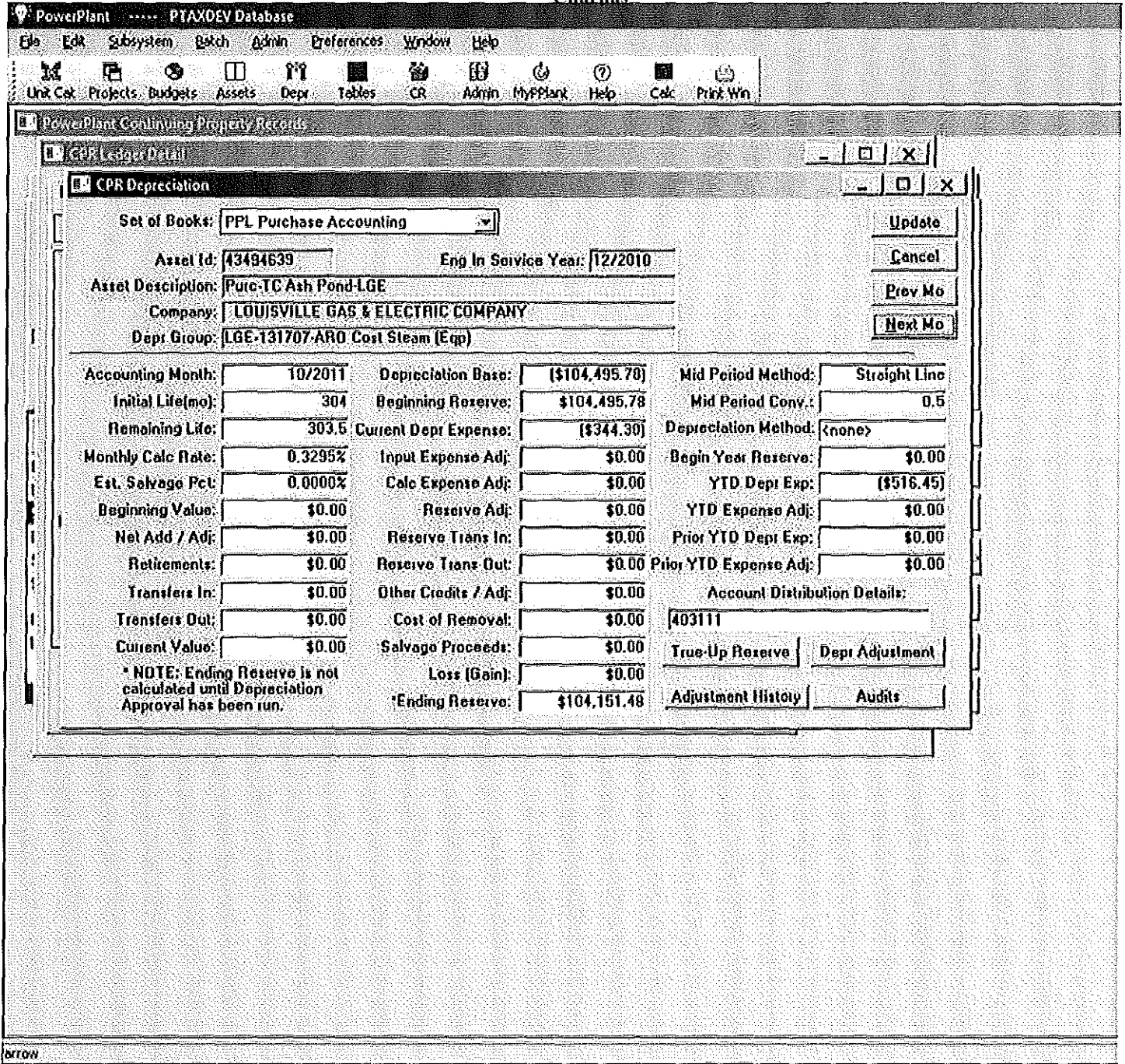
---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 12 October, 2011 10:16 AM  
**To:** Joseph Holt  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** FW: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ref:00 [ref:00D6KJDN.5006FE4Ma:ref ]

Joe,

It's baaaaack! It doubled the base to get a full month of depr this time, so it's still broken.

Thanks,  
Angela



-----Original Message-----

From: Joseph Holt [mailto:jholt@pwrplan.com]  
 Sent: Wednesday, October 12, 2011 10:39 AM  
 To: Crescente, Angela  
 Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

I can connect now if you have a minute. I am on PowerPlant Support 24.

Thank you,  
 Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

-----Original Message-----

From: Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
Sent: Wednesday, 12 October, 2011 8:35 AM  
To: Joseph Holt; PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Josh Hirschel  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

OK. Thanks Joe!

-----Original Message-----

From: Joseph Holt [mailto:jholt@pwrplan.com]  
Sent: Wednesday, October 12, 2011 9:34 AM  
To: Crescente, Angela; PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Josh Hirschel  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I will be available at 10:30 Eastern and will send you an email.

Thanks!  
Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

-----Original Message-----

From: Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
Sent: Wednesday, 12 October, 2011 8:32 AM  
To: PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Jim Ogilvie; Josh Hirschel; Jim Dahlby; Joseph Holt  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I can gotoassist whenever you are ready.

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]  
Sent: Wednesday, October 12, 2011 9:30 AM  
To: Wacker, Diana; Kinder, Debra; Crescente, Angela  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

Can you please forward the email below to jholt@pwrplan.com? I am having trouble viewing these pictures.

Also, would it be possible for you to connect me to your PC via gotoassist?

Thank you,  
Joe

----- Original Message -----

From: Crescente, Angela [Angela.Crescente@lge-ku.com]  
Sent: 10/12/2011 8:56 AM  
To: support@pwrplan.com;  
Diana.Wacker@lge-ku.com;  
Debra.Kinder@lge-ku.com  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Joe,

You are correct, this problem does not happen with new AROs.

However, due to a situation that we had to fix in September this year with some of our AROs, we needed to settle some older ones and set them up again with a January date so that the cumulative effect would "catch up" accretion and depreciation through September. We also did this in November 2010 due to the acquisition from PPL in order to capture the November accretion. However, the difference is that the purchase accounting set of books was not completed until December 2010. This is the first time we have done a transition ARO since then and although not likely, I cannot say for sure that we will never need to set up transitions again if it is decided that we need to account for the cumulative effect.

Therefore, we still need a fix for this in the event that we have to do something with transitions again. We cannot correct what happened, because there is no purchase accounting cost or asset, only a basis from which depreciation is computed. In the three screenshots below, you can see there is no purchase accounting ending plant in service, only a depreciable base in the depr ledger.

Thanks,

Angela

[cid:image002.jpg@01CC88BC.B0401280]

[cid:image008.jpg@01CC88BC.B0401280]

[cid:image009.jpg@01CC88BC.B0401280]

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]  
Sent: Tuesday, October 11, 2011 11:26 PM  
To: Wacker, Diana; Kinder, Debra  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com; Crescente, Angela  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING  
ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Debra,

To remove the incorrect depreciation basis, you should be able to perform a standard depreciation adjustment or CPR adjustment for that basis only for the book cost.

My question on the transition piece is why are is the ARO transition module to set up new AROs. The transition module, including the cumulative effective adjustment, was built to help comply with the 2003 adoption of FAS143, but it is no longer generally used as the adoption period has passed.

I believe this problem could be avoided by entering new AROs through the standard ARO module, although this would need to be tested in DEV.

Thanks!

Joe

----- Original Message -----

From: Kinder, Debra [Debra.Kinder@lge-ku.com]  
Sent: 10/7/2011 9:15 AM  
To: support@pwrplan.com<mailto:support@pwrplan.com>;  
Diana.Wacker@lge-ku.com<mailto:Diana.Wacker@lge-ku.com>

Charnas

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; Angela.Crescente@lge-  
ku.com<mailto:Angela.Crescente@lge-ku.com>

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING  
ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Elizabeth,

Our concerns are why this happened with the set up of the ARO transition assets, how to prevent it from happening again and how to get the basis that was created on the Purchase Accounting depreciation ledger removed so depreciation will not be calculated next month. Our DEV instance will be refreshed this weekend if that will help with the research of these issues.

Thanks,

Deb

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]<mailto:[mailto:support@pwrplan.com]>

Sent: Thursday, October 06, 2011 5:16 PM

To: Wacker, Diana

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; Kinder, Debra; Crescente, Angela

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING  
ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Diana,

You will need to do a depr adjustment to remove the amount from the one set of books.

Thanks,

Elizabeth Cowart

----- Original Message -----

From: Wacker, Diana [Diana.Wacker@lge-ku.com]

Sent: 10/6/2011 4:20 PM

To: support@pwrplan.com<mailto:support@pwrplan.com>

Cc: Debra.Kinder@lge-ku.com<mailto:Debra.Kinder@lge-ku.com>; Angela.Crescente@lge-ku.com<mailto:Angela.Crescente@lge-ku.com>;  
jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>

Subject: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE

All:

We have a Closing Issue. We set up Transition ARO's on both LGE and KU. Somehow these transition ARO's created a Purchase Accounting Depr Reserve Adjustment, which created entries for depreciation expense. It basically duplicated the financial set of books entry - the financial set of book entry is correct - BUT THE PURCHASE ACCOUNTING SET OF BOOKS IS NOT CORRECT.

There is a fictitious depr basis on the Purchase Accounting Set of Books, which created depreciation entries. I am sending screen shots of the Depr Ledger for the reserve activity for both sets of books.

This is in PRODUCTION only. Please let me know what other information I can provide to help you with getting this corrected.

Thanks,

Diana Wacker

502-627-4054



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Thanks,

Elizabeth Cowart

PowerPlant Support

770.937.3000

ref:00D6KJDN.5006FE4Ma:ref

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**Clark, Ed**

---

**From:** Joseph Holt <jholt@pwrplan.com>  
**Sent:** Wednesday, October 12, 2011 10:39 AM  
**To:** Crescente, Angela  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Angela,

I can connect now if you have a minute. I am on PowerPlant Support 24.

Thank you,  
Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

-----Original Message-----

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 12 October, 2011 8:35 AM  
**To:** Joseph Holt; PowerPlant Support; Wacker, Diana; Kinder, Debra  
**Cc:** Josh Hirschel  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

OK. Thanks Joe!

-----Original Message-----

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**To:** Crescente, Angela; PowerPlant Support; Wacker, Diana; Kinder, Debra  
**Cc:** Josh Hirschel  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I will be available at 10:30 Eastern and will send you an email.

Thanks!  
Joe

Joseph Holt  
PowerPlan Consultants  
(404) 734 - 4155  
200 Galleria Parkway  
Suite 1300  
Atlanta, GA 30339

-----Original Message-----

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Sent: Wednesday, 12 October, 2011 8:32 AM  
To: PowerPlant Support; Wacker, Diana; Kinder, Debra  
Cc: Jim Ogilvie; Josh Hirschel; Jim Dahlby; Joseph Holt  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

I can gotoassist whenever you are ready.

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]  
Sent: Wednesday, October 12, 2011 9:30 AM  
To: Wacker, Diana; Kinder, Debra; Crescente, Angela  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

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Also, would it be possible for you to connect me to your PC via gotoassist?

Thank you,  
Joe

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To: support@pwrplan.com;  
Diana.Wacker@lge-ku.com;  
Debra.Kinder@lge-ku.com  
Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com  
Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Joe,

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Thanks,

Angela

[cid:image002.jpg@01CC88BC.B0401280]

[cid:image008.jpg@01CC88BC.B0401280]

[cid:image009.jpg@01CC88BC.B0401280]

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Sent: Tuesday, October 11, 2011 11:26 PM

To: Wacker, Diana; Kinder, Debra

Cc: jogilvie@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com; Crescente, Angela

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00 [ ref:00D6KJDN.5006FE4Ma:ref ]

Debra,

To remove the incorrect depreciation basis, you should be able to perform a standard depreciation adjustment or CPR adjustment for that basis only for the book cost.

My question on the transition piece is why are is the ARO transition module to set up new AROs. The transition module, including the cumulative effective adjustment, was built to help comply with the 2003 adoption of FAS143, but it is no longer generally used as the adoption period has passed.

I believe this problem could be avoided by entering new AROs through the standard ARO module, although this would need to be tested in DEV.

Thanks!

Joe

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From: Kinder, Debra [Debra.Kinder@lge-ku.com]

Sent: 10/7/2011 9:15 AM

To: support@pwrplan.com<mailto:support@pwrplan.com>;

Diana.Wacker@lge-ku.com<mailto:Diana.Wacker@lge-ku.com>

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>; jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>; jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>;  
Angela.Crescente@lge-ku.com<mailto:Angela.Crescente@lge-ku.com>

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Elizabeth,

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Thanks,

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Sent: Thursday, October 06, 2011 5:16 PM

To: Wacker, Diana

Cc: jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>; jholt@pwrplan.com<mailto:jholt@pwrplan.com>;  
jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>; jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>;  
Kinder, Debra; Crescente, Angela

Subject: RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [  
ref:00D6KJDN.5006FE4Ma:ref ]

Diana,

You will need to do a depr adjustment to remove the amount from the one set of books.

Thanks,

Elizabeth Cowart

----- Original Message -----

From: Wacker, Diana [Diana.Wacker@lge-ku.com]

Sent: 10/6/2011 4:20 PM

To: support@pwrplan.com<mailto:support@pwrplan.com>

Cc: Debra.Kinder@lge-ku.com<mailto:Debra.Kinder@lge-ku.com>; Angela.Crescente@lge-  
ku.com<mailto:Angela.Crescente@lge-ku.com>; jogilvie@pwrplan.com<mailto:jogilvie@pwrplan.com>;  
jdahlby@pwrplan.com<mailto:jdahlby@pwrplan.com>; jhirschel@pwrplan.com<mailto:jhirschel@pwrplan.com>;  
jholt@pwrplan.com<mailto:jholt@pwrplan.com>

Subject: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE

All:

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There is a fictitious depr basis on the Purchase Accounting Set of Books, which created depreciation entries. I am sending screen shots of the Depr Ledger for the reserve activity for both sets of books.

This is in PRODUCTION only. Please let me know what other information I can provide to help you with getting this corrected.

Thanks,

Diana Wacker

502-627-4054

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your/any storage medium.

Thanks,

Elizabeth Cowart

PowerPlant Support

770.937.3000

ref:00D6KJDN.5006FE4Ma:ref

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**Clark, Ed**

---

**From:** Sechler, Joel R <JRSechler@pplweb.com>  
**Sent:** Tuesday, October 11, 2011 4:08 PM  
**To:** Crescente, Angela  
**Subject:** LGE-KU ARO Note for Q3

**Importance:** High

Hi Angela,

I'm working on the consolidated ARO Note for Q3 for PPL Corp. I know the LGE reporting package isn't due until next week, but could I get a copy of the amounts for your ARO note when they are finished and reviewed? It will be a big help in meeting the deadline. Let me know if you have any questions or concerns.

Thank you,

*Joel Sechler*  
Financial Accounting - Asset Management  
610-774-3948  
[JRSechler@pplweb.com](mailto:JRSechler@pplweb.com), GENTW10

The information contained in this message is intended only for the personal and confidential use of the recipient(s) named above. If the reader of this message is not the intended recipient or an agent responsible for delivering it to the intended recipient, you are hereby notified that you have received this document in error and that any review, dissemination, distribution, or copying of this message is strictly prohibited. If you have received this communication in error, please notify us immediately, and delete the original message.

Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Tuesday, October 11, 2011 3:49 PM  
**To:** Wiseman, Sara; Erskine, Greg  
**Subject:** FW: ARO Footnote - 9/30/11

The information looks OK to me.

Thanks,  
Angela

---

**From:** Erskine, Greg  
**Sent:** Tuesday, October 11, 2011 3:45 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** FW: ARO Footnote - 9/30/11

Sara and Angela:

I've updated the ARO footnote in the 10-Q to reflect the information in the file attached to Angela's e-mail below. The Word document I've attached to this e-mail contains the current version of the ARO footnote from the 10-Q. This version of the footnote should reflect the information Angela gave me.

Can you take a look at the attached version of the ARO footnote and let me know if the LKE/LG&E/KU information looks OK, please?

The footnote also contains ARO information for other PPL companies. You can ignore that information if you like.

Thanks,

Greg



Doc1.docx

---

**From:** Crescente, Angela  
**Sent:** Tuesday, October 11, 2011 3:26 PM  
**To:** Erskine, Greg  
**Cc:** Wiseman, Sara  
**Subject:** FW: ARO Footnote - 9/30/11

Greg:

Please see the attached ARO Footnote.



ARO Footnote 3rd  
Quarter.xlsx

Thanks,  
Angela

---

**From:** Erskine, Greg  
**Sent:** Friday, October 07, 2011 2:51 PM  
**To:** Crescente, Angela  
**Subject:** FW: ARO Footnote - 9/30/11

Angela:

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LKE	113
LG&E	54
KU	59

Please make sure that the 9/30/11 noncurrent balances that you put into the attached file equal the above balances.

If you have any questions, let me know.

Thanks,

Greg

---

**From:** Erskine, Greg  
**Sent:** Friday, September 30, 2011 10:38 AM  
**To:** Crescente, Angela  
**Subject:** ARO Footnote - 9/30/11

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The file calls for a rollforward of the ARO liabilities for LKE, LG&E and KU for the nine months ended 6/30/11 (in millions). It also calls for a split of the 9/30/11 ARO liability balances between current and noncurrent for LKE, LG&E and KU (also in millions).

Charnas

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I included the split between current and noncurrent we reported at 12/31/10 in the attached file for your reference.

Thanks,

Greg



Book7.xlsx

**16. Asset Retirement Obligations**

*(PPL, LKE, LG&E and KU)*

Accretion expense recorded by LG&E and KU is offset with a regulatory asset, such that there is no income statement impact.

*(PPL, PPL Energy Supply, LKE, LG&E and KU)*

The changes in the carrying amounts of AROs were as follows.

	PPL				
	PPL	Energy Supply	LKE	LG&E	KU
ARO at December 31, 2010	\$ 448	\$ 345	\$ 103	\$ 49	\$ 54
Accretion expense	16	12	4	2	2
Obligations assumed in acquisition of WPD					
Midlands (a)	43				
Derecognition (b)		(5)			
Changes in estimated cash flow or settlement date	(3)	(3)	7	4	3
Effect of foreign currency exchange rates	1				
Obligations settled	(6)	(6)			
ARO at September 30, 2011	<u>\$ 499</u>	<u>\$ 343</u>	<u>\$ 114</u>	<u>\$ 55</u>	<u>\$ 59</u>

- (a) Obligations required under U.K. law related to treated wood poles, gas-filled switchgear and fluid-filled cables. See Note 8 for additional information on the acquisition.
- (b) Represents AROs derecognized as a result of PPL Energy Supply's distribution of its membership interest in PPL Global to PPL Energy Supply's parent, PPL Energy Funding. See Note ##ADD for additional information on the distribution.

The classification of AROs on the Balance Sheet was as follows.

	September 30, 2011				
	PPL	PPL Energy Supply	LKE	LG&E	KU
Current portion (a)	\$ 8	\$ 7	\$ 1	\$ 1	
Long-term portion (b)	491	336	113	54	59
Total	<u>\$ 499</u>	<u>\$ 343</u>	<u>\$ 114</u>	<u>\$ 55</u>	<u>\$ 59</u>

	December 31, 2010				
	PPL	PPL Energy Supply	LKE	LG&E	KU
Current portion (a)	\$ 13	\$ 13			
Long-term portion (b)	435	332	103	49	54
Total	<u>\$ 448</u>	<u>\$ 345</u>	<u>\$ 103</u>	<u>\$ 49</u>	<u>\$ 54</u>

- (a) Included in "Other current liabilities."
- (b) Included in "Asset retirement obligations."

*(PPL and PPL Energy Supply)*

The most significant ARO recorded by PPL and PPL Energy Supply relates to the decommissioning of the Susquehanna nuclear plant. The accrued nuclear decommissioning obligation was \$281 million and \$270 million at September 30, 2011 and December 31, 2010, and is included in "Asset retirement obligations" on the Balance Sheets.

Assets in the NDT funds are legally restricted for purposes of settling PPL's and PPL Energy Supply's ARO related to the decommissioning of the Susquehanna station. The aggregate fair value of these assets was \$648 million and \$618 million at September 30, 2011 and December 31, 2010, and is included in "Nuclear plant decommissioning trust funds" on the Balance Sheets. See Notes ##FVMCC and ##AFS for additional information on these assets.

LKE CONSOLIDATED  
Asset Retirement Obligations  
9ME 09/30/11  
09/30/11 Reporting

10/11/11  
2:53 PM

	LKE	LG&E	KU
12/31/10 balance	103	49	54
Accretion expense	4	2	2
Obligations assumed in acquisition of LKE	???	???	???
Obligations assumed in acquisition of CN	???	???	???
ARO derecognized	???	???	???
New obligations incurred	???	???	???
Changes in estimated cash flow or settlement date	7	4	3
Effect of foreign currency exchange rates	???	???	???
Obligations settled	???	???	???
09/30/11 balance	<u>114</u>	<u>55</u>	<u>59</u>
Balance-sheet classification at 09/30/11:			
Current	1	1	???
Noncurrent	<u>113</u>	<u>54</u>	<u>59</u>
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Balance-sheet classification at 12/31/10:			
Current			
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LKE CONSOLIDATED  
Asset Retirement Obligations  
9ME 09/30/11  
09/30/11 Reporting

08/23/11  
4:17 PM

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Current			
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Totals	<u>103</u>	<u>49</u>	<u>54</u>



Clark, Ed

---

**From:** Erskine, Greg  
**Sent:** Tuesday, October 11, 2011 3:45 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** FW: ARO Footnote - 9/30/11

Sara and Angela:

I've updated the ARO footnote in the 10-Q to reflect the information in the file attached to Angela's e-mail below. The Word document I've attached to this e-mail contains the current version of the ARO footnote from the 10-Q. This version of the footnote should reflect the information Angela gave me.

Can you take a look at the attached version of the ARO footnote and let me know if the LKE/LG&E/KU information looks OK, please?

The footnote also contains ARO information for other PPL companies. You can ignore that information if you like.

Thanks,

Greg



Doc1.docx

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**From:** Crescente, Angela  
**Sent:** Tuesday, October 11, 2011 3:26 PM  
**To:** Erskine, Greg  
**Cc:** Wiseman, Sara  
**Subject:** FW: ARO Footnote - 9/30/11

Greg:

Please see the attached ARO Footnote.



ARO Footnote 3rd  
Quarter.xlsx

Thanks,  
Angela

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Book7.xlsx

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Asset Retirement Obligations  
9ME 09/30/11  
09/30/11 Reporting

10/11/11  
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**Clark, Ed**

---

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**Sent:** Tuesday, October 11, 2011 3:27 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Footnote - 9/30/11

Thanks, Angela.

Greg

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**To:** Erskine, Greg  
**Cc:** Wiseman, Sara  
**Subject:** FW: ARO Footnote - 9/30/11

Greg:

Please see the attached ARO Footnote.

<< File: ARO Footnote 3rd Quarter.xlsx >>

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<< File: Book7.xlsx >>



**Clark, Ed**

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ARO Footnote 3rd  
Quarter.xlsx

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Angela:

I need to get information from you to complete the LKE, LG&E and KU sections of the ARO footnote that will appear in the 9/30/11 PPL Form 10-Q. I've attached a file that shows the information I need. Can you replace the question marks in the file with amounts and return the file to me by Tuesday, October 11, please?

The file calls for a rollforward of the ARO liabilities for LKE, LG&E and KU for the nine months ended 6/30/11 (in millions). It also calls for a split of the 9/30/11 ARO liability balances between current and noncurrent for LKE, LG&E and KU (also in millions).

The 9/30/11 noncurrent ARO liability balances (in millions) that you put into the attached file need to agree with the 9/30/11 noncurrent ARO liability balances that will appear in the 9/30/11 balance sheets for LKE, LG&E and KU (in millions). I don't yet know the noncurrent ARO liability balances that will appear in the 9/30/11 balance sheets, but I should know them on or near Monday, October 10. I will e-mail the balances to you when I know them. Please make sure that the 9/30/11 noncurrent balances that you put into the attached file equal the balances that I e-mail to you.

Charnas

Please do not change the beginning balances in the attached file. Also, please do not change any of the formulas I've put into the file. If you feel that you need to change the beginning balances or a formula, please contact me before you do anything.

Please do not change the descriptions that appear in column A in the file and please do not add any new rows. PPL came up with the descriptions, and we can't change them.

Some of the formulas in the attached file return #VALUE!. After you replace the question marks with the correct 9/30/11 amounts, the #VALUE!s should go away.

I included the split between current and noncurrent we reported at 12/31/10 in the attached file for your reference.

Thanks,

Greg



Book7.xlsx

LKE CONSOLIDATED  
Asset Retirement Obligations  
9ME 09/30/11  
09/30/11 Reporting

08/23/11  
4:17 PM

	LKE	LG&E	KU
12/31/10 balance	103	49	54
Accretion expense	???	???	???
Obligations assumed in acquisition of LKE	???	???	???
Obligations assumed in acquisition of CN	???	???	???
ARO derecognized	???	???	???
New obligations incurred	???	???	???
Changes in estimated cash flow or settlement date	???	???	???
Effect of foreign currency exchange rates	???	???	???
Obligations settled	???	???	???
09/30/11 balance	<u>103</u>	<u>49</u>	<u>54</u>
Balance-sheet classification at 09/30/11:			
Current	???	???	???
Noncurrent	???	???	???
Totals	<u>#VALUE!</u>	<u>#VALUE!</u>	<u>#VALUE!</u>
Balance-sheet classification at 12/31/10:			
Current			
Noncurrent	<u>103</u>	<u>49</u>	<u>54</u>
Totals	<u>103</u>	<u>49</u>	<u>54</u>

**Clark, Ed**

---

**From:** Christopher.Holland@ey.com  
**Sent:** Friday, October 07, 2011 10:22 AM  
**To:** Crescente, Angela  
**Subject:** ARO Settlement Testing  
**Attachments:** List of ARO settlements for 2011 - E&Y request.xlsx

Angela,

As an engagement team, we have decided to test the ARO controls in two different ways. The first way, we have the support we need and can independently test. The second way will be a sample from the known ARO settlements in the year. I have selected five settlements (see attached for selections highlighted in yellow). For these, we would like to see the screen shot showing that the payments are set up in the right account but since the control also references the original AIP and the process of establishing the ARO, we are also going to want to see the original AIP for the 5 selections. Let me know if you have any difficulty gathering this support.

Thanks,  
Chris



**Christopher J. Holland | Assurance**

Ernst & Young LLP

400 West Market St Suite 2400, Louisville, KY 40202, United States of America

Office: (502) 585-1400 | [Christopher.Holland@ey.com](mailto:Christopher.Holland@ey.com)

Website: [www.ey.com](http://www.ey.com)

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Project	Task	ARO
112767	CP ARO2010	MC Landfill
120578	CP RETIRE MAIN	GAS MAINS AND SERVICE ABANDONMENTS
122452	CP ASBESTOS	PRESTON CITY GATE
123187	CP AROTY3ASB2008	TY3 ASBESTOS
124001	CP ASBESTOS	GR3 ASBESTOS
124260	CP ASBESTOS	BR1 ASBESTOS
124380	CP ARO09-4AH-R	CR4 ASBESTOS
124380	CP ARO09-5BL-R	CR5 ASBESTOS
124380	CP ARO09-6BL-R	CR6 ASBESTOS
124798	CP ASBESTOS	MAGNOLIA 235120
124798	CP ASBESTOS	MAGNOLIA 235300
124798	CP ASBESTOS	MAGNOLIA 235600
124802	CP ASBESTOS	MULDRAUGH 235120
124802	CP ASBESTOS	MULDRAUGH 235300
124802	CP ASBESTOS	MULDRAUGH 235600
124831	CP PLUG WELL-CTR	Center GSF UGS (Wells)
124831	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)
124831	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)
124842	CP ASBESTOS	PRESTON CITY GATE
126057	CP ASBESTOS	BR2 ASBESTOS
126160	CP ASBESTOS	TY3 ASBESTOS
126421	CP PLUG WELL-CTR	Center GSF UGS (Wells)
126421	CP PLUG WELL-DRI	Doe Run GSF UGS (Wells)
126421	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)
126421	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)
126421	CP PLUG WELL-MUL	Muldraugh GSF UGS (Wells)
127259	CP ASBESTOS	BR1 ASBESTOS
127280	CP ARO ASBESTOS	MILL CREEK 2 ASB
127297	CP ASBESTOS	BR2 ASBESTOS
130720	CP ASBESTOS	MILL CREEK 1 ASB
AROMC0241	CP 1755793	MC Landfill
LSMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS
PMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS

**Clark, Ed**

---

**From:** Kinder, Debra  
**Sent:** Friday, October 07, 2011 9:14 AM  
**To:** Plant Support; Wacker, Diana  
**Cc:** jogilvie@pwrplan.com; jholt@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com; Crescente, Angela  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Elizabeth,

Our concerns are why this happened with the set up of the ARO transition assets, how to prevent it from happening again and how to get the basis that was created on the Purchase Accounting depreciation ledger removed so depreciation will not be calculated next month. Our DEV instance will be refreshed this weekend if that will help with the research of these issues.

Thanks,  
Deb

-----Original Message-----

**From:** Plant Support [<mailto:support@pwrplan.com>]  
**Sent:** Thursday, October 06, 2011 5:16 PM  
**To:** Wacker, Diana  
**Cc:** [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com); [jholt@pwrplan.com](mailto:jholt@pwrplan.com); [jhirschel@pwrplan.com](mailto:jhirschel@pwrplan.com); [jdahlby@pwrplan.com](mailto:jdahlby@pwrplan.com); Kinder, Debra; Crescente, Angela  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Diana,

You will need to do a depr adjustment to remove the amount from the one set of books.

Thanks,

Elizabeth Cowart

----- Original Message -----

**From:** Wacker, Diana [[Diana.Wacker@lge-ku.com](mailto:Diana.Wacker@lge-ku.com)]  
**Sent:** 10/6/2011 4:20 PM  
**To:** [support@pwrplan.com](mailto:support@pwrplan.com)  
**Cc:** [Debra.Kinder@lge-ku.com](mailto:Debra.Kinder@lge-ku.com); [Angela.Crescente@lge-ku.com](mailto:Angela.Crescente@lge-ku.com); [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com); [jdahlby@pwrplan.com](mailto:jdahlby@pwrplan.com); [jhirschel@pwrplan.com](mailto:jhirschel@pwrplan.com); [jholt@pwrplan.com](mailto:jholt@pwrplan.com)  
**Subject:** Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE

All:

We have a Closing Issue. We set up Transition ARO's on both LGE and KU. Somehow these transition ARO's created a Purchase Accounting Depr Reserve Adjustment, which created entries for depreciation expense. It basically duplicated the financial set of books entry - the financial set of book entry is correct - BUT THE PURCHASE ACCOUNTING SET OF BOOKS IS NOT CORRECT.

Charnas

There is a fictitious depr basis on the Purchase Accounting Set of Books, which created depreciation entries. I am sending screen shots of the Depr Ledger for the reserve activity for both sets of books.

This is in PRODUCTION only. Please let me know what other information I can provide to help you with getting this corrected.

Thanks,  
Diana Wacker  
502-627-4054

-----  
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Thanks,

Elizabeth Cowart  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FE4Ma:ref

Clark, Ed

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Thursday, October 06, 2011 5:16 PM  
**To:** Wacker, Diana  
**Cc:** jogilvie@pwrplan.com; jholt@pwrplan.com; jhirschel@pwrplan.com; jdahlby@pwrplan.com; Kinder, Debra; Crescente, Angela  
**Subject:** RE: Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE [ ref:00D6KJDN.5006FE4Ma:ref ]

Diana,

You will need to do a depr adjustment to remove the amount from the one set of books.

Thanks,

Elizabeth Cowart

----- Original Message -----

**From:** Wacker, Diana [Diana.Wacker@lge-ku.com]  
**Sent:** 10/6/2011 4:20 PM  
**To:** [support@pwrplan.com](mailto:support@pwrplan.com)  
**Cc:** [Debra.Kinder@lge-ku.com](mailto:Debra.Kinder@lge-ku.com); [Angela.Crescente@lge-ku.com](mailto:Angela.Crescente@lge-ku.com); [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com); [jdahlby@pwrplan.com](mailto:jdahlby@pwrplan.com); [jhirschel@pwrplan.com](mailto:jhirschel@pwrplan.com); [jholt@pwrplan.com](mailto:jholt@pwrplan.com)  
**Subject:** Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE

All:

We have a Closing Issue. We set up Transition ARO's on both LGE and KU. Somehow these transition ARO's created a Purchase Accounting Depr Reserve Adjustment, which created entries for depreciation expense. It basically duplicated the financial set of books entry - the financial set of book entry is correct - BUT THE PURCHASE ACCOUNTING SET OF BOOKS IS NOT CORRECT.

There is a fictitious depr basis on the Purchase Accounting Set of Books, which created depreciation entries. I am sending screen shots of the Depr Ledger for the reserve activity for both sets of books.

This is in PRODUCTION only. Please let me know what other information I can provide to help you with getting this corrected.

Thanks,  
Diana Wacker  
502-627-4054

-----  
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Charnas

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Thanks,

Elizabeth Cowart  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FE4Ma:ref

Clark, Ed

---

**From:** Wacker, Diana  
**Sent:** Thursday, October 06, 2011 4:19 PM  
**To:** 'Plant Support'  
**Cc:** Kinder, Debra; Crescente, Angela; jogilvie@pwrplan.com; 'Jim Dahlby'; 'Josh Hirschel'; 'Joseph Holt'  
**Subject:** Transition ARO - PURCHASE ACCOUNTING SET OF BOOKS DEPRECIATION ISSUE - CLOSING ISSUE

All:

We have a Closing Issue. We set up Transition ARO's on both LGE and KU. Somehow these transition ARO's created a Purchase Accounting Depr Reserve Adjustment, which created entries for depreciation expense. It basically duplicated the financial set of books entry – the financial set of book entry is correct – BUT THE PURCHASE ACCOUNTING SET OF BOOKS IS NOT CORRECT.

There is a fictitious depr basis on the Purchase Accounting Set of Books, which created depreciation entries. I am sending screen shots of the Depr Ledger for the reserve activity for both sets of books.

This is in PRODUCTION only. Please let me know what other information I can provide to help you with getting this corrected.

Thanks,  
Diana Wacker  
502-627-4054



TRANSITION ARO  
DEPR ISSUE.doc...

PowerPlant Depreciation Ledger

Select Criteria: Monthly Start Date: August 2011 End Date: September 2011 Set of Books: FPL Purchase Acct  
 Duration: Time Group: Life Reserve, CDR Reserve, Combined Reserve  
 Refresh: KIL-131707-ARD Cost Steam (Eq) View Factors

Period Comparison	Depreciation Basis		Reserve Activity	Reserve History
	August 2011	September 2011		
Beginning Reserve Balance (Less CDR)	\$0.00	\$0.00		
Depreciation Provision	\$0.00	(\$173.28)		
Depreciation Input Adjustment	\$0.00	\$0.00		
Depreciation Calculated Adjustment	\$0.00	\$0.00		
Reserve Retirements	\$0.00	\$0.00		
Salvage Returns	\$0.00	\$0.00		
Salvage Cash	\$0.00	\$0.00		
Reserve Credits	\$0.00	\$0.00		
Reserve Transfers In	\$0.00	\$0.00		
Reserve Transfers Out	\$0.00	\$0.00		
<b>Net Reserve Adjustments</b>	<b>\$0.00</b>	<b>\$105,532.11</b>		
Net Gain Loss	\$0.00	\$0.00		
Ending Reserve Balance (Less CDR)	\$0.00	\$105,178.83		
Beginning Reserve Impairment	\$0.00	\$0.00		
Reserve Impairment Activity	\$0.00	\$0.00		
Salvage Provision	\$0.00	\$0.00		
Salvage Input Adjustment	\$0.00	\$0.00		
Salvage Calculated Adjustment	\$0.00	\$0.00		

Row 1 to 13 of 13 Rows Selected: 1

PURCHASE ACCOUNTING SET OF BOOKS

PowerPlant Database

File Edit Subsystem Batch Admin References Window Help

Unit Cost Projects Assets Depr Tables CR Admin MyProfile Help Calc PrintWin

PowerPlant Depreciation Ledger

Select Criteria:  Monthly Start Date: August 2011  Quarterly End Date: September 2011  Annually Set of Books: Financial

Calculation:  Time  Group  Life Reserve  COB Reserve  Combined Reserve

Refresh Pick Display View Rates View Factors

KU-131707-ARO Cost Steam (Exp)

Period Comparison	Depreciation Basis		Reserve Activity	Reserve History
	August 2011	September 2011		
Beginning Reserve Balance (Less COB)	\$2,189,591.01	\$2,431,891.77		
Depreciation Provision	\$243,300.76	\$249,153.52		
Depreciation Input Adjustment	\$0.00	\$0.00		
Depreciation Calculated Adjustment	\$0.00	\$0.00		
Reserve Retirements	\$0.00	\$0.00		
Salvage Returns	\$0.00	\$0.00		
Salvage Cash	\$0.00	\$0.00		
Reserve Credits	\$0.00	\$0.00		
Reserve Transfers In	\$0.00	\$0.00		
Reserve Transfers Out	\$0.00	\$0.00		
<b>Reserve Adjustments</b>	<b>10.00</b>	<b>\$105,352.11</b>		
Net Gain Loss	\$0.00	\$0.00		
Ending Reserve Balance (Less COB)	\$2,431,931.77	\$2,786,337.40		
Beginning Reserve Impairment	\$0.00	\$0.00		
Reserve Impairment Activity	\$0.00	\$0.00		
Salvage Provision	\$0.00	\$0.00		
Salvage Input Adjustment	\$0.00	\$0.00		
Salvage Calculated Adjustment	\$0.00	\$0.00		

Page 1 to 18 of 18 Rows Selected: 1

FINANCIAL SET OF BOOKS



**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Thursday, October 06, 2011 3:15 PM  
**To:** Wiseman, Sara; Crescente, Angela  
**Subject:** RE: Revised EAM for AROs

Below is the only additional change from Valerie, I will save a clean version to the acctrestricted drive distribute a clean version momentarily!

***Shannon Charnas***

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Scott, Valerie  
**Sent:** Thursday, October 06, 2011 2:31 PM  
**To:** Charnas, Shannon  
**Subject:** RE: Revised EAM for AROs

In the SOX paragraph (right before the disclosure paragraph) can we add a sentence: "The error occurred due to the misunderstanding of what gas main miles were included in the ARO calculation." Right before "Management believes....."

I am good with the other changes.

*Valerie*

---

**From:** Charnas, Shannon  
**Sent:** Thursday, October 06, 2011 12:19 PM  
**To:** Scott, Valerie  
**Subject:** RE: Revised EAM for AROs

Sorry, this includes the attachment. << File: EAM - ARO (TC2 Joint Use and Gas Trans) 10-6-11.docx >>

***Shannon Charnas***

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Charnas, Shannon  
**Sent:** Thursday, October 06, 2011 12:04 PM  
**To:** Scott, Valerie  
**Subject:** RE: Revised EAM for AROs

Valerie –

Attached are some revisions that I believe address your questions. Let me know if it would be helpful to discuss. If you are OK with the changes, I will clean up the notes before distributing and saving a final version.

Thanks,

**Shannon Charnas**

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Scott, Valerie  
**Sent:** Wednesday, October 05, 2011 7:38 PM  
**To:** Charnas, Shannon  
**Subject:** RE: Revised EAM for AROs

Shannon,

I have added some comments in the attached. Let me know if we should discuss.

<< File: EAM - ARO (TC2 Joint Use and Gas Trans) 10-5-11.docx >>

*Valerie*

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, October 05, 2011 4:03 PM  
**To:** Scott, Valerie  
**Subject:** Revised EAM for AROs

Valerie –

Let me know if you have any comments or would like to discuss.

Thanks, << File: EAM - ARO (TC2 Joint Use and Gas Trans) 10-5-11.docx >>

**Shannon Charnas**

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, October 05, 2011 8:46 PM  
**To:** Wiseman, Sara; Crescente, Angela  
**Subject:** RE: Revised EAM for AROs

Sorry, meant to include something else. If you could try to complete Thursday morning, that would be helpful. Once we get Valerie through it again we need to give it to Mimi – she has a reporting deadline to PPL of tomorrow to provide details from the EAM regarding quarter end.

Thanks,

**Shannon Charnas**

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, October 05, 2011 8:45 PM  
**To:** Wiseman, Sara; Crescente, Angela  
**Subject:** FW: Revised EAM for AROs

Sara & Angela –

Can you work on addressing Valerie's comments. Let me know if there is anything we should discuss.

Thanks,

**Shannon Charnas**

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Scott, Valerie  
**Sent:** Wednesday, October 05, 2011 7:38 PM  
**To:** Charnas, Shannon  
**Subject:** RE: Revised EAM for AROs

Shannon,

I have added some comments in the attached. Let me know if we should discuss.

<< File: EAM - ARO (TC2 Joint Use and Gas Trans) 10-5-11.docx >>

*Valerie*

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, October 05, 2011 4:03 PM  
**To:** Scott, Valerie  
**Subject:** Revised EAM for AROs

Valerie –

Let me know if you have any comments or would like to discuss.

Thanks, << File: EAM - ARO (TC2 Joint Use and Gas Trans) 10-5-11.docx >>

**Shannon Charnas**  
*Director, Accounting & Regulatory Reporting*  
*LG&E and KU*  
*(502) 627-4978*

**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, October 05, 2011 4:01 PM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: ARO TC 2 Joint Use & Gas Transmission 10-5-11.docx

Looks good, I will forward a clean version to Valerie. Thanks for the quick turnaround on the addition of the gas mains for Trans.

***Shannon Charnas***

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, October 05, 2011 3:40 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** ARO TC 2 Joint Use & Gas Transmission 10-5-11.docx

<< File: ARO TC 2 Joint Use & Gas Transmission 10-5-11.docx >>

Shannon: Here is the latest draft.

**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Tuesday, October 04, 2011 12:46 PM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: Trimble County 2 Joint Use ARO 10-3-11 tracked #2.docx

Sara –

Thanks. Yes, I will remove the green highlighted portion. I mentioned the overall issues to Valerie and told her I would be sending her a draft today. She wasn't very concerned about any of it. I'll let you know as I hear back from her, I will send her the draft very shortly.

***Shannon Charnas***

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, October 04, 2011 12:42 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** Trimble County 2 Joint Use ARO 10-3-11 tracked #2.docx

<< File: Trimble County 2 Joint Use ARO 10-3-11 tracked #2.docx >>

Attached is the latest draft. I've inserted the table (thanks to Debbie H.) and added the proposed language that we discussed. Also, talked to Dan about the debt covenant and changed the response on that. Should the part that is still highlighted in green be removed?

**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Monday, October 03, 2011 4:57 PM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: Trimble County 2 Joint Use ARO 10 3 11.docx

Sorry, still going. One thing I wanted to mention is that we just this afternoon made changes to the error assessment memo template – it is on the accounting policies drive. There are a few adjustments that need to be made to your memo to accommodate these changes. Can someone begin looking at that?

**Shannon Charnas**

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Monday, October 03, 2011 4:54 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** Trimble County 2 Joint Use ARO 10 3 11.docx

<< File: Trimble County 2 Joint Use ARO 10 3 11.docx >>

Shannon: Here is the memo with the journal entry numbers.

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Monday, October 03, 2011 11:33 AM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Asset Life [ ref:00D6KJDN.5006FDOhF:ref ]

Hi Angela,

Below is what I received from Josh.

The date on the ARO details screen doesn't ever change. If you change the depreciable life on the layer screen the remaining life on CPR depr will change after ARO processing runs for the first month the layer was posted.

Thanks,

Elizabeth Cowart

----- Original Message -----

**From:** Crescente, Angela [Angela.Crescente@lge-ku.com]  
**Sent:** 9/30/2011 6:13 PM  
**To:** [support@pwrplan.com](mailto:support@pwrplan.com)  
**Cc:** [Sara.Wiseman@lge-ku.com](mailto:Sara.Wiseman@lge-ku.com); [Diana.Wacker@lge-ku.com](mailto:Diana.Wacker@lge-ku.com); [Debra.Kinder@lge-ku.com](mailto:Debra.Kinder@lge-ku.com)  
**Subject:** RE: ARO Asset Life [ ref:00D6KJDN.5006FDOhF:ref ]

Thanks Elizabeth.

---

**From:** Plant Support [<mailto:support@pwrplan.com>]  
**Sent:** Friday, September 30, 2011 6:11 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Asset Life [ ref:00D6KJDN.5006FDOhF:ref ]

Hi Angela,

I've sent your question to someone in our ARO group. I will let you know when I have a response.

Elizabeth

----- Original Message -----

**From:** Crescente, Angela [Angela.Crescente@lge-ku.com]  
**Sent:** 9/30/2011 5:53 PM  
**To:** [support@pwrplan.com](mailto:support@pwrplan.com)  
**Cc:** [Diana.Wacker@lge-ku.com](mailto:Diana.Wacker@lge-ku.com); [Debra.Kinder@lge-ku.com](mailto:Debra.Kinder@lge-ku.com); [Sara.Wiseman@lge-ku.com](mailto:Sara.Wiseman@lge-ku.com)  
**Subject:** ARO Asset Life

Support,

I am revaluing an ARO asset and noticed that when I change the end of life date on the layer, it does not change the end of life date on the details screen so it appears that depreciation is trying to calculate on the original life. Looking through the "help" feature, it states that the date should change automatically when you update the date on the new



Charnas

layer. Please let me know if I have done everything correctly or if I am missing something. I have attached screenshots for your reference.

I need to be able to correct this for quarter ended September close.

Thanks,  
Angela

---

*The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.*

Thanks,

Elizabeth Cowart  
PowerPlant Support  
770.937.3000

ref:00D6KJDN.5006FDOhF:ref

---

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Thanks,

Elizabeth Cowart  
PowerPlant Support  
770.937.3000

Clark, Ed

---

**From:** Daly, Karen  
**Sent:** Monday, October 03, 2011 10:50 AM  
**To:** Kinder, Debra  
**Cc:** Crescente, Angela  
**Subject:** RE: New Depr Group - ARO

Thank you,

---

**From:** Kinder, Debra  
**Sent:** Monday, October 03, 2011 10:49 AM  
**To:** Daly, Karen  
**Cc:** Crescente, Angela  
**Subject:** RE: New Depr Group - ARO

LGE-236807-ARO Cost Gas Trans (Eqp)

Here you go.

---

**From:** Daly, Karen  
**Sent:** Monday, October 03, 2011 10:17 AM  
**To:** Kinder, Debra; Crescente, Angela  
**Subject:** New Depr Group - ARO

Did the new ARO depr group get added? If so, can I get the information (or a screen shot) so that I can add it to the plant reports? Thanks!

*Karen L. Daly*  
Accounting Analyst III  
Property Accounting  
Phone: (502) 627-4279  
e-mail: [Karen.Daly@lge-ku.com](mailto:Karen.Daly@lge-ku.com)

Clark, Ed

---

**From:** Kinder, Debra  
**Sent:** Monday, October 03, 2011 10:49 AM  
**To:** Daly, Karen  
**Cc:** Crescente, Angela  
**Subject:** RE: New Depr Group - ARO

LGE-236807-ARO Cost Gas Trans (Eqp)

Here you go.

---

**From:** Daly, Karen  
**Sent:** Monday, October 03, 2011 10:17 AM  
**To:** Kinder, Debra; Crescente, Angela  
**Subject:** New Depr Group - ARO

Did the new ARO depr group get added? If so, can I get the information (or a screen shot) so that I can add it to the plant reports? Thanks!

*Karen L. Daly*  
Accounting Analyst III  
Property Accounting  
Phone: (502) 627-4279  
e-mail: [Karen.Daly@lge-ku.com](mailto:Karen.Daly@lge-ku.com)

**Clark, Ed**

---

**From:** Daly, Karen  
**Sent:** Monday, October 03, 2011 10:17 AM  
**To:** Kinder, Debra; Crescente, Angela  
**Subject:** New Depr Group - ARO

Did the new ARO depr group get added? If so, can I get the information (or a screen shot) so that I can add it to the plant reports? Thanks!

*Karen L. Daly*  
Accounting Analyst III  
Property Accounting  
Phone: (502) 627-4279  
e-mail: [Karen.Daly@lge-ku.com](mailto:Karen.Daly@lge-ku.com)

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Friday, September 30, 2011 6:11 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Asset Life [ ref:00D6KJDN.5006FDOhF:ref ]

Hi Angela,

I've sent your question to someone in our ARO group. I will let you know when I have a response.

Elizabeth

----- Original Message -----

**From:** Crescente, Angela [Angela.Crescente@lge-ku.com]  
**Sent:** 9/30/2011 5:53 PM  
**To:** [support@pwrplan.com](mailto:support@pwrplan.com)  
**Cc:** [Diana.Wacker@lge-ku.com](mailto:Diana.Wacker@lge-ku.com); [Debra.Kinder@lge-ku.com](mailto:Debra.Kinder@lge-ku.com); [Sara.Wiseman@lge-ku.com](mailto:Sara.Wiseman@lge-ku.com)  
**Subject:** ARO Asset Life

Support,

I am revaluing an ARO asset and noticed that when I change the end of life date on the layer, it does not change the end of life date on the details screen so it appears that depreciation is trying to calculate on the original life. Looking through the "help" feature, it states that the date should change automatically when you update the date on the new layer. Please let me know if I have done everything correctly or if I am missing something. I have attached screenshots for your reference.

I need to be able to correct this for quarter ended September close.

Thanks,  
Angela

---

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Thanks,

Elizabeth Cowart  
PowerPlant Support  
770.937.3000

Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Friday, September 30, 2011 5:53 PM  
**To:** 'Plant Support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** ARO Asset Life

Support,

I am revaluing an ARO asset and noticed that when I change the end of life date on the layer, it does not change the end of life date on the details screen so it appears that depreciation is trying to calculate on the original life. Looking through the "help" feature, it states that the date should change automatically when you update the date on the new layer. Please let me know if I have done everything correctly or if I am missing something. I have attached screenshots for your reference.

I need to be able to correct this for quarter ended September close.



ARO Depr Date  
Change - Suppo...

Thanks,  
Angela

PowerPlant - DTAWORHDatabase

File Edit Subsystem Batch Admin Preferences Window Help

Link Cat Projects Budgets Assets Depr Tables CR Admin MyPlant Help Calc Print Win

ARO Description: Pure-CR Landfill

Layer #: 2 Initial Expected Bal: \$875,901.64 Cumulative Weighted Avg Discount Rate: 4.47% Discount Rate Group: <none> Adj Prob

Comments: Layer #2 Layer Asset Value: \$875,901.64 Annual Eff. Rate: 4.57% Risk Free Rate: 0.00% Rate Report

Revision Layer: Revision of P. GL Posting Mo Yr: 09/2011 Approval Date: Copy Cash Flows from Last Layer

End of Depr. Life: 12/2015 Current Layer Weighted Rate: 1.64%

Current Liability: \$1,438,985.96 New Liability: \$2,314,887.50 Rate Type: Weighted Avg

Click on Cell to Edit the Cash Flow Item

Month Yr	Gross Weighted Est. Layer 1	Settlements Since Prior Estimate	Stream 1 Gross	Stream 2 Gross	Stream 3 Gross	Gross Weighted Est. Layer 2	Net Change	Annual Discount Rate
	Stream Prob.:		100.00%	0.00%	0.00%			
12/2011	0.00	0.00	859,670.00	0.00	0.00	859,670.00	859,670.00	1.20% <input type="checkbox"/>
12/2012	0.00	0.00	393,862.00	0.00	0.00	393,862.00	393,862.00	1.60% <input type="checkbox"/>
12/2013	0.00	0.00	401,740.00	0.00	0.00	401,740.00	401,740.00	1.70% <input type="checkbox"/>
12/2014	0.00	0.00	409,774.00	0.00	0.00	409,774.00	409,774.00	1.90% <input type="checkbox"/>
12/2015	0.00	0.00	452,801.00	0.00	0.00	452,801.00	452,801.00	2.20% <input type="checkbox"/>
12/2023	2,494,673.00	0.00	0.00	0.00	0.00	0.00	(2,494,673.00)	0.00% <input type="checkbox"/>
00/0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00% <input type="checkbox"/>
<b>Total:</b>	<b>2,494,673.00</b>	<b>0.00</b>	<b>2,517,847.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2,517,847.00</b>	<b>23,174.00</b>	

Update Layer Calc Layer Bal Approve Layer Book to Pend Cancel

PowerPlant PTADEV Database  
 File Edit Subsystem Batch Admin Preferences Window Help  
 Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPlant Help Calc Print Win

**ARO Details**

ARO Details		ARO Asset Details	
Description:	Purc-CR Landfill	Asset Id:	30304490
Company:	LOUISVILLE GAS & ELECTRIC COMPANY	Description:	Purc-CR Landfill
ARO Type:	Site ARC Auto Ret: no	Business Segme:	Electric
ARO Status:	Active Rate Type: Weighted A	Asset GI Account:	101 - Plant In Service - PowerPlant
Status Date:	9/26/2011	Utility Account:	E317.07-ARO Cost Steam (Eqp)
Liability Account:	230012-ASSET RETIREMENT OE	Sub Account:	None
Accretion Acct:	411150-ACCRETION EXPENSE -	Retirement Unit:	ARO - CHILD
Gain Account:	421105-GAIN ON ARO SETTLEM	Property Group:	EON Default Property Group
Loss Account:	421105-GAIN ON ARO SETTLEM	Asset Location:	Land and AROs - Not Separately Identif
Long Description:	Purc-CR Landfill	Subledger Type:	ARO
Settle Cost Elmnt:	0699: CORPORATE DEFAULT	End of Life:	12/2023
ARO Rollup:	Gen-Equip	Asset Dollars:	\$1,380,941.93
Ext ARO Code		Long Description:	Purc-CR Landfill

**Underlying Related Locations**

Related Asset Locations

Update  
 Layers/Str  
 Depr  
 Audits  
 Relate ARO  
 Relate  
 UnRelate  
 Cancel



**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Friday, September 30, 2011 5:33 PM  
**To:** 'Plant Support'; Wacker, Diana; Duce, John; Richardson, Ralph  
**Cc:** jogilvie@pwrplan.com  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	'Plant Support'	
	Wacker, Diana	
	Duce, John	
	Richardson, Ralph	Read: 9/30/2011 5:45 PM
	jogilvie@pwrplan.com	

Yes, it is the same Post error. Please keep in mind that these entries must be posted for quarter ended September close so let us know what we can do to help.

Thank you for helping us,  
Angela

-----Original Message-----

**From:** Plant Support [<mailto:support@pwrplan.com>]  
**Sent:** Friday, September 30, 2011 5:26 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph; Crescente, Angela  
**Cc:** [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com)  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Is it still the same Post 300 error? Elizabeth is connected looking at another issue right now. I'll get connected first thing on Monday to look at the data again.

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Friday, September 30, 2011 5:26 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph; Crescente, Angela  
**Cc:** jogilvie@pwrplan.com  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Is it still the same Post 300 error? Elizabeth is connected looking at another issue right now. I'll get connected first thing on Monday to look at the data again.

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Friday, September 30, 2011 5:21 PM  
**To:** 'Plant Support'; Wacker, Diana; Richardson, Ralph; Duce, John  
**Cc:** jogilvie@pwrplan.com  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	'Plant Support'	
	Wacker, Diana	
	Richardson, Ralph	Read: 9/30/2011 5:26 PM
	Duce, John	
	jogilvie@pwrplan.com	

Joseph,

I added them, but it is still failing. I have attached a screenshot in case I didn't add them the way you wanted me to. Please let me know.

PowerPlant Journal Entry Configuration				
Company Id	Trans Type	Time Stamp	User Id	Je Method Id
All Companies	Life reserve transfer credit(1019)	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Life reserve transfer debit(1018)	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Reserve Transfer Credit	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Reserve Transfer Debit	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Retirement Credit (1010)	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Retirement Debit (1080)	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Transfer From (Credit)	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Transfer To (Debit)	2/28/2011 19:09:3	PWRPLANT	Purchase Accting Post Ac
All Companies	Tax Expense Credit	1/26/2011 22:14:4	PWRPLANT	Tax Expensing
All Companies	Tax Expense Debit	1/26/2011 22:14:4	PWRPLANT	Tax Expensing
IGNORE Entry	ARO addition credit(1017)	9/30/2011 17:14:4	E009595	Purchase Acct - FERC Re
IGNORE Entry	ARO addition debit(1016)	9/30/2011 17:14:5	E009595	Purchase Acct - FERC Re
LG&E and KU Services Cor	Addition Credit (1070)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re
LG&E and KU Services Cor	Addition Debit (1010/1060)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re
LG&E and KU Services Cor	Life reserve transfer credit(1019)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re
LG&E and KU Services Cor	Life reserve transfer debit(1018)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re
LG&E and KU Services Cor	Retirement Credit (1010)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re
LG&E and KU Services Cor	Retirement Debit (1080)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re
LG&E and KU Services Cor	Transfer From (Credit)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re
LG&E and KU Services Cor	Transfer To (Debit)	5/26/2011 18:25:2	PWRPLANT	Purchase Acct - FERC Re

Key Word Values from f_autogen_je_account	Key Word Values from pp_gl_transaction
gl_co - gl company no from company	gl_co - gl company no from company
acct - external gl account	wo_num - work order number
wo_num - work order number	ext_dp - external depr group value
ce - external cost element	acct - external gl account from pend trans
ext_dp - external depr group value	cwip - external gl acct for wo cwip acct
fp_num - funding project number	rwip - external gl acct for wo removal acct
	resv - external gl acct for de
	cor_rs - external gl acct for d
	gn_ls - external gl acct for de
	ic_pay - external gl acct for p
	ic_rec - external gl acct for p
	ic_co - gl comp no for inter c
	fn_num - funding project num

Thanks,  
 Angela

-----Original Message-----

From: Plant Support [mailto:support@pwrplan.com]  
 Sent: Friday, September 30, 2011 4:54 PM  
 To: Wacker, Diana; Richardson, Ralph; Duce, John  
 Cc: jogilvie@pwrplan.com; Crescente, Angela  
 Subject: RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Can you try adding an "Ignore" line for "Purchase Acct - FERC Reversal" for 1016/1017 (ARO Addition Debit/Credit). Even though these shouldn't have purchase accounting amounts, it runs through all of the corresponding set of books.

Joseph King  
 PowerPlant Support  
 770.937.3000  
 ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Friday, September 30, 2011 4:54 PM  
**To:** Wacker, Diana; Richardson, Ralph; Duce, John  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Can you try adding an "Ignore" line for "Purchase Acct - FERC Reversal" for 1016/1017 (ARO Addition Debit/Credit). Even though these shouldn't have purchase accounting amounts, it runs through all of the corresponding set of books.

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Friday, September 30, 2011 4:39 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Looks good -- that got me in. I'll have an update shortly.

----- Original Message -----

**From:** Duce, John [John.Duce@lge-ku.com]  
**Sent:** 9/30/2011 4:16 PM  
**To:** support@pwrplan.com;  
Diana.Wacker@lge-ku.com;  
Ralph.Richardson@lge-ku.com  
**Cc:** jogilvie@pwrplan.com; Angela.Crescente@lge-ku.com  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Started PB on 170.119.21.125, you should be good to go now.

John

-----Original Message-----

**From:** Plant Support [mailto:support@pwrplan.com]  
**Sent:** Friday, September 30, 2011 4:04 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Diana,

I just tried to get connected to look but both 170.119.21.125 and 170.119.21.124 appear to be having Powerbuilder license issues so I can't get in to investigate.

John/Ralph, can one of you log into those PCs (call me if you need login information) and start Powerbuilder please?

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref  
-----

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Joseph King  
PowerPlant Support  
770.937.3000

Clark, Ed

---

**From:** Duce, John  
**Sent:** Friday, September 30, 2011 4:15 PM  
**To:** Plant Support; Wacker, Diana; Richardson, Ralph  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Started PB on 170.119.21.125, you should be good to go now.

John

-----Original Message-----

**From:** Plant Support [mailto:support@pwrplan.com]  
**Sent:** Friday, September 30, 2011 4:04 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Diana,

I just tried to get connected to look but both 170.119.21.125 and 170.119.21.124 appear to be having Powerbuilder license issues so I can't get in to investigate.

John/Ralph, can one of you log into those PCs (call me if you need login information) and start Powerbuilder please?

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref



Clark, Ed

---

**From:** Duce, John  
**Sent:** Friday, September 30, 2011 4:07 PM  
**To:** Plant Support; Wacker, Diana; Richardson, Ralph  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

I'll log into .125, be just a few minutes.

-----Original Message-----

**From:** Plant Support [<mailto:support@pwrplan.com>]  
**Sent:** Friday, September 30, 2011 4:04 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph  
**Cc:** [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com); Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Diana,

I just tried to get connected to look but both 170.119.21.125 and 170.119.21.124 appear to be having Powerbuilder license issues so I can't get in to investigate.

John/Ralph, can one of you log into those PCs (call me if you need login information) and start Powerbuilder please?

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Friday, September 30, 2011 4:04 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Diana,

I just tried to get connected to look but both 170.119.21.125 and 170.119.21.124 appear to be having Powerbuilder license issues so I can't get in to investigate.

John/Ralph, can one of you log into those PCs (call me if you need login information) and start Powerbuilder please?

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Wacker, Diana  
**Sent:** Friday, September 30, 2011 3:05 PM  
**To:** Plant Support  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Joseph: Any luck figuring out why we are getting this post error? Thanks, Diana

-----Original Message-----

**From:** Plant Support [<mailto:support@pwrplan.com>]  
**Sent:** Friday, September 30, 2011 10:51 AM  
**To:** Wacker, Diana  
**Cc:** [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com); Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Diana, I'll connect in a few minutes to take a look.

----- Original Message -----

**From:** Wacker, Diana [[Diana.Wacker@lge-ku.com](mailto:Diana.Wacker@lge-ku.com)]  
**Sent:** 9/30/2011 10:20 AM  
**To:** [support@pwrplan.com](mailto:support@pwrplan.com)  
**Cc:** [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com); [Angela.Crescente@lge-ku.com](mailto:Angela.Crescente@lge-ku.com)  
**Subject:** Post Error 300 - - ARO Revaluation - DEV/PROD -

Support/Jim:

We are doing some ARO Revaluations for September close. Because this is such a big deal, we are testing in DEV. We have a Post 300 Error: No record found in the PP\_Journal\_Layouts for trans\_type=1016. We did this last year with no post problems, but are now having post issues. We must get this posted quickly, and during close.

I am attaching a screen shot of the PP Journal Layout Table showing a line for 'all companies' for this transaction type 1016 - what are we missing?

-----  
The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.

Joseph King  
PowerPlant Support

770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Friday, September 30, 2011 10:51 AM  
**To:** Wacker, Diana  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Diana, I'll connect in a few minutes to take a look.

----- Original Message -----

**From:** Wacker, Diana [Diana.Wacker@lge-ku.com]  
**Sent:** 9/30/2011 10:20 AM  
**To:** [support@pwrplan.com](mailto:support@pwrplan.com)  
**Cc:** [jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com); [Angela.Crescente@lge-ku.com](mailto:Angela.Crescente@lge-ku.com)  
**Subject:** Post Error 300 - - ARO Revaluation - DEV/PROD -

Support/Jim:

We are doing some ARO Revaluations for September close. Because this is such a big deal, we are testing in DEV. We have a Post 300 Error: No record found in the PP\_Journal\_Layouts for trans\_type=1016. We did this last year with no post problems, but are now having post issues. We must get this posted quickly, and during close.

I am attaching a screen shot of the PP Journal Layout Table showing a line for 'all companies' for this transaction type 1016 - what are we missing?

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Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Erskine, Greg  
**Sent:** Friday, September 30, 2011 10:38 AM  
**To:** Crescente, Angela  
**Subject:** ARO Footnote - 9/30/11

Angela:

I need to get information from you to complete the LKE, LG&E and KU sections of the ARO footnote that will appear in the 9/30/11 PPL Form 10-Q. I've attached a file that shows the information I need. Can you replace the question marks in the file with amounts and return the file to me by Tuesday, October 11, please?

The file calls for a rollforward of the ARO liabilities for LKE, LG&E and KU for the nine months ended 6/30/11 (in millions). It also calls for a split of the 9/30/11 ARO liability balances between current and noncurrent for LKE, LG&E and KU (also in millions).

The 9/30/11 noncurrent ARO liability balances (in millions) that you put into the attached file need to agree with the 9/30/11 noncurrent ARO liability balances that will appear in the 9/30/11 balance sheets for LKE, LG&E and KU (in millions). I don't yet know the noncurrent ARO liability balances that will appear in the 9/30/11 balance sheets, but I should know them on or near Monday, October 10. I will e-mail the balances to you when I know them. Please make sure that the 9/30/11 noncurrent balances that you put into the attached file equal the balances that I e-mail to you.

Please do not change the beginning balances in the attached file. Also, please do not change any of the formulas I've put into the file. If you feel that you need to change the beginning balances or a formula, please contact me before you do anything.

Please do not change the descriptions that appear in column A in the file and please do not add any new rows. PPL came up with the descriptions, and we can't change them.

Some of the formulas in the attached file return #VALUE!. After you replace the question marks with the correct 9/30/11 amounts, the #VALUE!s should go away.

I included the split between current and noncurrent we reported at 12/31/10 in the attached file for your reference.

Thanks,

Greg



Book7.xlsx

LKE CONSOLIDATED  
Asset Retirement Obligations  
9ME 09/30/11  
09/30/11 Reporting

08/23/11  
4:17 PM

	LKE	LG&E	KU
12/31/10 balance	103	49	54
Accretion expense	???	???	???
Obligations assumed in acquisition of LKE	???	???	???
Obligations assumed in acquisition of CN	???	???	???
ARO derecognized	???	???	???
New obligations incurred	???	???	???
Changes in estimated cash flow or settlement date	???	???	???
Effect of foreign currency exchange rates	???	???	???
Obligations settled	???	???	???
09/30/11 balance	<u>103</u>	<u>49</u>	<u>54</u>
Balance-sheet classification at 09/30/11:			
Current	???	???	???
Noncurrent	???	???	???
Totals	<u>#VALUE!</u>	<u>#VALUE!</u>	<u>#VALUE!</u>
Balance-sheet classification at 12/31/10:			
Current			
Noncurrent	<u>103</u>	<u>49</u>	<u>54</u>
Totals	<u>103</u>	<u>49</u>	<u>54</u>

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Saturday, October 01, 2011 10:40 PM  
**To:** Wacker, Diana; Duce, John; Richardson, Ralph; Crescente, Angela  
**Cc:** jogilvie@pwrplan.com  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

I tried to run post in debug mode myself but it keeps crashing so I'll have to get with the post developer on Monday.

That said, manually debugging, it looks like we need to add a line for 1016 and 1017 for JE Method "Purch Acct". That's the only one it's still erroring for when I tried.

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref



**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Saturday, October 01, 2011 9:02 PM  
**To:** Wacker, Diana; Richardson, Ralph; Duce, John; Crescente, Angela  
**Cc:** jogilvie@pwrplan.com  
**Subject:** RE: Post Error 300 - - ARO Revaluation - DEV/PROD - [ ref:00D6KJDN.5006FDIoM:ref ]

Can you run post in debug mode and send me the output?

Joseph King  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006FDIoM:ref

**Clark, Ed**

---

**From:** Wacker, Diana  
**Sent:** Friday, September 30, 2011 10:19 AM  
**To:** Plant Support  
**Cc:** jogilvie@pwrplan.com; Crescente, Angela  
**Subject:** Post Error 300 - - ARO Revaluation - DEV/PROD -

**Importance:** High

Support/Jim:

We are doing some ARO Revaluations for September close. Because this is such a big deal, we are testing in DEV. We have a Post 300 Error: No record found in the PP\_Journal\_Layouts for trans\_type=1016. We did this last year with no post problems, but are now having post issues. We must get this posted quickly, and during close.

I am attaching a screen shot of the PP Journal Layout Table showing a line for 'all companies' for this transaction type 1016 – what are we missing?

PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

System Administration

PowerPlant Tools Window

PowerPlant Journal Entry Configuration

Company Id	Trans Type	Time Stamp	User Id
All Companies	Adjustment Debit (1010)	10/19/2010 18:39:	PWRPLANT
All Companies	AFUDC Debit (Equity and Debt)	10/19/2010 18:39:	PWRPLANT
All Companies	AFUDC Debt Credit	10/19/2010 18:39:	PWRPLANT
All Companies	AFUDC Equity Credit	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Accretion Credit (liab)	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Accretion Debit (expense)	10/19/2010 18:39:	PWRPLANT
All Companies	ARO addition credit(1017)	10/19/2010 18:39:	PWRPLANT
All Companies	ARO addition debit(1016)	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Gain/Loss to (G/L)	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Gain/Loss to Liab	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Settle Credit to Wo	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Settle Debit to Liab	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Settle External GL	10/19/2010 18:39:	PWRPLANT
All Companies	ARO Trans. Adjust Credit	11/3/2010 09:37:1	E009595
All Companies	ARO Trans. Adjust Debit	11/3/2010 09:37:1	E009595
All Companies	COR reserve transfer credit(1021)	11/3/2010 10:14:2	E009112
All Companies	COR reserve transfer debit(1020)	11/3/2010 10:14:2	E009112
All Companies	COR Unitization Credit (RWIP)	10/19/2010 18:39:	PWRPLANT
All Companies	COR Unitization Debit (Reserve)	10/19/2010 18:39:	PWRPLANT
All Companies	Depr Activity Credit	10/19/2010 18:39:	PWRPLANT

Key Word Values from f\_autogen\_ie\_account

gl\_co - gl company no from company  
 acct - external gl account  
 wo\_num - work order number  
 ce - external cost element  
 ext\_dp - external depr group value  
 fp\_num - funding project number  
 woou - work order ou class code  
 dpou - depr group ou class code  
 exdept - external dept code from WO dept  
 arou - ARD OU from Depr group on ARD

Key Word Values from pp\_gl\_transaction

gl\_co - gl company no from company  
 wo\_num - work order number  
 ext\_dp - external depr group value  
 acct - external gl account from pend trans  
 cwip - external gl acct for wo cwip acct  
 rwip - external gl acct for wo removal acct  
 saly - external gl acct for wo saly acct  
 woou - work order ou class code  
 dpou - depr group ou class code  
 dfrc - default rc for BU  
 exdept - external dept code from WO dept

Rows 104 to 123 of 230. Rows Selected: 1

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Thursday, September 29, 2011 1:03 PM  
**To:** Crescente, Angela  
**Subject:** Trimble County 2 Joint Use ARO KU.docx



Trimble County 2  
Joint Use ARO...

**MEMORANDUM**

**Date:** October 3, 2011

**To:** Valerie L. Scott, Controller

**From:** Sara Wiseman, Manager, Property Accounting  
Angela Crescente, Accounting Analyst III, Property Accounting

**Re:** Trimble County 2 Joint Use Asset Retirement Obligations

**cc:** Shannon Charnas, Director, Accounting & Regulatory Reporting  
Debbie Shelton, Director, Audit Services  
Mimi Kelly, Manager, Sarbanes-Oxley Compliance  
Lesley Pienaar, Manager, Financial Reporting  
Ernst & Young  
Erik Rander, Director, Shared Accounting Services

**Overview of Error**

During September 2011, it was discovered that asset retirement obligations (AROs) should have been established on the financial records of Kentucky Utilities Companies (KU) for certain joint use assets used at Trimble County Unit 2 (TC 2). TC 2 became operational in January 2011 and it was at that time that the related AROs should have been established.

The joint use assets for which the AROs should have been established on KU are jointly owned with Louisville Gas and Electric Company (LG&E). An ARO had been appropriately established on LG&E's financial records for these assets. However, at the time when TC 2 became operational (January 2011), LG&E's ARO liability should have been reduced by KU's ownership share and an equal liability should have been established on KU's financial records.

The root cause of the error was due to human error.

This error caused the following misstatements on KU's financial statements:

Regulated Utility Plant	Understated
Accumulated Depreciation	Understated
Regulatory Assets	Understated
Asset Retirement Obligations	Understated

This error caused the following misstatements on LG&E's financial statements:

October 3, 2011

Page 2

Trimble County 2 Joint Use Asset Retirement Obligations

Regulated Utility Plant	Overstated
Accumulated Depreciation	Overstated
Regulatory Assets	Overstated
Asset Retirement Obligations	Overstated

On a consolidated basis, there is no impact as the addition of AROs on KU's financial records is offset by the reduction on LG&E's.

Narrative containing a general description and cause of the error/change, including high-level background of the process where the error/change occurred and when the error was detected or the change made (i.e., month and year). This section should include **Description, Root Cause, and Issue Implication** from *Appendix B - Guidance for reporting Sarbanes-Oxley (SOX) Issues in Materiality Memos*.

**How Error Was Identified**

While reviewing ARO reports during account reconciliation preparation for period of August 2011, an Accounting Analyst realized that AROs should have been established on KU's financial records for the joint use assets associated with TC 2.

Narrative containing a general description of how and when the error was identified (i.e., "In analysis of the June activity an error was identified in the way ..." or "While reconciling the XXX account for the month of April it was determined that ...")

**Controls Impacted**

Narrative indicating the controls impacted (i.e., "The error was attributable to failure of controls surrounding key spreadsheets ..."), the plan to mitigate future risk of the error occurring, and affirmation that Sarbanes-Oxley documentation has been updated for the change in processes. This section should include **Issue Classification, Reason for Classification, Compensating Control Number(s), Action Plan, Evidence Requirements, and Date to Implement** from *Appendix B - Guidance for reporting Sarbanes-Oxley (SOX) Issues in Materiality Memos*.

**Periods Impacted (including quarter correction booked)**

Year/Quarter	Q1	Q2	Q3	Q4
2011	X	X		
2010				
2009				

**Adjustment to Amounts Reported on Financial Statements – US GAAP (000's)**

October 3, 2011

Page 3

Trimble County 2 Joint Use Asset Retirement Obligations

Fin Stmt Line Item	Company	6ME 06/30/11	
		Debit	Credit
	LG&E		
Copy entry(ies) into this space	LG&E		
	LG&E		
Asset Retirement Obligations	LG&E		
	KU		
Copy entry(ies) into this space	KU		
	KU		
Asset Retirement Obligations	KU		

In this situation, a waived adjustment was not entered into the waived adjustment file; there was no waived adjustment in the current period (Q3 2011) since the balance sheet was corrected when the above entry was recorded in September 2011 on the general ledger. The adjustment was discovered in September, which was too late to be included in the June 2011 waived adjustment file.

**NOTE:** If the adjustment creates a financial statement error of greater than 5% of any financial statement line item, other than income taxes, in the current reporting period, complete Appendix C, Accounting Issue Deficiency Analysis, for assessment of the error under the Sarbanes-Oxley Act of 2002.

**Clark, Ed**

---

**From:** Leenerts, Patricia  
**Sent:** Tuesday, September 27, 2011 1:11 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** RE: ARO revaluation

Angela, I had some gas transmission main activity in September. I added and retired some gas transmission mains on project 131377. Also, Diana did a minor add on project 125684, for September, on a gas transmission main asset.

Thanks,

Pat  
502-627-3811

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, September 27, 2011 12:46 PM  
**To:** Clark, Ed; Clark, Lynda; Crescente, Angela; Daly, Karen; Griffin, Sharon; Kinder, Debra; Kuntz, John; Leenerts, Patricia; Riggs, Eric; Rose, Bruce; Wacker, Diana  
**Subject:** ARO revaluation

Hi all:

Just wanted to let you know that Angela will be revaluating some AROs for the quarter close:

1. Revaluating the Mill Creek and Cane Run AROs due to a change in the retirement dates and a changes in the \$ estimate.
2. Establishing AROs related to TC joint use assets on KU. A similar reduction will be made on LGE's books.
3. Establishing an ARO for cut, cap and purge of gas transmission mains.

The accounts impacted with be 101, 108, 230, and 182.

Overall, we expect LGE's 230 account to increase \$1 million. KU's 230 account may increase by about \$4 million.

We will be working up some journal entries to illustrate what is being recorded in the PowerPlant system. Please let us know if you are interested in receiving a copy of them. Please see either Angela or me if you have questions.

*Sara Wiseman*  
*Manager, Property Accounting*  
*Office 502.627.3189*  
*Cell 502.338.0886*



Clark, Ed

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, September 27, 2011 12:46 PM  
**To:** Clark, Ed; Clark, Lynda; Crescente, Angela; Daly, Karen; Griffin, Sharon; Kinder, Debra; Kuntz, John; Leenerts, Patricia; Riggs, Eric; Rose, Bruce; Wacker, Diana  
**Subject:** ARO revaluation

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1. Revaluating the Mill Creek and Cane Run AROs due to a change in the retirement dates and a changes in the \$ estimate.
2. Establishing AROs related to TC joint use assets on KU. A similar reduction will be made on LGE's books.
3. Establishing an ARO for cut, cap and purge of gas transmission mains.

The accounts impacted with be 101, 108, 230, and 182.

Overall, we expect LGE's 230 account to increase \$1 million. KU's 230 account may increase by about \$4 million.

We will be working up some journal entries to illustrate what is being recorded in the PowerPlant system. Please let us know if you are interested in receiving a copy of them. Please see either Angela or me if you have questions.

*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, September 27, 2011 12:33 PM  
**To:** Crescente, Angela  
**Subject:** Please review ARO revaluation for Q3 For Prop Acct dept

Hi all:

Just wanted to let you know that Angela will be revaluating some AROs for the quarter close:

1. Revaluating the Mill Creek and Cane Run AROs due to a change in the retirement dates and a changes in the \$ estimate.
2. Establishing AROs related to TC joint use assets on KU. A similar reduction will be made on LGE's books.
3. Establishing an ARO for cut, cap and purge of gas transmission mains.

The accounts impacted with be 101, 108, 230, and 182.

Overall, we expect little change in terms of \$\$ to LGE's 230 account. KU's 230 account may increase by about \$5 million.

We will be working up some journal entries to illustrate what is being recorded in the PowerPlant system. Please let us know if you are interested in receiving a copy of them. Please see either Angela or me if you have questions.

*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*

**Clark, Ed**

---

**From:** PowerPlantAlerts@lge-ku.com  
**Sent:** Wednesday, September 21, 2011 5:59 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

Project 124309 has ARO

[login to powerplant](#)

Clark, Ed

---

**From:** Wacker, Diana  
**Sent:** Tuesday, September 20, 2011 7:19 AM  
**To:** Crescente, Angela  
**Subject:** FW: PowerPlant Alerts - LGE-KU - AIP - ARO

Angela: This is a breaker replacement – is there something I should do for you on this? Diana

---

**From:** [PowerPlantAlerts@lge-ku.com](mailto:PowerPlantAlerts@lge-ku.com) [<mailto:PowerPlantAlerts@lge-ku.com>]  
**Sent:** Tuesday, September 20, 2011 5:59 AM  
**To:** Wacker, Diana  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

Project 135598 has ARO

[login to powerplant](#)

**Clark, Ed**

---

**From:** PowerPlantAlerts@lge-ku.com  
**Sent:** Tuesday, September 20, 2011 5:59 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

Project 135598 has ARO

[login to powerplant](#)

Clark, Ed

---

**From:** Allen, Lisa  
**Sent:** Monday, September 19, 2011 10:57 AM  
**To:** Sundheimer, Glenn; Wiseman, Sara; Crescente, Angela  
**Subject:** RE: ARO Quarterly Questionnaire.docx

Sara/Angela,  
Please disregard this. I will consolidate all ED results and provide 1 response to you for ED in total.

Glenn,  
Last quarter you mentioned some wells being drilled.....**We will be drilling two new wells in the Doe Run Storage Facility, KY in the 3<sup>rd</sup> quarter 2011 and possibly between three and twelve wells in the Center Gas Storage Field.** Is that not applicable anymore since you answered No or did you just not indicate it since we answered it last time?

Lisa

---

**From:** Sundheimer, Glenn  
**Sent:** Monday, September 19, 2011 10:35 AM  
**To:** Wiseman, Sara; Crescente, Angela; Allen, Lisa  
**Subject:** ARO Quarterly Questionnaire.docx

<< File: ARO Quarterly Questionnaire.docx >>

**Clark, Ed**

---

**From:** Sundheimer, Glenn  
**Sent:** Monday, September 19, 2011 10:35 AM  
**To:** Wiseman, Sara; Crescente, Angela; Allen, Lisa  
**Subject:** ARO Quarterly Questionnaire.docx



ARO Quarterly  
Questionnaire.d...

**ARO Quarterly Questionnaire**

Please answer the following questions for the period since the date of your last completed questionnaire.

1. To the best of your knowledge, are you aware of any changes that would impact the valuation of the asset retirement obligations ("AROs") that have been identified? Such changes may include changes in laws, statutes, regulations, precedents set by the Company, contracts, permits, certificates of need, right of way agreements, market costs or available resources for remediation, or planned retirements. (Please list)

**Answer: No, I am not aware of any changes.**

2. To the best of your knowledge, are you aware of any acquired assets, land, or leases that will create an ARO? (Please list, include location)

**Answer: I am not aware of any acquired assets, land, or leases that will create an ARO.**

3. To the best of your knowledge, are you aware of any new construction that will create an ARO? (Please list, include location)

**Answer: No.**

4. In certain very limited circumstances the Company could be determined to be obligated to retire an asset or a group of assets based upon a commitment made to a third party. Are you aware of any communications either written or verbal between representatives of LKE and third parties with respect to retirement of an asset or a group of assets owned by LKE at the end of operations or a specific point in time? If so, please list the identities of the LKE representatives and assets involved, as well as the third party or parties who were involved and the context in which the discussions took place.

**Answer: No.**

**Completed by: \_\_\_ Glenn  
Sundheimer** \_\_\_\_\_

**For the quarter ended: \_\_\_\_\_ September  
2011** \_\_\_\_\_



Clark, Ed

---

**From:** Charnas, Shannon  
**Sent:** Monday, September 12, 2011 11:44 AM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: ARO Quarterly Questionnaire.docx

Makes sense, go ahead.

***Shannon Charnas***

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Sunday, September 11, 2011 8:16 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** ARO Quarterly Questionnaire.docx

<< File: ARO Quarterly Questionnaire.docx >>

Shannon: Attached is the ARO questionnaire we want to send out for the third quarter. The yellow highlighted parts are what has been added. Additionally, we just made it one questionnaire instead of 2, like it is in the policy. We added the yellow parts based on suggestions from the field. If you are OK with it, please let us know so we can get it sent out. Also, the policy will need to be updated.

Thanks,

Sara and Angela

Clark, Ed

---

**From:** Wiseman, Sara  
**Sent:** Sunday, September 11, 2011 8:16 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** ARO Quarterly Questionnaire.docx



ARO Quarterly  
Questionnaire.d...

Shannon: Attached is the ARO questionnaire we want to send out for the third quarter. The yellow highlighted parts are what has been added. Additionally, we just made it one questionnaire instead of 2, like it is in the policy. We added the yellow parts based on suggestions from the field. If you are OK with it, please let us know so we can get it sent out. Also, the policy will need to be updated.

Thanks,

Sara and Angela

**ARO Quarterly Questionnaire**

Please answer the following questions for the period since the date of your last completed questionnaire.

1. To the best of your knowledge, are you aware of any changes that would impact the valuation of the asset retirement obligations (“AROs”) that have been identified? Such changes may include changes in laws, statutes, regulations, precedents set by the Company, contracts, permits, certificates of need, right of way agreements, market costs or available resources for remediation, or planned retirements. (Please list)

**Answer:**

2. To the best of your knowledge, are you aware of any acquired assets, land, or leases that will create an ARO? (Please list, include location)

**Answer:**

3. To the best of your knowledge, are you aware of any new construction that will create an ARO? (Please list, include location)

**Answer:**

4. In certain very limited circumstances the Company could be determined to be obligated to retire an asset or a group of assets based upon a commitment made to a third party. Are you aware of any communications either written or verbal between representatives of LKE and third parties with respect to retirement of an asset or a group of assets owned by LKE at the end of operations or a specific point in time? If so, please list the identities of the LKE representatives and assets involved, as well as the third party or parties who were involved and the context in which the discussions took place.

**Answer:**

**Completed by:** \_\_\_\_\_

**For the quarter ended:** \_\_\_\_\_

**Clark, Ed**

---

**From:** Leenerts, Patricia  
**Sent:** Thursday, August 25, 2011 8:52 AM  
**To:** Crescente, Angela  
**Subject:** FW: ARO comments on LSMR414, PMR414 and MAN414 project retirements

I should have requested verification that I need to move all the pipe retirements to 108799 for the retirement tasks on this project? I believe that you don't care if I combine them all onto one task or not? If you want to setup a task for me...all the work was downtown. If you want me to set it up, just let me know (remind me though is it setup in Oracle or PP?).

Thanks,

Pat  
502-627-3811

---

**From:** Leenerts, Patricia  
**Sent:** Thursday, August 25, 2011 8:47 AM  
**To:** Crescente, Angela  
**Subject:** ARO comments on LSMR414, PMR414 and MAN414 project retirements

Angela, I think that you will find the last email, from the stream attached, from Paul Stratman interesting in each of these emails.



Re: Project  
MAN414



RE: Project  
MAN414

Clark, Ed

---

**From:** Stratman, Paul  
**Sent:** Monday, May 16, 2011 5:56 PM  
**To:** Leenerts, Patricia; Singleton, Janna  
**Cc:** Murphy, Kevin  
**Subject:** Re: Project MAN414

The Dresser 31s are the cap part of that whole "cut, cap and purge" discussion that keeps coming up.

From my Blackberry device, please excuse any typos.

---

**From:** Leenerts, Patricia  
**Sent:** Monday, May 16, 2011 05:14 PM  
**To:** Singleton, Janna  
**Cc:** Stratman, Paul; Murphy, Kevin  
**Subject:** FW: Project MAN414

Janna, You indicated below that JEs were needed for the tasks I questioned. Please let me know when you planned on sending me the approved up-loaded JE. I need it by end of day on May 24<sup>th</sup>, to still allow me to be able to unitize this project for May and be able to ask questions at that time if questions still remain. As you can tell by the email stream it was intended for me to process this project in April, so I really need to get it unitized in May if possible.

JE needed to transfer charges on the following tasks:

JEF13INV to JEF13RET

ALIINV to MUHALINST

LIB6THINV to GEN419G as O&M

In addition, I am not finding unitizable material charged to the following tasks:

1STBRDINV

6THMARINV

CHESTINV

JEF8THINV

Go ahead and process necessary JEs for these items, depending on your research on the 4 above tasks. If you want to drop me a quick note as to what you plan, that might be helpful. I can review prior to you investing the time for creating the JE if you like.

Also, tasks BROJEFRET, what are '18" Dresser style 31 Line Cap for NATURAL GAS use'? If these are unitizable material then shouldn't they be on the investment task.

Thanks,

Pat  
502-627-3811

---

**From:** Singleton, Janna  
**Sent:** Wednesday, April 27, 2011 5:07 PM  
**To:** Leenerts, Patricia  
**Cc:** Stratman, Paul; Murphy, Kevin; Singleton, Janna  
**Subject:** FW: Project MAN414

Pat,

See answers below, in red.

*Janna*



Think Green! Before printing this e-mail, ask the question, is it necessary?

---

**From:** Leenerts, Patricia  
**Sent:** Wednesday, April 20, 2011 4:36 PM  
**To:** Stratman, Paul  
**Cc:** Murphy, Kevin  
**Subject:** RE: Project MAN414

Paul, the name of the project is ELECTRIC/GAS MANHOLE CONFLICTS with a description of "Eliminate gas main conflicts with 15 electric manholes in downtown Louisville by replacing approximately 12,300-feet of distribution mains and the associated services." This description does not indicate to me what type of work was done, except that to me replacing means putting new in where old used to be. Maybe that isn't what this project is about as you indicate that there is cut, cap and purge.

Please See attached <<2010 Leak Mitigation Manhole summary to PA 04 28 2011 edited KPM.pdf>>

How do I know what the associated services are to retire for 6THMARRET and JEF13THRET?

Actually, can you tell me what was installed for those same 2 task? For 6THMARRET I only see reducer pipe and fittings...no unitizable material shown for \$100,000 of investment costs, although there is a reference to coldpatch tickets. Maybe the coldpatch ticket detail will provide me the asset information which I need.

All service work for this project was billed to MUHALCOM, MUHALCUST. For the tasks above we capped and retired pipe. Downtown is expensive. Coldpatch is used for road restoration after installation, repair, retirement or maintenance of gas assets. We don't put cold patch on the pipe.

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Initial task set up; xfer all \$ to MUHALINST as this was the actual task used.

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Verified main in manhole was inactive and retired – xfer to GEN419G as O&M

I guess that there is a chance that the pipe was left over from ~~another~~ <sup>another</sup> project, in which case I would need to know, by task, footage, size and material so that I can add these dollars as fixed assets.

None

When you say gas facility, what does that mean in the case of this blanket?

Pipe, valve, fitting

---

**From:** Stratman, Paul  
**Sent:** Wednesday, April 20, 2011 3:13 PM  
**To:** Leenerts, Patricia  
**Cc:** Murphy, Kevin  
**Subject:** RE: Project MAN414

Yes, these are cut, cap and purge retirements.

It is impossible to retire a gas facility without a cut, cap and purge operation. Without such an operation, gas would continually leak out into the atmosphere.

---

**From:** Leenerts, Patricia  
**Sent:** Wednesday, April 20, 2011 2:44 PM  
**To:** Stratman, Paul  
**Subject:** Project MAN414

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If you could let me know by April 27, I would appreciate it...if not your project, please let me know so that I can forward to correct person and still get the answer by Apr 27.

Thanks,

Pat  
502-627-3811

Clark, Ed

---

**From:** Stratman, Paul  
**Sent:** Monday, May 09, 2011 4:10 PM  
**To:** Singleton, Janna; Leenerts, Patricia  
**Cc:** Murphy, Kevin; Crescente, Angela  
**Subject:** RE: Project MAN414

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Miles and miles of it.

---


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Just to clarify and prevent further emails...

Is your question – Did the tasks 6THMARRET and JEF13THINV have cut, cap and purge associated with them in which the pipe remained in the ground without gas flowing through it; therefore, making them ARO retirements?

*Janna*

 Think Green! Before printing this e-mail, ask the question, is it necessary?

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Thanks,



Pat  
502-627-3811

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Thanks,

Pat  
502-627-3811

**Clark, Ed**

---

**From:** Leenerts, Patricia  
**Sent:** Thursday, August 25, 2011 8:47 AM  
**To:** Crescente, Angela  
**Subject:** ARO comments on LSMR414, PMR414 and MAN414 project retirements

Angela, I think that you will find the last email, from the stream attached, from Paul Stratman interesting in each of these emails.



Re: Project  
MAN414



RE: Project  
MAN414

**Clark, Ed**

---

**From:** Stratman, Paul  
**Sent:** Monday, May 16, 2011 5:56 PM  
**To:** Leenerts, Patricia; Singleton, Janna  
**Cc:** Murphy, Kevin  
**Subject:** Re: Project MAN414

The Dresser 31s are the cap part of that whole "cut, cap and purge" discussion that keeps coming up.

From my Blackberry device, please excuse any typos.

---

**From:** Leenerts, Patricia  
**Sent:** Monday, May 16, 2011 05:14 PM  
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**Cc:** Stratman, Paul; Murphy, Kevin  
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**Clark, Ed**

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Thanks,

Pat  
502-627-3811

**Clark, Ed**

---

**From:** Kehdy, Angele  
**Sent:** Wednesday, August 24, 2011 8:36 AM  
**To:** Crescente, Angela  
**Subject:** ARO Reg Asset

Angela,

I am looking for the journal entry that is booked for the amortization of the ARO reg asset and Megan Kuhl said that you are the one who gives her the numbers. Do you have time today to show me the journal entry that is done?

Let me know.

Thank you,

*Angela Derjani Kehdy*  
Financial Planning and Controlling  
LG&E and KU Energy Services  
(502) 627-3940



**Clark, Ed**

---

**From:** Dowdell, Richard  
**Sent:** Tuesday, August 23, 2011 3:58 PM  
**To:** Crescente, Angela  
**Subject:** ARO Settlement Review

Angela – The list below has my selections for the ARO settlement review for SOX control 040.01.10. I'd like to see how they were handled, the calculations, etc. I'm not sure exactly what documentation you will have, so we can discuss it if you like. Let me know what time you will be able to discuss the samples.



C.2.10 - FI11S040 -  
4-18-2011....

Thanks,  
Rich

LG&E and KU Energy LLC  
Audit Services Department  
SOX Controls Testing - Cycle 040 Fixed Assets  
FI11S040  
C.2.10 - ARO Settlements Review  
2011

Auditor RHD

The list of assets with ARO activity settled between January and July 2010 was supplied by Angela Crescente - Accounting Analyst with Property Accounting. While none of the assets were disposed of, the assets were replaced with other ARO assets. The term settlement is defined as a replacement of one asset for another similar asset and not the complete removal of an entire asset.

Project	Task	Description
122452	CP ASBESTOS	PRESTON CITY GATE
124380	CP ARO09-4AH-R	CR4 ASBESTOS
124380	CP ARO09-5BL-R	CR5 ASBESTOS
124380	CP ARO09-6BL-R	CR6 ASBESTOS
124842	CP ASBESTOS	PRESTON CITY GATE
126160	CP ASBESTOS	TY3 ASBESTOS
127280	CP ARO ASBESTOS	MILL CREEK 2 ASB
AROMC0241	CP 1755793	MC Landfill

Project	Task	ARO	Population
112767	CP ARO2010	MC Landfill	1
120578	CP RETIRE MAIN	GAS MAINS AND SERVICE ABANDONMENTS	2
122452	CP ASBESTOS	PRESTON CITY GATE	3
123187	CP AROTY3ASB2008	TY3 ASBESTOS	4
124001	CP ASBESTOS	GR3 ASBESTOS	5
124260	CP ASBESTOS	BR1 ASBESTOS	6
124380	CP ARO09-4AH-R	CR4 ASBESTOS	7
124380	CP ARO09-5BL-R	CR5 ASBESTOS	8
124380	CP ARO09-6BL-R	CR6 ASBESTOS	9
124798	CP ASBESTOS	MAGNOLIA 235120	10
124798	CP ASBESTOS	MAGNOLIA 235300	11
124798	CP ASBESTOS	MAGNOLIA 235600	12
124802	CP ASBESTOS	MULDRAUGH 235120	13
124802	CP ASBESTOS	MULDRAUGH 235300	14
124802	CP ASBESTOS	MULDRAUGH 235600	15
124831	CP PLUG WELL-CTR	Center GSF UGS (Wells)	16
124831	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)	17
124831	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)	18
124842	CP ASBESTOS	PRESTON CITY GATE	19
126057	CP ASBESTOS	BR2 ASBESTOS	20
126160	CP ASBESTOS	TY3 ASBESTOS	21
126421	CP PLUG WELL-CTR	Center GSF UGS (Wells)	22
126421	CP PLUG WELL-DRI	Doe Run GSF UGS (Wells)	23
126421	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)	24
126421	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)	25
126421	CP PLUG WELL-MUL	Muldraugh GSF UGS (Wells)	26
127259	CP ASBESTOS	BR1 ASBESTOS	27
127280	CP ARO ASBESTOS	MILL CREEK 2 ASB	28
127297	CP ASBESTOS	BR2 ASBESTOS	29
130720	CP ASBESTOS	MILL CREEK 1 ASB	30
AROMC0241	CP 1755793	MC Landfill	31
LSMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS	32
PMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS	33

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Monday, August 22, 2011 5:04 PM  
**To:** Crescente, Angela  
**Subject:** ARO reval issues

A few other items we need to consider:

CSAPR—a disclosure in the Q  
The impact of the upcoming life assessment study  
SCR catalyst and need for an ARO.

We need to have some numbers and be able to meet with Shannon hopefully by mid September.

*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*

**Clark, Ed**

---

**From:** Ritchey, Stacy  
**Sent:** Thursday, July 21, 2011 7:25 PM  
**To:** Crescente, Angela  
**Cc:** Hudson, Rusty; Wiseman, Sara; Neal, Susan  
**Subject:** IMEA/IMPA Partner Reimbursement Task for ARO

Angela,

As I was entering the budget for the TC CCR Landfill Phase I & II (Projects 127134,127135,134055, & 134056) I realized we would need IMEA/IMPA partner reimbursement tasks to go against the ARO task we are going to use for the capping of the landfills. However, when I set them up (CP\_ARO IMEA and CP\_ARO IMPA) I got a cross validation rule stating the 676 (Customer Payment) exp. type is not valid account with 108799. This is not an issue until 2015. Would loading the numbers at Net instead of Gross be ok, or do I need to submit a GLAFF combination change request to allow the 676 expenditure type to work with account 108799?

Thanks,

Stacy Ritchey  
Sr Budget Analyst  
Project Engineering  
BOC Phone: (502) 627-4388  
Fax: (502) 217-4980

**Clark, Ed**

---

**From:** PowerPlantAlerts@lge-ku.com  
**Sent:** Tuesday, July 19, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

Project 134560 has ARO

[login to powerplant](#)

**Clark, Ed**

---

**From:** Plant Support <support@pwrplan.com>  
**Sent:** Tuesday, July 12, 2011 3:36 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra; Ogilvie, Jim  
**Subject:** RE: ARO reclass to 182 regulatory entries [ ref:00D6KJDN.5006DvSco:ref ]

We will follow up with Jim on the information you gave him when he was on site.

Thanks,

Elizabeth Cowart  
PowerPlant Support  
770.937.3000  
ref:00D6KJDN.5006DvSco:ref

Clark, Ed

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Thursday, July 07, 2011 10:28 AM  
**To:** Crescente, Angela  
**Subject:** [Case # 00002971] - RE: ARO reclass to 182 regulatory entries

Thank you for contacting PowerPlan Support. We have recently implemented a new case management tool. By contacting us through email, your request will automatically create a case and be placed in the appropriate queue (Plant, PowerTax, Property Tax, Tax Provision) and you will immediately receive confirmation with a case number. This will enable us to provide faster and better service while providing a clear basis for communication and updates regarding your case. Please be sure to send your case to support directly, rather than individual consultants, in order to insure your case is properly prioritized and tracked, and enabling you to receive appropriate updates. Please reply to your response from PowerPlan support for future email communication, or reference your case number should you wish to call with more detail.

Your request has been received and assigned case number 00002971.

Thank You  
PowerPlan Support  
ref:00D6KJDN.5006DvSco:ref



Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Thursday, July 07, 2011 10:27 AM  
**To:** 'PowerPlant Support'  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana; Ogilvie, Jim  
**Subject:** RE: ARO reclass to 182 regulatory entries

Tracking:	Recipient	Read
	'PowerPlant Support'	
	Wiseman, Sara	Read: 7/7/2011 11:02 AM
	Kinder, Debra	Read: 7/7/2011 11:18 AM
	Wacker, Diana	Read: 7/7/2011 10:40 AM
	Ogilvie, Jim	

Support,

This report is still not showing what I need it to show, so I believe there is still confusion regarding what I need. I have copied Jim Ogilvie on this email because I gave him some support/screenshots on what I need done when he was here in May. He also helped me set up the reg entries in March that I needed in the hopes that they would make the report work when I actually performed the work in PowerPlant. So, I figured I should go ahead and follow the procedure for sending this through support as this happened before the new procedure was put into place.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, April 13, 2011 11:22 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

I create new versions of each report and sent them to Nick to be included in the next rebuild. Whenever this new rebuild is made available, let me know, and I'll help you modify the report setup in Powerplant to point to the new reports so you can test the new reports.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 13 April, 2011 9:35 AM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Sure thing, you go to Assets>ARO>Reg Entry>Reports and it is report number ARO-4005.

By the way, I remembered on the way home last night that I have this same problem on report "Reg-1001" so the asset adjustment that I did is not showing up on this report by asset either. I'm sorry, I should of thought of that sooner. This report is in the same location as the one above.

Charnas

Also, Nick Alexander is here today and tomorrow working on some things for us including simple formatting tweaks on my reports, but he doesn't want to send them to the build until you are finished so he doesn't cause you any trouble. So he wanted me to keep him posted of when you are completed with your changes.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, April 13, 2011 9:26 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,  
Can you tell me where in Powerplant you go to get to this report? I've lost my notes on how to find this report again.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 12 April, 2011 8:32 AM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Any word on the progress of the report? Just checking on it because I will be using it for my monthly account reconciliations.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 3:09 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Report change won't be a quick turn around.  
It will likely be next week before you'll get the report changed.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 1:48 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Charnas

I need to post these asset adjustments today since we have to close first thing in the morning. Are you expecting the report modification to happen today or can I go ahead and post these transactions and fix the report later? Is there anything else I can do to help?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 9:35 AM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela called and provided clarification. I still had journal entries on the brain. The report can be modified to include asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Tuesday, 05 April, 2011 9:16 AM  
**To:** 'Crescente, Angela'; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

No, there is no way this report can show the asset\_id information for the entry you are asking about. You could run a query using the CPR Query tool window if you wanted to reconcile the asset adjustments dollars for the depr group.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 8:33 AM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

I am OK with the entry including both assets. Is there some way I can modify the report to show what happened by asset?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Monday, April 04, 2011 5:00 PM  
**To:** Crescente, Angela; Jim Ogilvie

**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,

The entry for \$ 9,754,171.05 that includes the two assets is a one line transaction due to both assets being in the same depr group, and the entry information is setup to pull from the depr\_ledger table, which is a table where the dollars are by depr group, and it doesn't appear that the setup can be changed to retain asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Monday, 04 April, 2011 4:11 PM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO reclass to 182 regulatory entries  
**Importance:** High

OK, accidentally told a lie (I'm sorry, it's Monday). I kept looking and now I can see where the reg entries fired, but since there was more than one done on LGE, it combined them which makes sense. However, my report does not reflect this activity by asset. Any ideas on how to make that work? I thought it worked before, but I must be mistaken. The other asset was Purc-MC Ash Pond for \$4,696,835.38.

PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cot. Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Account Type	GL Account	Account Balance
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARO	\$76,573.91
- Depreciation Neuti	182317-OTHER REGULATORY ASSETS ARO	\$-31,807.14
- Transition ARC Dej	182317-OTHER REGULATORY ASSETS ARO	\$31,807.14
- Transition ARO Act	182317-OTHER REGULATORY ASSETS ARO	\$18,965.01
	Balance:	\$-5,057,335.67

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 Print...  
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 Save Rows  
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Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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**Clark, Ed**

---

**From:** Porter, Janice  
**Sent:** Monday, June 27, 2011 12:27 PM  
**To:** Crescente, Angela  
**Cc:** Skaggs, John  
**Subject:** FW: ARO Quarterly Questionnaire.docx

Angela,

There are charges to a regular removal task. Should we set up an ARO task and move the charges?  
Thanks,  
Janice

---

**From:** Allen, Lisa  
**Sent:** Monday, June 27, 2011 11:48 AM  
**To:** Porter, Janice; Skaggs, John  
**Subject:** FW: ARO Quarterly Questionnaire.docx

John, thanks for the response.

Janice, see answer to question 3 – was that treated as an ARO and/or should it be?

Lisa

---

**From:** Skaggs, John  
**Sent:** Monday, June 27, 2011 11:34 AM  
**To:** Allen, Lisa  
**Subject:** ARO Quarterly Questionnaire.docx



ARO Quarterly  
Questionnaire.d...

Lisa,

Attached questionnaire for Magnolia.

Thanks,  
John



**ARO Quarterly Questionnaire**

Please answer the following questions.

1. To the best of your knowledge, are you aware of any changes that would impact the valuation of the asset retirement obligations ("AROs") that have been identified? Such changes may include changes in laws, statutes, regulations, precedents set by the Company, contracts, permits, certificates of need, right of way agreements, market costs or available resources for remediation, or planned retirements. (Please list)

**Answer: No**

2. To the best of your knowledge, are you aware of any acquired assets, land, or leases that will create an ARO? (Please list, include location)

**Answer: No.**

3. To the best of your knowledge, are you aware of any new construction that will create an ARO? (Please list, include location)

**Answer: Replaced 1,300' of 4" bare pipe at Center during April/May 2011.**

4. In certain very limited circumstances the Company could be determined to be obligated to retire an asset or a group of assets based upon a commitment made to a third party. Are you aware of any communications either written or verbal between representatives of LKE and third parties with respect to retirement of an asset or a group of assets owned by LKE at the end of operations or a specific point in time? If so, please list the identities of the LKE representatives and assets involved, as well as the third party or parties who were involved and the context in which the discussions took place.

**Answer: No.**

**Completed by: \_\_\_\_\_ John W. Skaggs \_\_\_\_\_**

**Date: \_\_\_\_\_ 6-27-11 \_\_\_\_\_**

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Friday, June 24, 2011 1:29 PM  
**To:** Crescente, Angela  
**Subject:** FW: ARO Survey - Transmission

---

**From:** Miller, Jon  
**Sent:** Friday, June 24, 2011 12:52 PM  
**To:** Wiseman, Sara  
**Subject:** ARO Survey - Transmission

Sara,

Attached is the completed 2<sup>nd</sup> quarter 2011 ARO survey for Transmission.

Jon



20110624122855....

ARO Quarterly Questionnaire

Please answer the following questions.

1. To the best of your knowledge, are you aware of any changes that would impact the valuation of the asset retirement obligations ("AROs") that have been identified? Such changes may include changes in laws, statutes, regulations, precedents set by the Company, contracts, permits, certificates of need, right of way agreements, market costs or available resources for remediation, or planned retirements. (Please list)

**Answer:**

I am not aware of any.

2. To the best of your knowledge, are you aware of any acquired assets, land, or leases that will create an ARO? (Please list, include location)

**Answer:**

I am not aware of any.

3. To the best of your knowledge, are you aware of any new construction that will create an ARO? (Please list, include location)

**Answer:**

I am not aware of any.

4. In certain very limited circumstances the Company could be determined to be obligated to retire an asset or a group of assets based upon a commitment made to a third party. Are you aware of any communications either written or verbal between representatives of LKE and third parties with respect to retirement of an asset or a group of assets owned by LKE at the end of operations or a specific point in time? If so, please list the identities of the LKE representatives and assets involved, as well as the third party or parties who were involved and the context in which the discussions took place.

**Answer:**

I am not aware of any.

Completed by: Roby Tumb

Date: 6-24-11

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Thursday, June 23, 2011 4:41 PM  
**To:** Crescente, Angela  
**Subject:** FW: ARO Quarterly Questionnaire.docx

I received a hard copy from Rusty. It is in my windowsill.

---

**From:** Garrett, Chris  
**Sent:** Friday, June 17, 2011 9:37 AM  
**To:** Wiseman, Sara  
**Subject:** ARO Quarterly Questionnaire.docx

I hope an electronic submittal will work. Let me know if you need a hard copy.

Chris



ARO Quarterly  
Questionnaire.d...

**ARO Quarterly Questionnaire**

Please answer the following questions.

1. To the best of your knowledge, are you aware of any changes that would impact the valuation of the asset retirement obligations ("AROs") that have been identified? Such changes may include changes in laws, statutes, regulations, precedents set by the Company, contracts, permits, certificates of need, right of way agreements, market costs or available resources for remediation, or planned retirements. (Please list)

**Answer: No**

2. To the best of your knowledge, are you aware of any acquired assets, land, or leases that will create an ARO? (Please list, include location)

**Answer: No**

3. To the best of your knowledge, are you aware of any new construction that will create an ARO? (Please list, include location)

**Answer: No**

4. In certain very limited circumstances the Company could be determined to be obligated to retire an asset or a group of assets based upon a commitment made to a third party. Are you aware of any communications either written or verbal between representatives of LKE and third parties with respect to retirement of an asset or a group of assets owned by LKE at the end of operations or a specific point in time? If so, please list the identities of the LKE representatives and assets involved, as well as the third party or parties who were involved and the context in which the discussions took place.

**Answer: No**

**Chris Garrett**

**Completed by:** \_\_\_\_\_

**6/17/2011**

**Date:** \_\_\_\_\_

Clark, Ed

---

**From:** Orlando, Pam  
**Sent:** Monday, September 26, 2011 3:03 PM  
**To:** Crescente, Angela  
**Subject:** FW: SCR Catalyst and Possible ARO Treatment

---

**From:** Orlando, Pam  
**Sent:** Monday, September 26, 2011 9:59 AM  
**To:** Rose, Bruce  
**Subject:** RE: SCR Catalyst and Possible ARO Treatment

Bruce,

So sorry I didn't get back to you before my vacation! I have attached the full EPRI report and the most recent update below. The last item includes two key tables from the reports that may provide the information you need. Disposal cost is estimated at \$125 per cubic meter (2008 dollars). We own 6600 cubic meters of catalyst currently (628 cubic meters are being regenerated now and 337 cubic meters will be regenerated in early 2012).

There are several re-cycling options, identified in item 3 below. We will pursue the steel making application when the time comes, as Hitachi has indicated they have a contact nearby who may be interested in recycling.

I hope this is what you need.

*Pam Orlando*



2010 Tech Update  
1019710.pdf



1015750.pdf



20110926093043....

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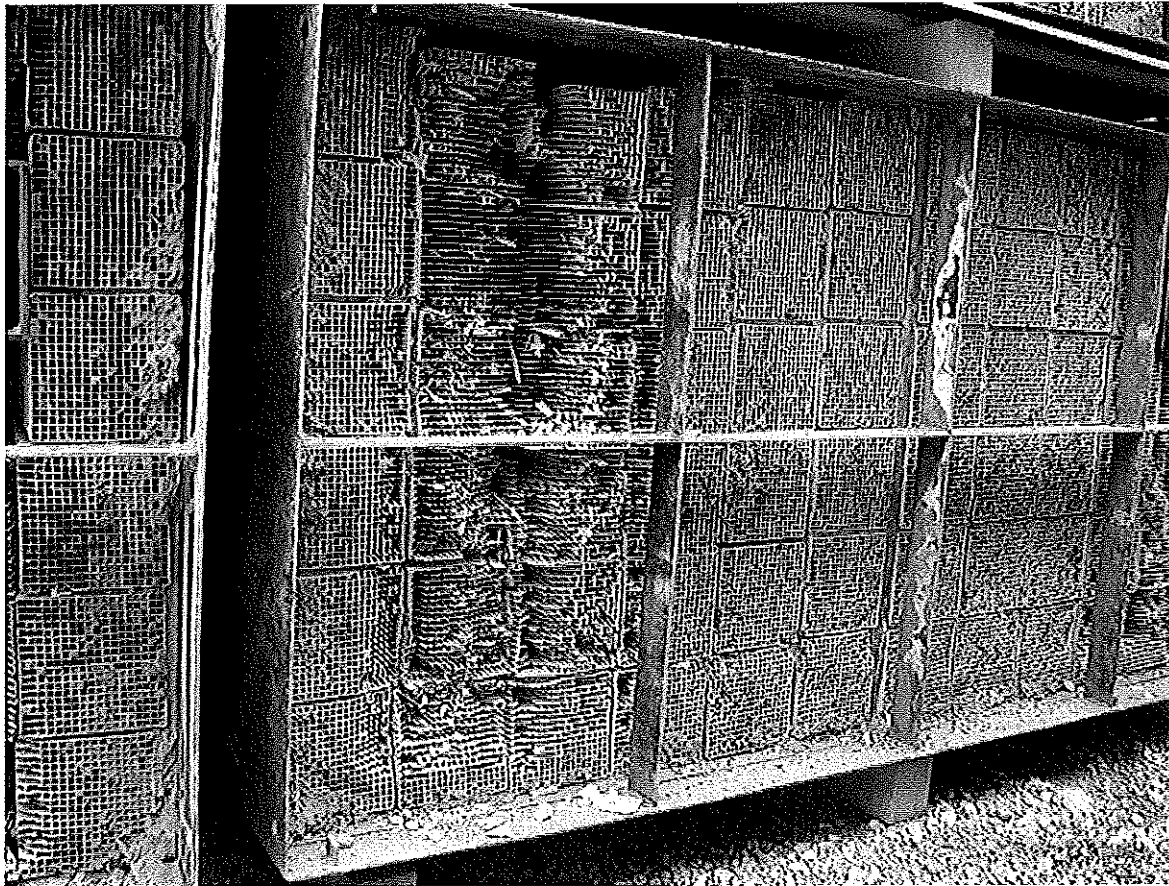
**From:** Rose, Bruce  
**Sent:** Thursday, September 22, 2011 11:02 AM  
**To:** Orlando, Pam  
**Subject:** SCR Catalyst and Possible ARO Treatment  
**Importance:** High

Pam,

Sorry, but Sara asked if I had heard back from you regarding the possible ARO treatment of catalyst layers once they are no longer viable for refurbishment. She has a meeting to discuss this topic Monday AM. Thanks

## Selective Catalytic Reduction Catalyst Recycle and Re-Use Options

1019710







# **Selective Catalytic Reduction Catalyst Recycle and Re-Use Options**

1019710

Technical Update, December 2010

EPRI Project Manager

A. Jimenez

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**W.S. Hinton & Associates**

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## ACKNOWLEDGMENTS

The following organization, under contract to the Electric Power Research Institute (EPRI), prepared this report:

W.S. Hinton & Associates  
1612 Smugglers Cove Circle  
Gulf Breeze, FL 32563

Principal Investigator  
W. Hinton, Ph.D., P.E.

This report describes research sponsored by EPRI.

---

This publication is a corporate document that should be cited in the literature in the following manner:

*Selective Catalytic Reduction Catalyst Recycle and Re-Use Options*. EPRI, Palo Alto, CA: 2010. 1019710.



## ABSTRACT

Given the widespread implementation of selective catalytic reduction (SCR) technology, there is a great deal of interest in finding viable recycle/re-use routes for spent catalyst as an alternative to landfilling. The current effort has focused on detailed evaluation of several recycle/re-use processes that were identified in previous EPRI studies. These recycle/re-use technologies include mineral filler applications, incorporation into wet-bottom boiler slag, cement kiln co-processing, and use in iron/steel-making applications.

Efforts related to mineral filler applications focused on laboratory analyses designed to qualify the spent catalyst material for use in applications such as asphalt paving materials, asphaltic shingles, and plastic/polymer filler applications. These laboratory analyses were based primarily on current industry standard analyses commonly used for the target applications. This effort represents a first step in commercializing a mineral filler recycle/re-use route.

A detailed engineering analysis was performed to evaluate incorporation of spent catalyst into wet-bottom boiler slag as a potential spent catalyst re-use route. The process involves adding catalyst by various means to a wet-bottom boiler where the material becomes homogeneously incorporated into the boiler slag. Various parameters, such as catalyst feed rate, plant emissions, and balance-of-plant effects, were evaluated as a way of qualifying the technology for potential further development.

Cement kiln co-processing of spent catalyst was investigated to determine the applicability of the material to the cement manufacturing process. Various engineering analyses were conducted, and, in particular, a case study was performed with a major co-processor to determine various process parameters and development needs. Cement kiln co-processing is a particularly attractive potential recycle/re-use route for spent catalysts since co-processing is currently conducted on a large scale with varied wastes. The familiarity of the cement industry in co-processing wastes, and the infrastructure already in place, make this recycle/re-use route particularly attractive in terms of the limited development that would be required to fully implement the technology as applied to spent SCR catalysts.

The final recycle/re-use route evaluated relates to use of spent catalyst in iron/steel-making processes where the material would potentially act as a source of raw metallic materials, or as a replacement for slagging/fluxing agents used in iron/steel manufacture. The efforts focused primarily on discussions with various iron/steel manufacturers and research consortiums as an initial phase in determining overall feasibility of the proposed process.

The project has made significant headway in evaluating potential technologies for the recycle/re-use of spent SCR catalysts. The results will provide guidance to the utility industry in terms of which technologies are the most technically viable, commercially developed, and economically attractive.

### Keywords

SCR

Spent catalyst

Catalyst recycle and re-use

Bituminous concrete paving

Selective catalytic reduction

Waste disposal

Cement kiln co-processing



## CONTENTS

<b>1 INTRODUCTION .....</b>	<b>1-1</b>
Project Purpose and Background .....	1-1
SCR Implementation and Spent Catalyst Generation Rate .....	1-1
Aged Catalyst Composition.....	1-3
<b>2 UTILIZATION OF SPENT SCR CATALYST IN MINERAL FILLER APPLICATIONS.....</b>	<b>2-1</b>
Introduction .....	2-1
Characteristics of the Spent Catalyst Utilized in the Study .....	2-2
Composition of Spent Catalyst Utilized in the Study .....	2-2
Leaching Behavior of Spent Catalyst .....	2-3
Filler Profile Testing .....	2-3
Particle Size Distributions .....	2-3
Viscosity and Density .....	2-6
Gradation Testing.....	2-7
Rigden Voids Testing.....	2-7
Economics.....	2-10
Conclusions.....	2-10
<b>3 INCORPORATION OF SPENT SCR CATALYST WITH WET-BOTTOM BOILER SLAG ....</b>	<b>3-1</b>
Introduction .....	3-1
Process Mechanics.....	3-2
Point A – Catalyst Introduced with Primary Coal Feed .....	3-2
Point B – Catalyst Introduced with Fly Ash Recirculation Stream.....	3-3
Point C – Catalyst Introduced with Limestone Feed .....	3-3
Point D – Direct Catalyst Injection.....	3-3
Applicability of Boiler Type.....	3-5
Process Performance.....	3-5
Laboratory Testing .....	3-5
Case Study #1 – PRB Fuel .....	3-10
Background.....	3-10
Analysis Results.....	3-12
Case Study #2 – Eastern Bituminous Fuel .....	3-17
Background.....	3-17
Analysis Results.....	3-19
Economics.....	3-25
Conclusions.....	3-25
<b>4 UTILIZATION OF SPENT CATALYST IN THE CEMENT MANUFACTURE (CO-PROCESSING).....</b>	<b>4-1</b>
Introduction .....	4-1

Cement Manufacturing Process Description.....	4-1
Rotary Kiln Design .....	4-2
Cement Kiln Emissions .....	4-6
Co-Processing of Waste Materials in Cement Manufacture .....	4-6
Introduction .....	4-6
Types of Wastes Co-Processed.....	4-7
Case Study.....	4-9
Introduction .....	4-9
Hypothetical Source Unit and Catalyst Amounts .....	4-10
Catalyst Characteristics .....	4-10
Cement Manufacturer/Co-Processor Evaluation.....	4-11
Conclusions.....	4-21
<b>5 UTILIZATION OF SPENT CATALYST IN IRON/STEEL-MAKING.....</b>	<b>5-1</b>
Introduction .....	5-1
Contacted Firms.....	5-1
Primary Contact Firms .....	5-1
Findings.....	5-2
Major Hurdles to Commercialization .....	5-2
Value of Raw Materials Present in Spent Catalyst.....	5-2
Technical Liability in Utilizing Spent Catalyst.....	5-2
Limited Supply of Spent Catalyst Material .....	5-3
Large Number of Intermittent Generators .....	5-3
Variable Composition of Spent Catalyst Material.....	5-3
Catalyst Contaminants .....	5-4
Industry Familiarity with Processing Waste Materials .....	5-4
Economics.....	5-4
Conclusions.....	5-4
<b>6 PROJECT SUMMARY AND CONCLUSIONS .....</b>	<b>6-1</b>
<b>7 RECOMMENDED FUTURE WORK .....</b>	<b>7-1</b>
Cement Kiln Co-Processing .....	7-1
Mineral Filler Applications .....	7-1
Wet-Bottom Boiler Slag Incorporation.....	7-1
Iron/Steel-Making Applications.....	7-2



## LIST OF FIGURES

Figure 1-1 Projected Coal-Fired U.S. SCR Capacity .....	1-2
Figure 1-2 Catalyst Available for Recycle or Disposal as Function of Reconditioning Rate .....	1-3
Figure 2-1 Particle Size Distribution of Crushed Catalyst .....	2-4
Figure 2-2 Particle Size Distribution of PRB Fly Ash .....	2-5
Figure 2-3 Particle Size Distribution of Catalyst/PRB Fly Ash Blend .....	2-5
Figure 2-4 Particle Size Distribution of Eastern Bituminous Fly Ash .....	2-5
Figure 2-5 Particle Size Distribution of Catalyst/Eastern Bituminous Fly Ash Blend .....	2-6
Figure 3-1 Generalized Boiler Schematic with Possible Catalyst Addition Points Noted .....	3-4
Figure 3-2 Fly Ash Production Rate vs. Catalyst Feed Proportion.....	3-7
Figure 3-3 Fly Ash LOI vs. Catalyst Feed Proportion .....	3-7
Figure 3-4 Titania Concentrations Vs. Catalyst Feed Proportion.....	3-8
Figure 3-5 Vanadium Concentrations Vs. Catalyst Feed Proportion .....	3-9
Figure 3-6 Tungsten Concentrations Vs. Catalyst Feed Proportion .....	3-10
Figure 3-7 Comparative Catalyst Effect Due to Calcium and Arsenic Levels in Fuel .....	3-16
Figure 3-8 Comparative Catalyst Effect Due to Calcium and Arsenic Levels in Fuel .....	3-22
Figure 4-1 Generalized Schematic of Rotary Cement Kiln .....	4-4
Figure 4-2 Primary Cement-Forming Reactions and Corresponding Temperatures .....	4-5
Figure 4-3 Preferred Waste Management Hierarchy .....	4-7
Figure 4-4 Example Generalized Decision Tree for Waste Acceptance .....	4-9
Figure 4-5 Process Scenario for the Co-Processing of SCR Catalyst .....	4-14



## LIST OF TABLES

Table 1-1 XRF Composition Data for 274 Catalyst Samples .....	1-5
Table 1-2 Approximate Metal/Catalyst Weight Fractions for General Catalyst Types .....	1-6
Table 2-1 Catalyst Composition Data by XRF .....	2-2
Table 2-2 Leaching Results for Raw Spent Catalyst .....	2-3
Table 2-3 Mean and Median Particle Sizes of Catalyst and Fly Ash Samples .....	2-4
Table 2-4 Viscosity and Density Measurements .....	2-6
Table 2-5 Mineral Filler Gradation Test Results .....	2-7
Table 2-6 Results of Rigden Voids Testing .....	2-9
Table 3-1 Summary of Laboratory Testing Conditions .....	3-6
Table 3-2 Assumed Boiler Design Characteristics.....	3-11
Table 3-3 Coal Ultimate Analysis.....	3-11
Table 3-4 Slag and Catalyst Composition.....	3-12
Table 3-5 Analysis Results as a Function of Catalyst Feed Proportion .....	3-14
Table 3-6 Equivalent Coal Arsenic Concentration Due to Catalyst Arsenic Content .....	3-15
Table 3-7 Assumed Boiler Design Characteristics.....	3-17
Table 3-8 Coal Ultimate Analysis.....	3-18
Table 3-9 Slag and Catalyst Composition.....	3-18
Table 3-10 Analysis Results as a Function of Catalyst Feed Rate .....	3-20
Table 3-11 Equivalent Coal Arsenic Concentration Due to Catalyst Arsenic Content .....	3-21
Table 3-12 Potential Total Arsenic Released Due to Catalyst Due to Coal Combustion .....	3-24
Table 3-13 Potential Total Arsenic Released Due to Catalyst Arsenic Content (200 ton basis) .....	3-24
Table 4-1 Common Wastes Co-Processed in Cement Kilns .....	4-8
Table 4-2 Assumed Spent Catalyst Source Information and Quantity.....	4-10
Table 4-3 Catalyst Sample Bulk Elemental Composition.....	4-11
Table 4-4 Summary of Evaluation Findings .....	4-12
Table 4-5 Economic Analysis Assumptions .....	4-18
Table 4-6 Co-Processing versus Landfill Disposal Economics Analysis .....	4-20
Table 6-1 Findings Summary .....	6-1



# 1

## INTRODUCTION

### Project Purpose and Background

Over the past several years, EPRI has addressed various issues related to catalyst regeneration, rejuvenation, cleaning, recycle/re-use, and disposal. In particular, studies performed over the period 2007 through 2009 identified several potential recycle/re-use technologies that warranted further investigation, as listed below.<sup>1</sup> This report details the findings of those investigations.

- **Mineral Filler Applications** – Testing was conducted to investigate the utilization of spent catalyst as a mineral filler in various applications including bituminous concrete applications.
- **Wet-Bottom Boiler Slag Incorporation** – An engineering study was performed to determine the general process applicability, and process parameters associated with injecting spent catalyst into wet-bottom boilers, resulting in the incorporation of the catalyst into the slag.
- **Cement Kiln Co-Processing** – A feasibility study was conducted to examine the utilization of spent catalyst as a raw feed to cement kilns (co-processing). Work included evaluations of spent catalyst by a commercial co-processor, as well as a detailed case study and general engineering analysis.
- **Iron/Steel-Making Applications** – A general feasibility analysis was made which focused on input from the iron and steel industry to determine the general applicability of spent catalyst material to the industry's various processes.

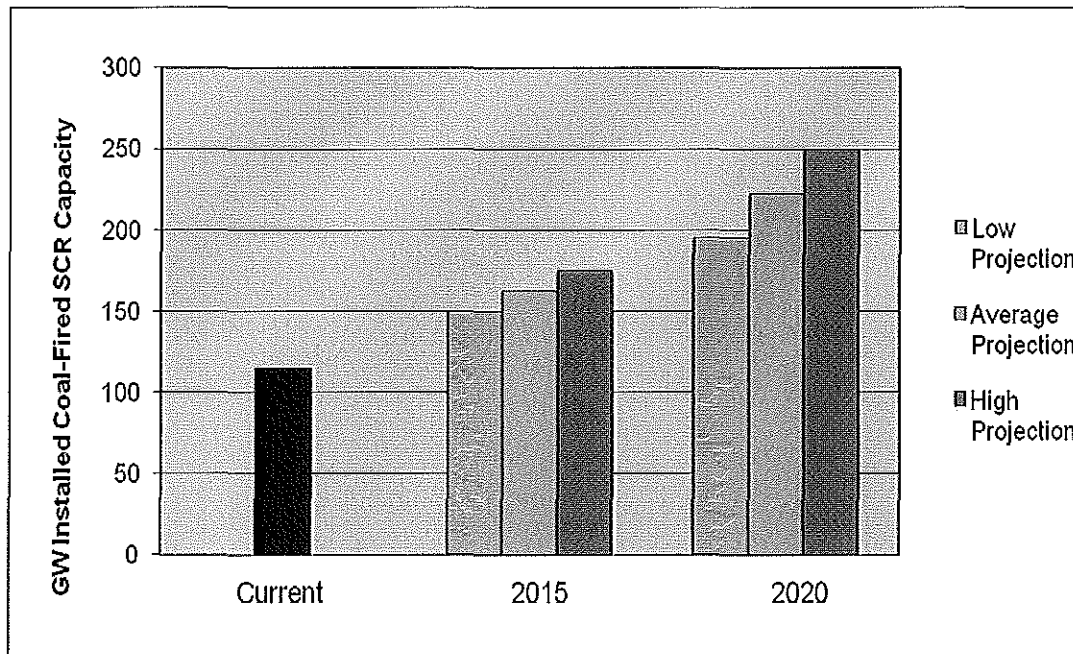
### SCR Implementation and Spent Catalyst Generation Rate

SCR is widely implemented on coal-fired boilers, with about 115 GW of capacity currently in place domestically. Previous EPRI work related to the above referenced reports projected coal-fired SCR capacity into the future. This information was updated for the current report, as shown in Figure 1-1. The projected coal-fired SCR capacity up to 2020 is given, based loosely on several published sources.<sup>2</sup>

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<sup>1</sup> See EPRI Reports: "SCR Catalyst Disposal, Recycle, and On-Site Washing/Rejuvenation Options," Product ID: 1016397, 3/31/08, "SCR Catalyst Disposal, Recycle, and On-Site Washing Options and Experience," Product ID: 1015750, 12/23/08, and "Selective Catalytic Reduction (SCR) Recycle, Re-Use and Disposal Options," Product ID: 1017554, 12/16/2009.

<sup>2</sup> Murphy, James T., National Energy Technology Laboratory, "Projection of U.S. Coal-Fired Power Plants Potentially Impacted by Excess SO<sub>3</sub> Emissions," DOE/NETL 2006 Environmental Controls Conference, May 16-18, 2006, Pittsburgh, PA.; Clean Coal Technology, Topical Report No. 23, May 2005.; "Environmental Technologies for Coal-Fired Power Plant," Turkish-American Clean Energy Conference, Istanbul, Turkey, January 29-30, 2008; Misc. trade information and presentations.



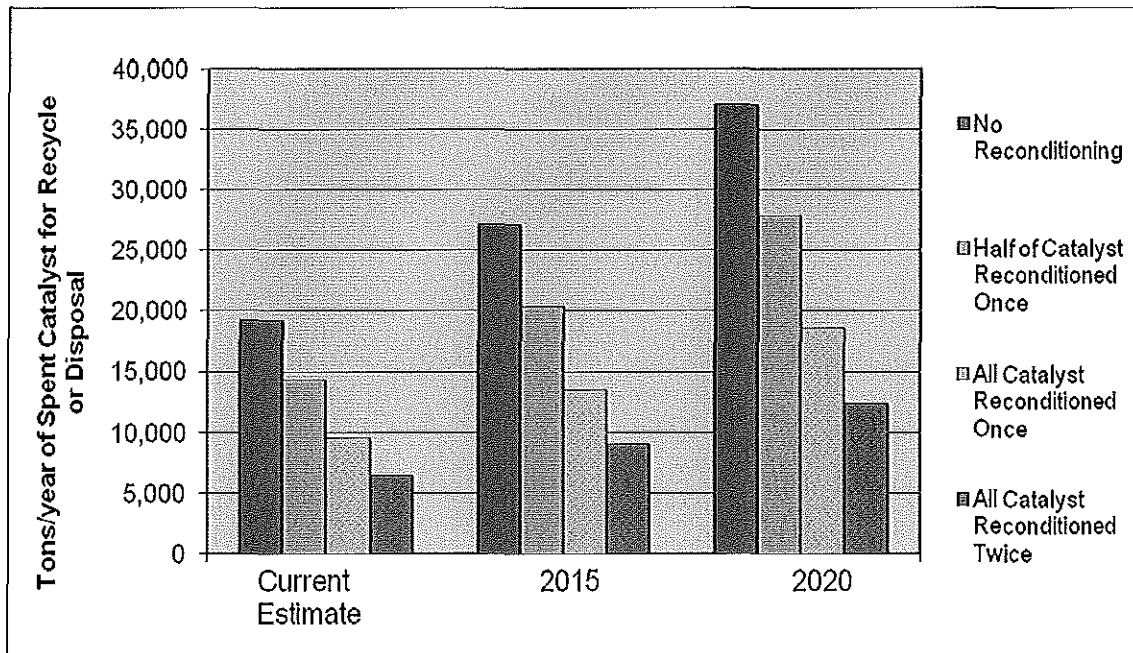
**Figure 1-1**  
**Projected Coal-Fired U.S. SCR Capacity**

This SCR implementation rate directly affects the potential spent catalyst generation rate, but additional factors, such as the catalyst deactivation rate, guaranteed life, and required deNOx levels, all influence the rate of spent catalyst generation. Given the large number of influencing factors, it is difficult to accurately project spent catalyst generation rates for the industry as a whole, especially into the relatively distant future. This is especially true since emerging catalyst technologies, or alternate NOx control technologies, could heavily affect long-term projections. As a result, depending on the estimation assumptions, predicted spent catalyst generation rates vary quite widely.

Notwithstanding the above mentioned difficulties in accurately predicting spent catalyst generation rates, an updated projection was developed for the coal-fired utility industry as a whole. For this projection, it was assumed that the “average” SCR installation requires roughly one ton of catalyst per MW of capacity. Note that this is an extremely rough estimate due to weight differences between catalysts, as well as other catalyst characteristics, such as activity, pitch, etc. In addition, unit specifics, such as desired guaranteed life and required NOx reduction, will also heavily affect the amount of catalyst required for any particular installation. It was further assumed that, on average, one third of the installed catalyst for any particular unit would require replacement every two years, consistent with roughly one layer of a three-layer reactor being replaced every two years. This estimate may be more frequent than many installations require, but has been utilized to account for the occasional facility having acute catalyst failures.

These assumptions allow for a very rough estimate of the U.S. spent catalyst generation rate to be determined on a yearly basis, as shown in Figure 1-2. Given that much of the catalyst that is considered spent may actually be reconditioned in some manner (cleaned, rejuvenated, or regenerated) to recover its activity, not all spent catalyst would actually be destined for recycle or

disposal. The rate at which spent catalyst will be reconditioned is difficult to determine, especially for projections into the distant future, thus the projections as shown in the figure have been made as a function of the level of reconditioning that is undertaken, on average, by the industry.



**Figure 1-2  
 Catalyst Available for Recycle or Disposal as Function of Reconditioning Rate**

The “No Reconditioning” case is equivalent to the expected spent catalyst regeneration rate as a whole (prior to any reconditioning activities), but it is clear that some reconditioning would take place, making the actual amount of catalyst requiring recycle or disposal somewhat lower. As the level of reconditioning increases, the amount of catalyst recycled or disposed will vary proportionately. Given that catalyst reconditioning is relatively prevalent in the industry, with many system owners choosing to recondition catalyst for their own use, or selling the spent catalyst to the reconditioning firms for future sale to other customers, a reasonable assumption for the rate of reconditioning might be the “All Catalyst Reconditioned Once” case. If this assumption holds, then the projected rate of spent catalyst requiring recycle or disposal will be on the order of 20,000 tons/year by 2020.

### **Aged Catalyst Composition**

Previous EPRI work developed chemical composition data for spent SCR catalysts as shown in Table 1-1.<sup>3</sup> These data were based on X-ray fluorescence (XRF) analyses (both bulk and surface) for 274 catalyst samples, representing a range of catalyst manufacturers, catalyst formulations,

<sup>3</sup> See: “SCR Catalyst Disposal, Recycle, and On-Site Washing Options and Experience,” EPRI Report No. 1015750, 12/3/2008.

fuels, boiler types, ages, etc. The data were acquired from a firm experienced in catalyst testing; thus, a relatively large database was available. On a composite basis, these data provide valuable information about catalyst composition for the SCR fleet, as a whole, and offer a basis to which any particular catalyst can be compared. One important parameter to consider is catalyst age. The data are based upon multiple samples of various ages, not necessarily samples acquired at the end of catalyst life. Thus, a significantly aged catalyst may, on average, have levels of poisons higher than those indicated by the average values in the table. Consequently, one might reasonably expect that the maximum arsenic level indicated, for example, would correspond to a catalyst that was applied to a high-arsenic fuel for a relatively long operational period. The age parameter applies primarily to catalyst poisons, since most primary catalyst components, as present at the time of manufacturing, will not change significantly with catalyst exposure. For recycle involving metals recovery, the levels of titanium, vanadium, tungsten, and molybdenum are of particular interest. Note that for niobium (Nb), thallium (Tl), and barium (as BaO), the sample set is considerably smaller than 274 samples – these analytes were not always quantified.



**Table 1-1**  
**XRF Composition Data for 274<sup>4</sup> Catalyst Samples**

Species	Sample Type	Average (%)	Standard Deviation	Maximum (%)	Minimum (%)
Titanium (TiO <sub>2</sub> )	Bulk	73.9	7.75	87.3	54.1
	Surface	64.8	13.3	89.8	24.9
Vanadium (V <sub>2</sub> O <sub>5</sub> )	Bulk	0.87	0.52	3.5	0.1
	Surface	0.85	0.55	4.3	0.22
Tungsten (WO <sub>3</sub> )	Bulk	5.26	5.39	21.0	0
	Surface	4.85	4.82	20.7	0
Molybdenum (MoO <sub>3</sub> )	Bulk	2.02	1.90	7.5	0.03
	Surface	1.61	1.52	7.3	0.03
Iron (Fe <sub>2</sub> O <sub>3</sub> )	Bulk	0.65	0.74	6.0	0.03
	Surface	1.20	1.04	5.9	0.17
Silicon (SiO <sub>2</sub> )	Bulk	10.39	4.36	26	3.7
	Surface	13.86	7.47	49.4	1.85
Aluminum (Al <sub>2</sub> O <sub>3</sub> )	Bulk	2.63	1.75	9.1	0.6
	Surface	4.02	2.53	13.2	0.42
Calcium (CaO)	Bulk	1.22	0.81	3.4	0.03
	Surface	1.76	1.3	11.5	0.03
Magnesium (MgO)	Bulk	0.28	0.17	0.72	0.03
	Surface	0.34	0.26	1.76	0.03
Barium (BaO)	Bulk	0.36	0.92	3.6	0
	Surface	0.76	1.17	3.2	0
Sodium (Na <sub>2</sub> O)	Bulk	0.19	0.22	1.64	0.01
	Surface	0.30	0.26	1.69	0.03
Potassium (K <sub>2</sub> O)	Bulk	0.17	0.16	1.57	0.03
	Surface	0.26	0.26	2.0	0.03
Sulfur (SO <sub>2</sub> )	Bulk	1.66	0.85	5.6	0.11
	Surface	5.2	4.3	32.8	0.11
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	Bulk	0.12	0.17	1.36	0.03
	Surface	0.39	0.49	2.7	0.03
Niobium (Nb)	Bulk	0.11	0.05	0.21	0.02
	Surface	0.10	0.10	0.95	0.04
Thallium (Tl)	Bulk	0.06	0.04	0.25	0.03
	Surface (not available)	NA	NA	NA	NA
Arsenic (As)	Bulk	7,186	6,384	26,470	10
	Surface	8,352	6,217	31,085	50

<sup>4</sup> Except for Nb, Tl, and BaO.

Table 1-2 gives a general guideline as to the ceramic and metal proportions of various catalyst types. This table should only be used as a general guideline – the catalyst manufacturer can give more definitive information for specific catalyst formulations and module designs. This information is particularly helpful when assessing the potential value of bulk metals that are present with the catalyst modules, and in the case of plate catalysts, the bulk metal associated with the screen supports. This information aids in the determination of how much actual ceramic material is available for recycle or disposal for any given tonnage of catalyst modules.

**Table 1-2**  
**Approximate Metal/Catalyst Weight Fractions for General Catalyst Types**

<b>Catalyst Type</b>	<b>Bulk Module Metal Fraction</b>	<b>Screen/Support Metal Fraction (SST)</b>	<b>Ceramic Catalyst Fraction</b>
Honeycomb	40%	NA	60%
Hybrid/Corrugated	10%	NA	90%
Plate	33%	33%	33%

# 2

## UTILIZATION OF SPENT SCR CATALYST IN MINERAL FILLER APPLICATIONS

### Introduction

One area of particular emphasis in the current research study is the utilization of spent catalyst as mineral filler in several applications. This work is closely related to prior work which investigated the use of catalyst in concrete-related applications (portland cement type). This previous work showed that the catalyst had no pozzolanic activity, but that it could potentially be used as an aggregate in certain applications. In particular, applications which did not have a high performance demand, such as strength performance, would likely be the most attractive. Using these previous findings as a basis, it was determined that several mineral filler applications could potentially be utilized for catalyst recycle/re-use. These mineral filler applications include:

- Bituminous Concrete (Paving Asphalt)
- Asphaltic Shingles
- Plastic/Polymer Products

In general, mineral fillers are used in various asphaltic, plastic, and rubber materials to impart various qualities such as strength, durability, and cohesiveness. The selection of a mineral filler for a particular application will depend on various parameters including technical applicability (filler physical and chemical characteristics), cost, availability, and handling logistics. Pulverized limestone is the most commonly utilized mineral filler, but many other materials are employed for the purpose, including various stone dusts, fly ash, crushed slags, silica, hydrated lime, portland cement, and naturally occurring mineral materials.

In the case of bituminous concretes (i.e. asphaltic concretes, or simply “paving asphalt”), mineral fillers are often used to fill voids between larger aggregate particles, increasing the density, strength, and durability of the resulting mixture. Technically, as defined by the Asphalt Institute, mineral fillers are a finely divided mineral product with at least 65 percent mass passing through a No. 200 (0.074 mm) sieve, with typically 100% of the material passing a No. 30 (0.60 mm) sieve. Mineral fillers generally make up less than 3 wt% of the hot mix asphaltic concrete.

For asphaltic shingle applications, mineral fillers are used to impart color, strength, and durability to the product, and to add bulk. Mineral fillers are especially important in adding sunlight and weather resistance, and to prevent rutting and cracking. Mineral fillers may comprise up to roughly 40% of the asphaltic shingle weight.

In traditional plastic/polymer applications, mineral fillers are used to replace a portion of the polymer material, thereby reducing cost, since the comparative filler versus polymer cost is generally quite low. However, many current plastic applications require that “functional” mineral fillers be used, which impart certain processing characteristics or finished material properties. For example, mineral fillers are often used to increase the temperature resistance of certain

polymers for specific high-temperature applications. Physical characteristics which are considered key to plastic/polymer applications include the particle size distribution, particle shape, surface area, dispersibility, and inherent color.

In order to confirm the applicability of spent catalyst to the above mineral filler uses, a number of laboratory analyses were conducted related to provide a general filler profile, as follows.

- Particle Size Distributions
- Viscosity and Density
- Gradation Analysis
- Rigden Voids Evaluation

**Characteristics of the Spent Catalyst Utilized in the Study**

Honeycomb SCR catalyst was sourced from a commercial utility boiler for use in this study. The catalyst was applied to a PRB-fired boiler, and was of conventional type and of relatively large pitch, consistent with high-dust applications. The chemical composition and leaching behavior of the raw spent catalyst sample were determined for reference purposes, as described below.

**Composition of Spent Catalyst Utilized in the Study**

The bulk composition of the catalyst utilized in the study was evaluated using X-Ray Fluorescence Spectroscopy (XRF). The data are shown in Table 2-1. Note that this analysis was utilized to determine the principal oxide components of the catalyst, rather than to determine trace levels of contaminants.

**Table 2-1  
Catalyst Composition Data by XRF**

Analyte	Quantity
SiO <sub>2</sub>	6.63 %
Al <sub>2</sub> O <sub>3</sub>	3.30 %
Fe <sub>2</sub> O <sub>3</sub>	0.40 %
SO <sub>3</sub>	2.85 %
CaO	0.00 %
Na <sub>2</sub> O	0.17 %
MgO	0.12 %
K <sub>2</sub> O	0.08 %
P <sub>2</sub> O <sub>5</sub>	0.31 %
TiO <sub>2</sub>	74.18 %
SrO	0.07 %
BaO	3.42 %
<b>Total</b>	<b>91.53%</b>

**Leaching Behavior of Spent Catalyst**

The leaching behavior of the raw spent catalyst was established to offer some baseline value as to the potential for contaminant leaching for the catalyst material itself. The leaching tests were performed using standard test methods,<sup>5</sup> which produced an aqueous leachate. The results of this testing are shown below in Table 2-2.

**Table 2-2  
Leaching Results for Raw Spent Catalyst**

Analyte	Leachate Concentration (mg/L)
Arsenic	0.032
Barium	0.096
Cadmium	<0.001
Chromium	0.005
Lead	0.008
Selenium	0.070
Silver	<0.001
Mercury	0.0011

**Filler Profile Testing**

A series of filler profile tests was conducted on the catalyst sample. These tests were conducted in conjunction with two reference fly ashes, since in many cases subsequent testing was conducted on catalyst/fly ash blends. The fly ashes also provided a benchmark for various parameters to which the catalyst could be compared. The fly ashes were acquired from large utility boilers, one firing PRB coal, and one firing eastern bituminous (EB) coal. The tests included such parameters as crushed catalyst particle size distribution (PSD), viscosity, specific gravity, and bulk density.

**Particle Size Distributions**

The particle size distributions<sup>6</sup> were measured for the catalyst sample, the reference fly ash samples, and two catalyst/fly ash blends. Table 2-3 shows the mean and median particle sizes for the various samples.

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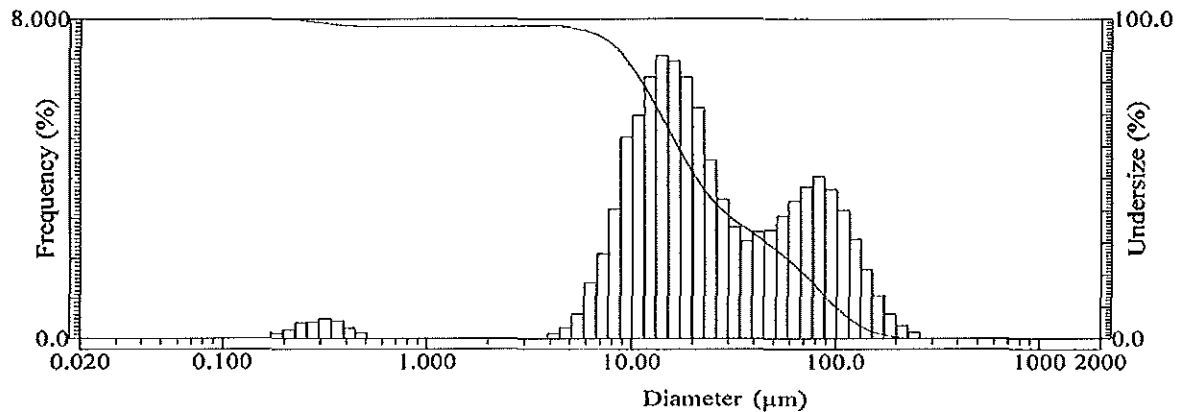
<sup>5</sup> EPA Test Methods SW-846/1311/6010B and SW1311/7470A (mercury) using preparation methods 3010 A and SW7470P (mercury).

<sup>6</sup> Measured using a Horiba LA-920 Particle Size Distribution Analyzer.

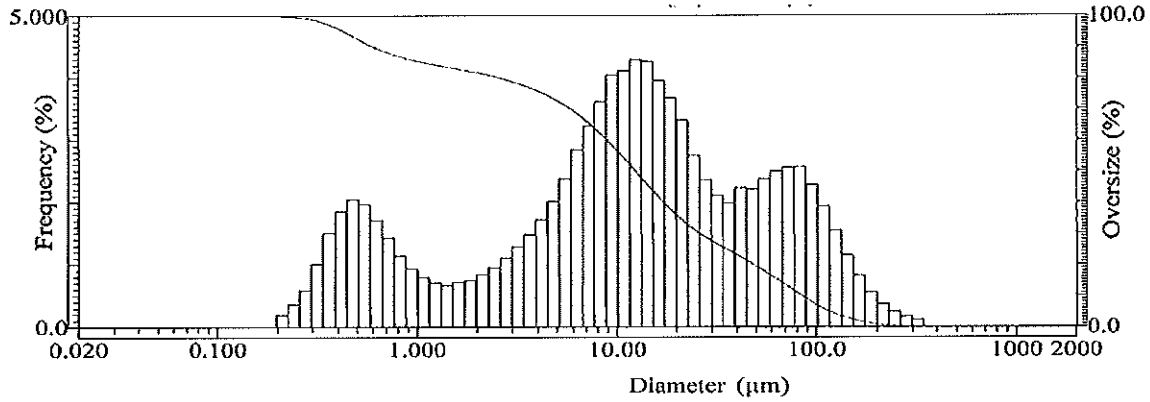
**Table 2-3**  
**Mean and Median Particle Sizes of Catalyst and Fly Ash Samples**

Parameter	Catalyst	PRB Fly Ash	Catalyst/PRB Blend	EB Fly Ash	Catalyst/EB Blend
Median Diameter ( $\mu\text{m}$ )	20.8	12.4	14.6	14.3	16.0
Mean Diameter ( $\mu\text{m}$ )	39.8	29.2	33.1	29.6	33.3

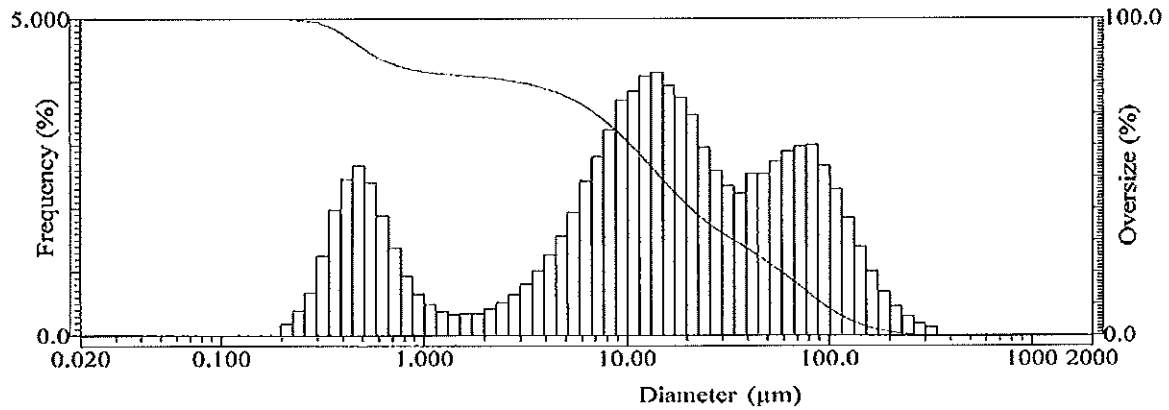
Figure 2-1 shows the PSD for the crushed catalyst sample. A bi-modal distribution can be noted, with peaks at roughly 25 and 95 microns ( $\mu\text{m}$ ). Figure 2-2 shows the distribution of the PRB fly ash, where a tri-modal distribution is apparent, with peaks at roughly 0.7, 20, and 95 microns. The catalyst/PRB blend, as depicted in Figure 2-3 shows a similar tri-modal distribution, with peaks at roughly the same points as the parent PRB fly ash. Figure 2-4 shows the PSD for the eastern bituminous fly ash, where the distribution is principally unimodal, with a primary peak at roughly 20 microns, although there are a relatively large number of particles up to roughly 100 microns, for this sample. The catalyst/EB blend, as shown in Figure 2-5, shows distinct peaks at 0.6 and 25 microns, with a less distinct peak at roughly 90 microns. Overall, the PSD data show that the catalyst is not markedly different from the reference fly ash samples, at least in terms of size distribution.



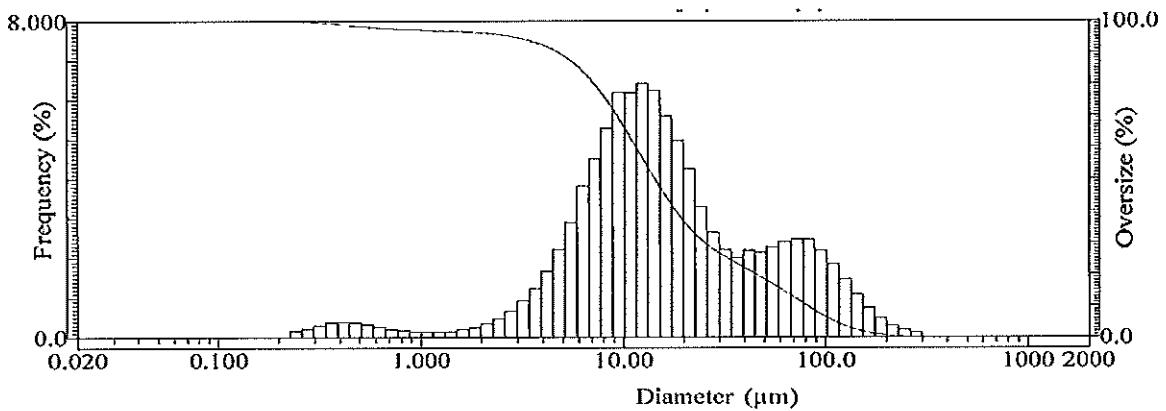
**Figure 2-1**  
**Particle Size Distribution of Crushed Catalyst**



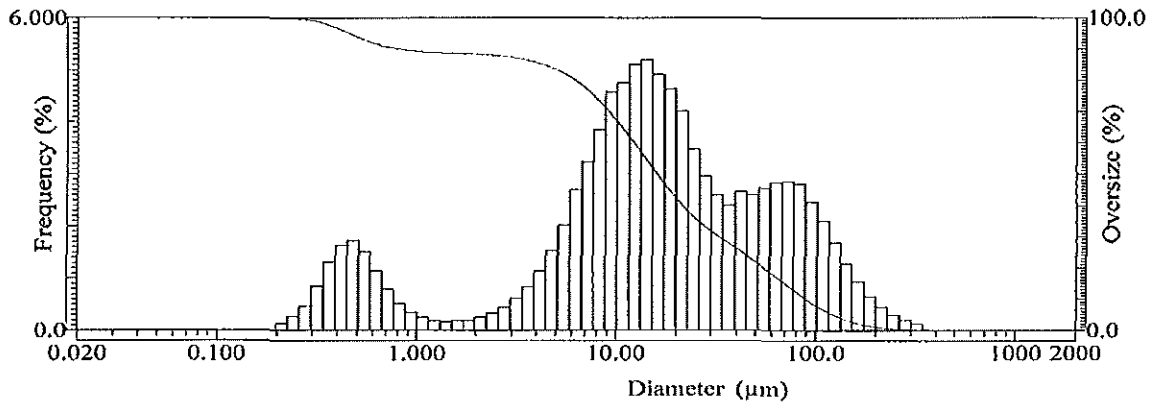
**Figure 2-2**  
**Particle Size Distribution of PRB Fly Ash**



**Figure 2-3**  
**Particle Size Distribution of Catalyst/PRB Fly Ash Blend**



**Figure 2-4**  
**Particle Size Distribution of Eastern Bituminous Fly Ash**



**Figure 2-5**  
**Particle Size Distribution of Catalyst/Eastern Bituminous Fly Ash Blend**

***Viscosity and Density***

The viscosity and various density parameters were measured for the catalyst samples, fly ash samples, and catalyst/fly ash blends. The viscosity measurement<sup>7</sup> is designed to simulate a 65% loading of mineral filler into asphalt at 400°F, primarily related to roofing shingle applications. (Note that this test method is not generally applicable to paving asphalt applications.) The specific gravity measurement<sup>8</sup> evaluated the material density excluding void spaces, while bulk density was determined using a calibrated measure for both loose and vibrated samples. The results of this testing are shown in Table 2-4. The data indicate that the catalyst will produce a more viscous mix than fly ash alone, when tested in accordance with roofing shingle applications.

**Table 2-4**  
**Viscosity and Density Measurements**

Parameter	Catalyst	PRB Fly Ash	Catalyst/PRB Blend	EB Fly Ash	Catalyst/EB Blend
Viscosity (Cp)	N/A <sup>9</sup>	2,594	17,900	11,578	23,245
Specific Gravity (gm/cm <sup>3</sup> )	3.45	2.64	2.96	2.38	2.76
Loose Unit Wt (lb/ft <sup>3</sup> )	62.4	70.9	66.4	60.2	60
Vibrated Density -2 min. (lb/ft <sup>3</sup> )	78.0	91.8	86.7	72.6	78
Vibrated Density -final (lb/ft <sup>3</sup> )	82.1	100.7	89.2	80	82

<sup>7</sup> Performed using a Brookfield LVDV II+ Viscometer, with a 65 wt% load of solids in 20/50 motor oil, according to standard practices.

<sup>8</sup> Performed using a Quantichrome Helium Pycnometer

<sup>9</sup> Viscosity was outside of measurable range



**Gradation Testing**

A catalyst sample was evaluated for use as mineral filler for bituminous paving mixtures according to ASTM standards. The gradation was conducted according to ASTM D-546-05 “Sieve Analysis of Mineral Filler for Bituminous Paving Mixtures,” which provides the methodology for determining the material gradation. The actual mineral filler gradation requirements are specified in ASTM D-242 “Standard Specification for Mineral Filler for Bituminous Paving Mixtures.” Generally, the specification requires that the filler consist of finely divided mineral matter, with free-flowing characteristics, and free of agglomerations. Specifically, the standard requires that the gradation be within specified ranges. The results of the testing are shown in Table 2-5, along with the ASTM specifications. The data show that the catalyst meets the specifications.

**Table 2-5  
Mineral Filler Gradation Test Results**

Sieve Number	# 16	# 30	# 50	#200
Sieve size	1.18 mm	600 µm	300 µm	75 µm
Catalyst Fraction Passing Size	100%	97.4%	96.4%	82.9%
ASTM D-242 limits	100%	97-100%	95-100%	70-100%

**Rigden Voids Testing**

The term “Rigden Voids” applies to the void volume in dry-compacted mineral filler or fines. The method is based on the assumption that the maximum bulk density of fines can be obtained by compacting the material in a mold. The Rigden Voids parameter is sensitive to changes in gradation and other properties of the fines, and therefore acts as a parameter for monitoring the uniformity of the potential filler material. In particular, the parameter may be used to estimate the stiffening effect of the filler when mixed with asphalt in bituminous paving applications. Typically, the Rigden Voids volume should be 50% or less for these applications, otherwise excessive mix stiffness will potentially result.

Two test series were run to determine the Rigden Voids. The second test series basically repeated the first, to help establish variability. In addition, within each test series, two samples of each of the material mixtures (all catalyst, catalyst/PRB fly ash blend, and catalyst/EB fly ash blend) were tested. Thus, four individual measurements were made for each of the material mixtures. The results are shown in Table 2-6.

For the unblended catalyst, the Rigden Voids value expressed as a percentage (%V<sub>DV</sub>) was on the order of 55%. This is greater than the recommended 50% value. For the catalyst/PRB fly ash blend, the average Rigden Voids value was roughly 43%, with no individual measurement exceeding 46%. Thus, this particular blend would be deemed acceptable based on this evaluation. For the catalyst/EB fly ash blend, the first test series showed marginal acceptance, with an average at 50% for the two replicate samples in this test series. The second test series, however, showed higher voids, at an average of about 58%, exceeding the 50% recommendation.

Thus, for this particle blend, the Rigden Voids testing showed that it will be marginally acceptable, at best. Overall, the results of this testing indicate that the catalyst may need to be evaluated on a case-by-case basis in terms of Rigden Voids, as a function of both catalyst properties, and the parent fly ashes used in the blend.

**Table 2-6**  
**Results of Rigden Voids Testing**

Sample	Catalyst					Catalyst/PRB Fly Ash Blend					Catalyst/EB Fly Ash Blend				
	Series 1		Series 2		Ave.	Series 1		Series 2		Ave.	Series 1		Series 2		Ave.
	A	B	A	B		A	B	A	B		A	B			
Specific Gravity	3.024	3.024	3.024	3.024	<b>3.024</b>	2.861	2.861	2.861	2.861	<b>2.861</b>	2.753	2.753	2.753	2.753	<b>2.753</b>
Wt. of Compacted Sample (g)	1.14	1.30	1.00	1.20	<b>1.16</b>	1.23	1.28	1.50	1.30	<b>1.32</b>	1.32	1.27	1.50	1.40	<b>1.37</b>
Sample Thickness (in)	0.263	0.317	0.255	0.287	<b>0.281</b>	0.248	0.261	0.281	0.277	<b>0.267</b>	0.300	0.310	0.406	0.405	<b>0.355</b>
Mold Dia. (in)	0.50	0.50	0.50	0.50	<b>0.5</b>	0.50	0.50	0.50	0.50	<b>0.5</b>	0.50	0.50	0.50	0.50	<b>0.5</b>
V <sub>DB</sub> (cm <sup>3</sup> )	0.81	0.98	0.79	0.88	<b>0.87</b>	0.76	0.80	0.87	0.85	<b>0.82</b>	0.92	0.96	1.25	1.25	<b>1.10</b>
V <sub>DS</sub> (cm <sup>3</sup> )	0.38	0.43	0.33	0.40	<b>0.39</b>	0.43	0.45	0.52	0.45	<b>0.46</b>	0.48	0.46	0.54	0.51	<b>0.50</b>
V <sub>DV</sub> (cm <sup>3</sup> )	0.43	0.55	0.46	0.49	<b>0.48</b>	0.33	0.36	0.34	0.40	<b>0.36</b>	0.45	0.49	0.71	0.74	<b>0.60</b>
%V <sub>DV</sub>	53.50	56.01	57.93	55.15	<b>55.65</b>	43.77	44.39	39.47	46.79	<b>43.61</b>	48.15	51.73	56.47	59.28	<b>53.91</b>
Bulk Density of Compacted Dust (g/cm <sup>3</sup> )	1.406	1.330	1.272	1.356	<b>1.341</b>	1.609	1.591	1.732	1.522	<b>1.614</b>	1.427	1.329	1.198	1.121	<b>1.269</b>

V<sub>DB</sub> = Bulk volume of compacted dust sample

V<sub>DS</sub> = Volume of dust solids

V<sub>DV</sub> = Volume of voids in compacted dust

%V<sub>DV</sub> = Rigden Voids – volume of voids in compacted dust, as percentage

## **Economics**

The economics of mineral filler applications will be highly case specific, depending on the product in which the spent catalyst is utilized, and various other factors, such as catalyst transport and the value of the mineral filler which is replaced by the catalyst. As a result, it is impossible at present to determine any specific economics for mineral filler applications, although some generalizations can be made.

It is unclear whether catalyst would be used on a project-specific intermittent basis, or whether catalyst would be utilized continuously as part of a routinely produced commercial product. It can be imagined that certain applications, such as paving asphalt, might be conducted on an individual basis, where a single paving application would take advantage of a particular batch of spent catalyst as mineral filler. This might be conducted in conjunction with an on-site utility paving project. Other applications, such as the continuous production of plastic products, would likely represent the opposite end of the spectrum, where catalyst is utilized on a continuous basis.

In any event, the value of the catalyst as mineral filler is not great, since the cost of commonly used mineral fillers is quite low. Thus, most of the value to the utility would derive from the offset of landfill costs. It does not appear that spent catalyst could be sold at any appreciable price as mineral filler, and most likely a premium would have to be paid by the utility to the product manufacturer for the catalyst to be utilized. One exception to this might be on-site projects, where the utility simply specifies the catalyst as the mineral filler. In such a scenario, there may be little if any cost associated with utilizing the catalyst, and there may be some slight credit to the utility since at least a portion of the mineral filler normally purchased may be avoided. In such a case, the value to the utility would essentially be the offset disposal cost (environmental good-will would also be accrued).

## **Conclusions**

The data acquired to date indicate that spent catalyst may be suitable for mineral filler applications, at least in terms of basic physical parameters. Additional studies are required for specific targeted applications to fully understand all potential impacts that the catalyst may have on the final product. Specifically, such issues as leachability and durability for specific applications would need to be addressed as a next step to full commercialization. As is the case with many other proposed utilization routes, the inherent value of the catalyst as a mineral filler is not large, and therefore most of the derived value of the utilization route is a result of avoided disposal costs.

# 3

## INCORPORATION OF SPENT SCR CATALYST WITH WET-BOTTOM BOILER SLAG

### Introduction

Technology currently owned by Evonik Industries AG<sup>10</sup> provides for a utilization route for spent SCR catalyst by incorporating it in boiler slag. The technology involves the introduction of spent catalyst into a wet-bottom boiler where it dissolves into the molten bottom-ash and becomes integrated with this stream. The resulting slag can then be utilized for various applications, such as construction aggregate, in a manner similar to traditional uses of slag.

The fusion temperature of SCR catalyst itself is relatively high, on the order of 3,000° to 3,250°F. This is well above typical boiler combustion temperatures. Thus, the catalyst particles will not become directly molten under normal boiler operating conditions. However, at appropriate temperatures and catalyst/slag weight ratios, fine catalyst particles will dissolve into the boiler slag and become incorporated within the chemical matrix of the slag. The exact required minimum temperature at which the spent catalyst particles will completely dissolve is a function of the catalyst and slag composition, as well as the catalyst to slag weight ratio.

As practiced in Europe, the technology has only been applied to a very specific boiler configuration. Specifically, the facility used a wet-bottom boiler which was equipped with 100% fly ash recycle and a tail-end SCR. The fly ash recycle insured that all ash was ultimately converted to slag. Further, the installed SCR catalyst was protected to a large degree from gas-phase contaminants by its tail end configuration. This tail-end location was downstream of flue gas scrubbing, and thus required re-heating to facilitate the SCR reaction. The facility was also equipped with a limestone feed system for ash fusion point adjustment. Spent catalyst feed was incorporated with this limestone feed system as a convenient method of introducing the catalyst/limestone mixture to the coal before firing.

Clearly, the above process configuration is not common in the U.S., especially as related to the tail-end SCR configuration. Thus, the current efforts related to the evaluation of this recycle scenario are focused on alternate boiler/SCR configurations, using available data and general engineering analyses to examine the potential feasibility of the various process scenarios.

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<sup>10</sup> See U.S. Patent 5,120,690, entitled "Process for the Utilization of Used DeNOx Catalysts," and the related Patent 6,067,914, providing for coal and catalyst/titania co-injection.

A number of process considerations are applicable to the analysis as follows.

- Process Mechanics
- Applicability of Boiler Type
- Process Performance
- Applicability of Coal Type
- Spent Catalyst Characteristics
- Slag Product Characteristics

The above considerations are discussed in detail in the following report sections. To further understand the practical application of the technology, two case studies were also developed; one examining a PRB coal fired unit, and a second examining a bituminous coal fired unit. These two case studies follow the discussions of the above primary process considerations.

### **Process Mechanics**

The actual physical design of the recycle process is mainly related to the mechanics of introducing the catalyst into the boiler. Figure 3-1 shows a generalized boiler schematic which is helpful in understanding the various catalyst introduction points that are possible. The current discussion will focus on the introduction of catalyst into the furnace, while subsequent discussions will focus on the impact of boiler type and fuel on the overall process design. Potential catalyst injection points are denoted on the Figure marked "A" through "D." A description of each of these potential injection points follows.

#### ***Point A – Catalyst Introduced with Primary Coal Feed***

In perhaps the simplest injection configuration, the catalyst is co-fed with the coal to the furnace. For a pulverized coal boiler, the catalyst would typically be combined with the coal prior to milling, thus taking advantage of the coal milling process to finely grind the catalyst. The catalyst's grinding properties, along with various coal and mill properties will influence the final particle size distribution of the catalyst, as introduced to the boiler. This, in turn, will likely influence the degree to which the catalyst dissolves into the molten ash, and thus will affect the overall success of the technology. In the case of a cyclone boiler where the coal is not finely milled prior to introduction into the furnace, the size of the catalyst pieces prior to combination with the coal will likely influence the size reduction of the catalyst within the furnace. This will potentially affect the overall process characteristics. In all cases, the ratio of catalyst to coal would typically be on the order of 1% or less, although levels up to 3% are discussed in the technology descriptions. For this co-feed scenario, pre-crushed catalyst would usually be stored in a silo or similar vessel and transported pneumatically to the introduction point, where it would be combined with the coal. Provisions for metering the catalyst as a function of coal feed rate would be required.

***Point B – Catalyst Introduced with Fly Ash Recirculation Stream***

If a boiler is equipped with fly ash recirculation, as is the case with the European application of the technology, the catalyst may be introduced into the boiler by feeding it along with the fly ash recirculation stream. Specifically, the catalyst would need to be ground to a pre-determined size, preferably 200 microns (0.2 mm) or less. Finer particle size tends to facilitate dissolution of the catalyst into the molten ash phase, so finer grinding would be beneficial. The actual ratio of catalyst feed to fly ash recycle will depend heavily on the ash content of the fuel burned, and the general performance of the boiler. In any event, the appropriate catalyst feed rate would be consistent with the above scenario, equivalent to a ratio of about 3% maximum catalyst feed to coal.

***Point C – Catalyst Introduced with Limestone Feed***

Limestone is utilized with coal-fired boilers for various purposes, including sulfur control, arsenic mitigation for SCR catalysts, and ash fusion point adjustment. For facilities equipped with limestone injection systems, catalyst-limestone co-feed may be an attractive option. Under this injection scenario, the catalyst is combined with the limestone prior to limestone injection, or prior to the combination of the limestone with the coal feed. Figure 3-1 shows the various limestone injection scenarios including coal-limestone co-feed (both prior to and after coal milling), and direct limestone furnace injection. Depending on the injection scenario selected, the catalyst may need to be pre-ground, ground along with the limestone, or milled as part of a coal-limestone-catalyst mixture. In all cases, the catalyst would require continuous metering in some fashion, unless limestone-catalyst batches were used, in which case more rudimentary catalyst measurement methods may be utilized. In any event, the resulting catalyst would need to be fed at a consistent rate compared to the coal entering the boiler, as in the other scenarios.

***Point D – Direct Catalyst Injection***

Under this scenario, finely ground catalyst would be injected directly into the furnace in a manner similar to direct powdered limestone injection. This scenario would require basically a stand-alone catalyst storage, grinding, conveyance, and injection system. Typically, the catalyst would be pre-ground and stored for pneumatic injection into the boiler. The injection location and resulting mixing behavior would be important parameters to insure that the catalyst ultimately dissolved as part of the ash melt. In particular, catalyst particle size distribution and potential for carryover are likely to be critical factors. As with the other injection scenarios, the catalyst must be fed at a controlled and consistent rate with respect to the coal feed rate.

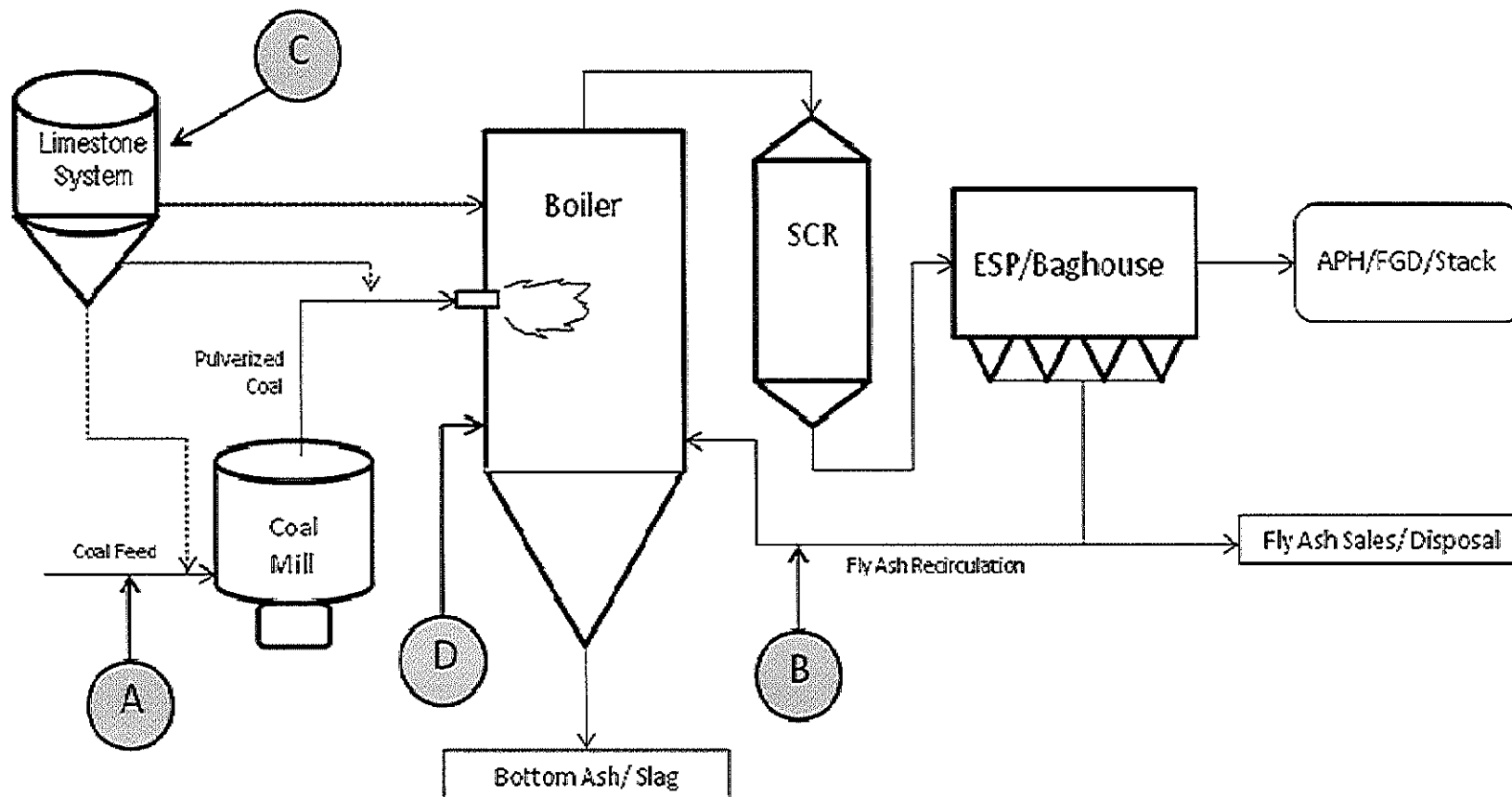


Figure 3-1  
Generalized Boiler Schematic with Possible Catalyst Addition Points Noted



### **Applicability of Boiler Type**

The industry experience with the recycle technology has been limited to a slag-tap wet-bottom boiler. In the case of slag-tap furnaces, all options for catalyst introduction as described previously generally apply. Since slag-tap boilers require the fine milling/pulverization of the coal, it may be particularly attractive to simply combine the roughly crushed catalyst with the coal prior to milling. Alternatively the catalyst may be separately ground and introduced with the coal subsequent to milling, with ash recycle or with limestone feed, as previously discussed. If separate limestone milling is done on-site, the catalyst may be co-milled with the limestone.

In all cases, the applicability of the process to a particular boiler must be made on a case-by-case basis. Consideration must be given to the method of catalyst introduction, the catalyst physical and chemical characteristics, and the specific characteristics of the fuel, furnace, and other unit equipment.

### **Process Performance**

The ultimate goal of the process is to fully incorporate spent catalyst into the boiler slag matrix, thus creating a homogeneous mixture which resists leaching of undesirable constituents, and has properties consistent with traditional slag. The exact process performance, especially in terms of parameters, such as slag melt point and leachability, will depend heavily on the boiler configuration, coal composition, catalyst composition, and the rate at which catalyst is fed to the furnace. In addition, the exact methodology of the process, such as catalyst grinding and introduction method, will affect the overall process performance. Very little full-scale information is available for the process, but the available patent literature discusses in some detail the process parameters and effectiveness. The available data are related to tests using a laboratory combustion chamber. These tests are discussed below in detail.

### **Laboratory Testing**

Published data<sup>11</sup> associated with the process (see prior referenced patents) are limited to small-scale testing conducted in a laboratory test chamber. Tests were conducted using various proportions of catalyst to coal, both finely ground to produce a homogenous feed mixture. The firing configuration was consistent with a pulverized coal slag-tap type furnace. The coal was selected to provide a representative slag melt temperature and composition, consistent with the normal behavior for furnaces of this type. Note that the laboratory system was configured with no fly ash recirculation, which may limit the applicability of the data in some cases. Table 3-1 summarizes the laboratory testing conditions.

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<sup>11</sup> See data contained in the U.S. Patents 5,120,690, and 6,067,914.

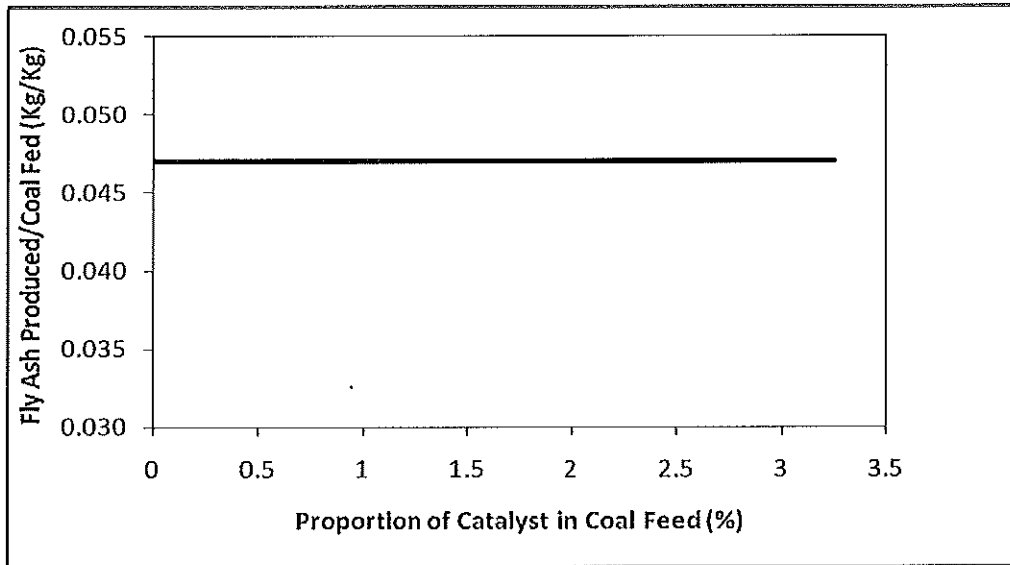
**Table 3-1  
Summary of Laboratory Testing Conditions**

<b>Apparatus</b>	Laboratory-scale combustion chamber operating in wet-bottom pulverized coal configuration (slag-tap)	
<b>Coal</b>	Low-volatile semi-anthracitic coal with normal melting behavior	
<b>Catalyst Composition</b>	<b>Component</b>	<b>Wt %</b>
	TiO <sub>2</sub>	75
	SiO <sub>2</sub>	11
	WO <sub>3</sub>	8
	V <sub>2</sub> O <sub>5</sub>	1.8
<b>Catalyst Feed Rate</b>	0 - 3% as proportion of catalyst in coal-catalyst mixture	
<b>Measured Parameters</b>	Fly ash production rate LOI in fly ash Composition of tapped slag, fly ash, and slag deposits Slagging/fouling behavior of furnace	

### Fly Ash Production Rate

The production rate of fly ash was measured as a function of the proportion of catalyst in the coal/catalyst feed mixture (i.e., “catalyst feed proportion”<sup>12</sup>) to the test furnace. Figure 3-2 shows the results of the testing, indicating that the fly ash production rate was constant up to roughly 3% catalyst feed proportion. The total mass of fly ash produced by the furnace did not increase, even though additional non-volatile components were being added. This indicates that the majority of the catalyst mass was incorporated into the tapped slag. In addition, as will be discussed below, the LOI of the resulting ash decreased with increasing catalyst addition, thus this reduction in fly ash LOI helped to reduce, in a relative sense, the total mass of fly ash that was formed. In any event, these data offer some reassurance that total fly ash loading will not measurably increase when catalyst is added. This is important to give some confidence that particulate collection devices will not be overburdened due to the implementation of the technology.

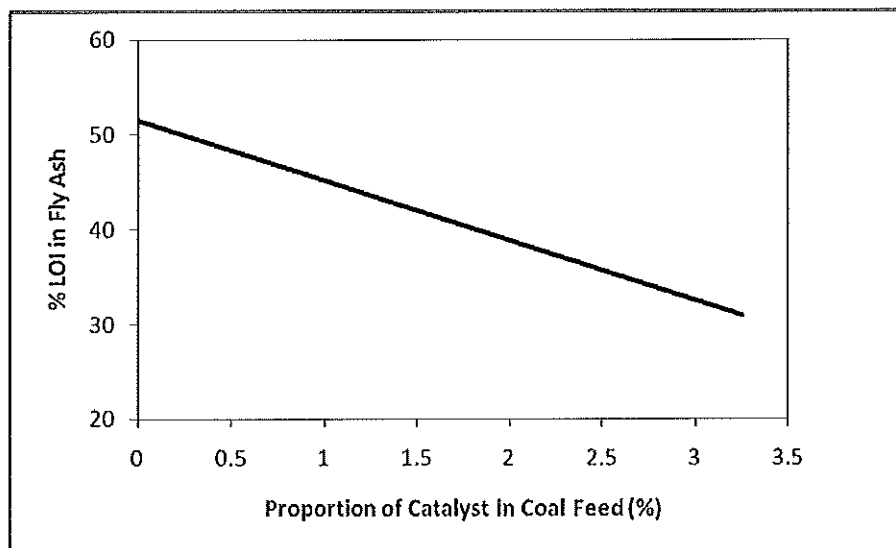
<sup>12</sup> Catalyst feed proportion (%) = 100% x [catalyst feed (lb/hr)]/[coal feed (lb/hr) + catalyst feed (lb/hr)]



**Figure 3-2**  
Fly Ash Production Rate vs. Catalyst Feed Proportion

#### Loss-On-Ignition of Fly Ash

The loss-on-ignition (LOI) of the fly ash produced by the test furnace was measured as a function of catalyst feed rate. Results are shown in Figure 3-3. Interestingly, as the proportion of catalyst in the coal feed to the furnace increased, the LOI of the resulting fly ash decreased. The exact mechanism of this reduction is unknown. Additional testing is needed to validate LOI reductions.

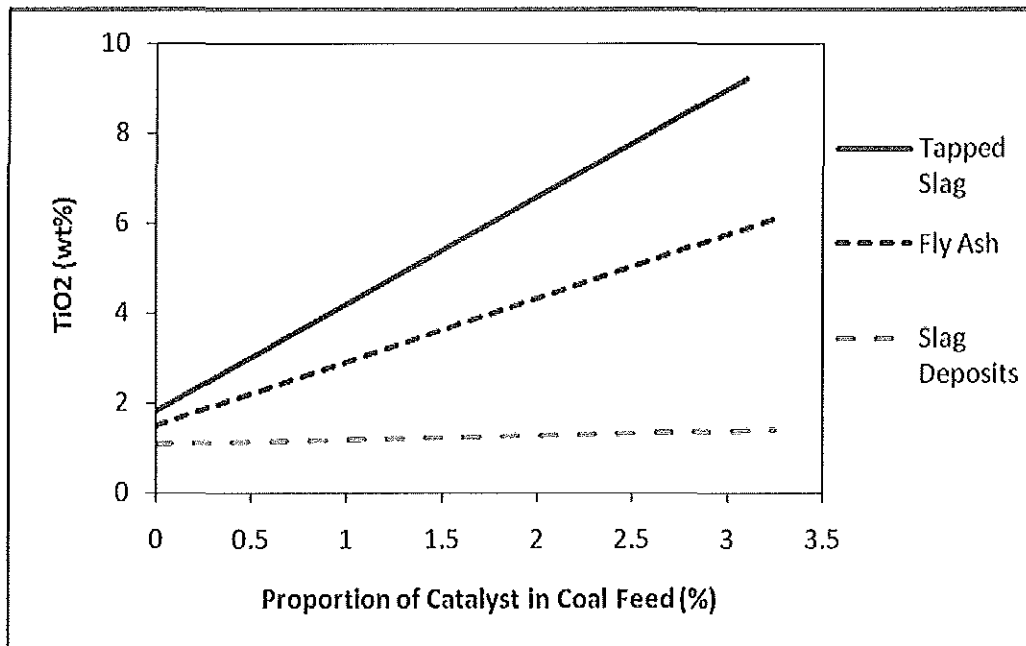


**Figure 3-3**  
Fly Ash LOI vs. Catalyst Feed Proportion

### Composition of Tapped Slag, Fly Ash, and Slag Deposits

One of the fundamental considerations of the technology is the effect that it may have on the properties of the resulting tapped slag, fly ash, and slag deposits that are formed. The laboratory testing included chemical composition testing of notable parameters via x-ray fluorescence as a function of the catalyst feed proportion. Specifically, three principal catalyst components were tracked: titanium (as  $\text{TiO}_2$ ), vanadium (as  $\text{V}_2\text{O}_5$ ), and tungsten (as  $\text{WO}_3$ ).

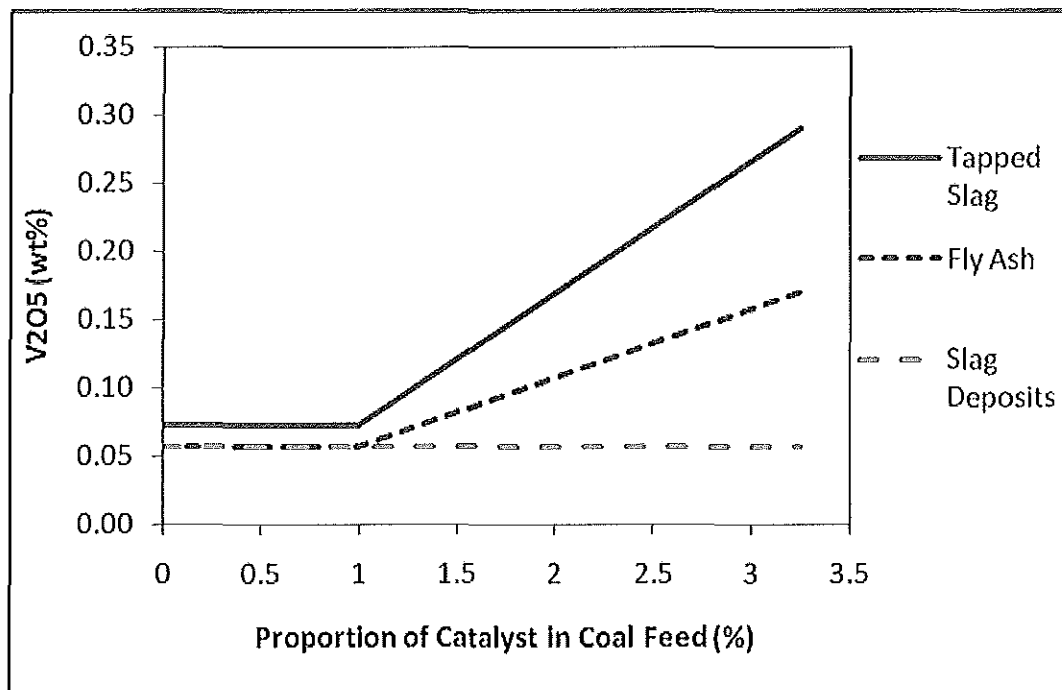
Figure 3-4 shows the influence of catalyst feed rate on titania concentrations in the furnace solids, up to a catalyst feed proportion of roughly 3%. The tapped slag showed the most marked increase in titania concentration, from roughly 2% to 9% by weight, while the fly ash showed a more moderate increase in titania concentration, from roughly 1.5% to 6%. This indicates that the titania partitioned more heavily toward the tapped slag phase. Interestingly, virtually no increase in titania was noted on the slag deposits. This indicates that, at least in terms of titania, the fouling deposits associated with the furnace and downstream surfaces will be unaffected by the addition of the catalyst (additional information related to the effects of catalyst addition on slag deposits/fouling is included in a subsequent discussion).



**Figure 3-4**  
Titanium Concentrations Vs. Catalyst Feed Proportion

Results for vanadium content of the combustion solids are shown in Figure 3-5. Across the tested catalyst feed proportion range, vanadium increased from roughly 0.07% to about 0.30% for the tapped slag, and from about 0.05% to 0.17% for the fly ash. No changes in the vanadium concentration of the slag deposits within and downstream of the furnace were noted.

These data are similar to the previously shown data for titania, except there was no noted vanadium concentration increase up to about 1% catalyst feed. This is somewhat counterintuitive and may be a data anomaly associated with the testing or analytical procedures. In any event, the data show that the vanadium tends to partition to the tapped-slag phase.



**Figure 3-5**  
**Vanadium Concentrations Vs. Catalyst Feed Proportion**

As with with titanium and vanadium, tungsten appears to partition toward the tapped slag phase, as shown in Figure 3-6. The partitioning of tungsten toward the tapped slag phase appears to be particularly strong as compared to titanium and vanadium, with the tungsten concentration increasing from roughly 0.2% to about 1.4% for the tapped slag and about 0.06% to 0.3% for the fly ash. A very slight increase in tungsten concentration in the slag deposits was noted.

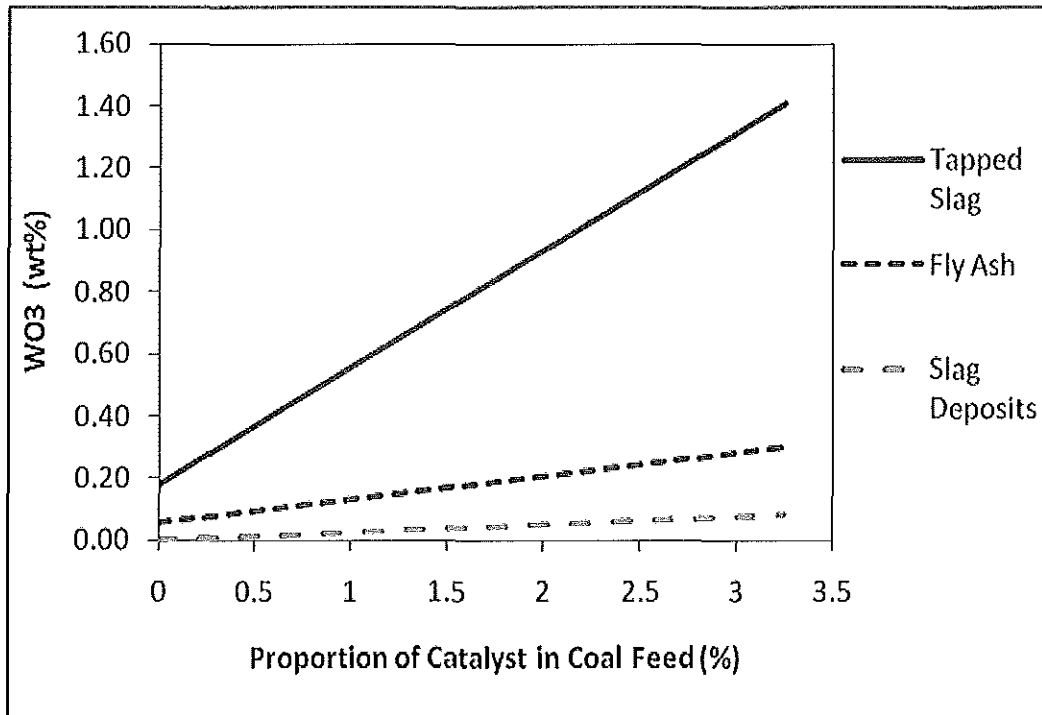


Figure 3-6  
Tungsten Concentrations Vs. Catalyst Feed Proportion

### Case Study #1 – PRB Fuel

#### Background

A case study was performed using assumed parameters as a demonstration of the hypothetical application of the technology on a large wet-bottom boiler. Table 3-2 gives the general boiler operating parameters. The representative ultimate coal analysis is given in Table 3-3, and the nominal slag and catalyst compositions are given in Table 3-4. Note that the shown slag composition assumes 100% fly ash recycle and represents the expected base-line value with the assumption that no catalyst is fed to the boiler. For facilities without 100% fly ash recycle, the relative composition of ash and slag will differ somewhat, but the weighted average composition of both streams will match that shown in the table. The catalyst composition represents a nominal catalyst composition – specific catalyst designs will, of course, differ somewhat from the assumed formulation. For the given slag and catalyst compositions, only the major components are shown, thus the values do not necessarily sum to 100%.

**Table 3-2  
Assumed Boiler Design Characteristics**

Parameter	Value
Name Plate MW	650
Boiler Type	Wet-bottom with 100% fly ash recycle
Fuel	PRB Coal
Nominal Full Load Coal Burn Rate (dry basis)	300 tons/hr
Unit Heat Rate	7,000 MMBtu/hr
Full Load Nominal Flue Gas Flow Rate	1.4 X 10 <sup>6</sup> dscf/min

**Table 3-3  
Coal Ultimate Analysis**

Parameter	Value
Btu/lb	9,845
Moisture (as received)	14.00%
<b>Dry Basis Analysis</b>	
Carbon	69.41%
Hydrogen	4.45%
Nitrogen	0.97%
Oxygen	17.82%
Sulfur	0.35%
Ash	7.00%
<i>Total</i>	<i>100.00%</i>

**Table 3-4  
Slag and Catalyst Composition**

Component	Nominal Slag Composition – w/o Catalyst Addition (%)	Nominal Catalyst Composition (%)
SiO <sub>2</sub>	33.4	17
CaO	21.5	1.5
Al <sub>2</sub> O <sub>3</sub>	16.3	3
SO <sub>3</sub>	11.7	2
Fe <sub>2</sub> O <sub>3</sub>	5.2	0.25
MgO	6.4	0.2
Na <sub>2</sub> O	1.9	0.2
P <sub>2</sub> O <sub>5</sub>	1.2	--
TiO <sub>2</sub>	1.2	66
BaO	0.6	--
K <sub>2</sub> O	0.4	0.2
V <sub>2</sub> O <sub>5</sub>	--	1
MoO <sub>3</sub>	--	0.2
WO <sub>3</sub>	--	6

### ***Analysis Results***

#### **General Process Parameters and Effects on Slag**

Using the above assumed design specifications, an engineering analysis was performed examining the various critical process parameters and slag effects, including such parameters as catalyst mass flow rate and injection time, slag production rate, and resulting slag composition. The analysis was conducted as a function of the catalyst feed proportion, as defined previously. Catalyst feed proportions generally of less than 1% would be typical of the application, but higher feed rates of up to 3% were also considered.

The analysis is summarized in Table 3-5. Note that for this particular analysis, a catalyst batch of 200 tons (actual ceramic portion) was assumed. This would be roughly consistent with a single catalyst layer from a 650 MW boiler. (It is important to note, however, that the catalyst batch may not originate from the boiler that is utilized for the application of the process. Furthermore, multiple or partial catalyst layers may be treated as a process batch, and thus the actual amount of catalyst treated may vary greatly.) The analysis shows that the catalyst mass flow rate, ranging from roughly 1 to 6 tons/hr is quite small compared to the dry coal feed rate of roughly 300 tons/hr. This low feed rate would help to minimize impacts on mills, burners, and the general combustion characteristics of the boiler. Similarly, the total slag production rate is not markedly affected at low catalyst feed rates, up to 0.5% or so. As the catalyst feed rate increases,



however, the total slag production would increase noticeably, with almost 30% more slag being produced at 2% catalyst feed, and almost 50% more slag being produced at 3% catalyst feed, as compared to the base-line (no catalyst fed) condition. This higher slag production rate could impact boiler operations, and thus total slag production rate may be an important factor in determining the maximum catalyst feed rate. Note that these calculations are based on a coal with relatively low ash (7%). As the coal ash level increases, the relative affect on total slag production due to the catalyst addition would decrease. Using the assumed 200 ton batch of catalyst, the total catalyst feed time is quite lengthy at very low catalyst feed rates (roughly 10 days (261 hours) for the low catalyst feed rate of 0.25%). At a high catalyst feed rate of 3%, the total feed time is about 2 days (21.2 hours).

The slag composition values represent expected steady-state values. Clearly, there will be a transitional period just after the start of catalyst injection and after the completion of catalyst injection, in which the slag composition is transitional. The hold-up associated with the fly ash recycle stream will greatly affect the equilibrium times associated with the slag composition. In any event, it is clear that as the catalyst feed rate increases, the slag will become more and more enriched in the principal catalyst components. This is most evident for the primary catalyst component, titania. Specifically, the base-line slag titania concentration (without catalyst injection) would be quite low at roughly 1.2% (for the selected design fuel), but as the catalyst feed rate increases, the titania concentration increases markedly, to nearly 10% at a catalyst feed rate of 1%, and to just over 20% at a catalyst feed rate of 3%. As a result, principal coal slag components, such as silicon, calcium, and aluminum, become depleted with increasing catalyst feed rate. Based on the process literature, the higher titania content will generally have the effect of lowering the melting point of the slag, as well as that of the recycled ash. To maintain consistency of the overall boiler operation in terms of slag handling and downstream fouling, etc., it is recommended by the process inventors that the amount of titania in the total boiler feed (coal + catalyst) not exceed 2.25%. This parameter is shown in the summary table, where even the highest catalyst feed rate of 3% only produces a titania feed concentration of just over 2%. Thus, for this particular test case, even the high catalyst feed rate of 3% should not be problematic in terms of slag and ash behavior. Note that the prediction of ash fusion temperatures and viscosities is notoriously difficult, especially in cases where the ash constituents deviate from those found in common coals. Thus, laboratory tests examining ash fusion temperatures and viscosities on synthetic ash samples comprised of coal ash and ground catalyst would likely be beneficial in determining the slag properties for specific installations considering applying the recycle technology. In this case, the coal ash and catalyst would be highly specific to the proposed application, and a very accurate assessment of slag and ash melting and viscosity properties could be determined.

**Table 3-5  
Analysis Results as a Function of Catalyst Feed Proportion**

Catalyst Feed Rate →	0% (baseline)	0.25 %	0.5%	0.75%	1%	2%	3%
Coal burned - dry basis (tons/hr)	305.7	305.7	305.7	305.7	305.7	305.7	305.7
Catalyst added at above feed rate (tons/hr)	--	0.8	1.5	2.3	3.1	6.2	9.5
Total feed rate of coal and catalyst (tons/hr)	305.7	306.5	307.3	308.0	308.8	312.0	315.2
Slag produced (w/o catalyst) (tons/hr)	21.4	21.4	21.4	21.4	21.4	21.4	21.4
Total slag produced with catalyst (tons/hr)	21.4	22.2	22.9	23.7	24.5	27.6	30.9
Total catalyst fed (ceramic only -tons)	200	200	200	200	200	200	200.0
Run time required to feed catalyst (hrs)	--	261.0	130.2	86.6	64.8	32.1	21.2
Conc. of TiO <sub>2</sub> in total boiler feed (%)	0.08	0.25	1.41	0.58	0.74	1.40	2.06
<b>Slag Composition (%)</b>							
SiO <sub>2</sub>	33.4	32.83	32.30	31.80	31.33	29.70	28.37
CaO	21.5	20.81	20.16	19.55	18.98	16.99	15.37
Al <sub>2</sub> O <sub>3</sub>	16.3	15.84	15.41	15.00	14.62	13.30	12.22
SO <sub>3</sub>	11.7	11.36	11.05	10.75	10.48	9.51	8.73
Fe <sub>2</sub> O <sub>3</sub>	5.2	5.03	4.87	4.72	4.58	4.08	3.68
MgO	6.4	6.19	5.98	5.80	5.62	5.00	4.50
Na <sub>2</sub> O	1.9	1.84	1.79	1.73	1.69	1.52	1.38
P <sub>2</sub> O <sub>5</sub>	1.2	1.16	1.12	1.08	1.05	0.93	0.83
TiO <sub>2</sub>	1.2	3.44	5.54	7.51	9.37	15.83	21.06
BaO	0.6	0.58	0.56	0.54	0.52	0.46	0.42
K <sub>2</sub> O	0.4	0.39	0.39	0.38	0.37	0.35	0.34
V <sub>2</sub> O <sub>5</sub>	--	0.03	0.07	0.10	0.13	0.23	0.31
MoO <sub>3</sub>	--	0.01	0.01	0.02	0.03	0.05	0.06
WO <sub>3</sub>	--	0.21	0.40	0.58	0.76	1.35	1.84

### Arsenic Effects

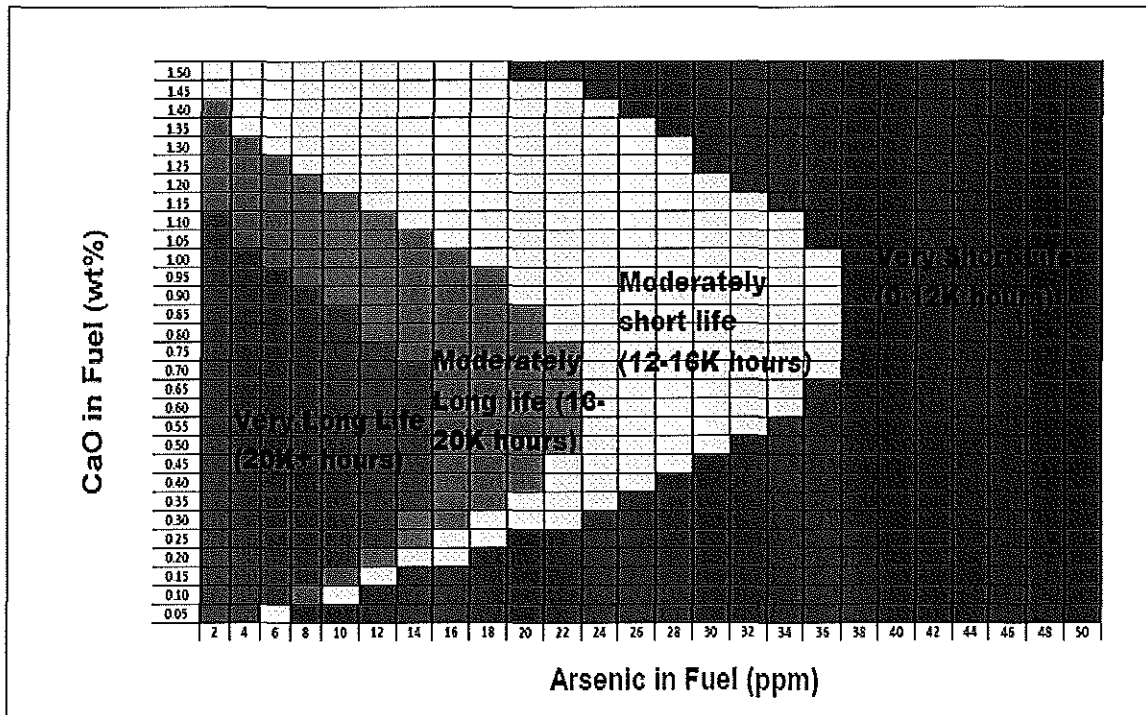
The presence of arsenic in the processed catalyst will, of course, add to the total arsenic loading for the boiler. Depending on the fuels fired and the boiler operating configuration, this could impact downstream SCR installations, as well as toxic releases. The potential for these effects is greatly impacted by the coal calcium content; however, since it is well known that calcium (specifically free CaO) helps to mitigate arsenic poisoning of catalysts, since it acts as a binder for gaseous arsenic. This also helps to mitigate gas-phase arsenic releases. Using the parameters of the test case, the arsenic released from the processed catalyst was calculated in terms of equivalent coal arsenic concentration, for various catalyst feed rates and catalyst arsenic concentrations. These data are shown in Table 3-6. The calculated equivalent coal arsenic concentration represents the arsenic contributed by the catalyst, and thus is in addition to any arsenic contained in the coal itself. The equivalent coal arsenic concentration offers a convenient parameter for determining potential arsenic-related effects, since the effects of coal arsenic are relatively well understood. The table clearly shows that as catalyst arsenic level increases, or as catalyst feed rate increases, the equivalent coal arsenic levels increase in a commensurate manner. Note that the table represents a very wide range in potential catalyst arsenic concentrations. Generally, the low range of arsenic levels, perhaps 1,000 ppmw or less, would represent catalysts that were applied to boilers firing principally high-calcium coals, such as PRB coals, or catalysts which had very short flue gas exposure times. Higher levels of arsenic, greater than roughly 2,000 ppmw, would be generally consistent with catalysts applied to boilers firing principally bituminous coals. Very high arsenic levels, such as 10,000 to 20,000 ppmw, would be consistent with highly deactivated catalysts likely applied to high-arsenic bituminous coals, or catalysts which had very long exposure histories applied to bituminous fuels containing moderate to high levels of arsenic.

**Table 3-6**  
**Equivalent Coal Arsenic Concentration Due to Catalyst Arsenic Content**

Catalyst Feed Rate ↓(%)	Arsenic in Catalyst (ppmw)							
	50	100	200	500	1000	2000	5000	10000
	Equivalent Coal Arsenic Concentration (ppmw)							
0.25	0.1	0.3	0.5	1.3	2.5	5.0	12.5	25.1
0.5	0.3	0.5	1.0	2.5	5.0	10.1	25.1	50.3
0.75	0.4	0.8	1.5	3.8	7.6	15.1	37.8	75.6
1.0	0.5	1.0	2.0	5.1	10.1	20.2	50.5	101.0
2.0	1.0	2.0	4.1	10.2	20.4	40.8	102.0	204.1
3.0	1.5	3.1	6.2	15.5	30.9	61.9	154.6	309.3

Given that coal calcium is an important mitigating factor with respect to arsenic, it is helpful to examine the arsenic related effects as a function of both calcium and arsenic in the coal. Often, arsenic-related effects on catalyst life are discussed in terms of the calcium/arsenic ratio, with higher ratios generally being beneficial at mitigating arsenic poisoning. For PRB-fired installations, where calcium is generally quite high, arsenic is not typically a factor in catalyst

deactivation, and calcium sulfate poisoning instead controls the deactivation rate. Figure 3-7 provides a convenient demonstration of the relative effects of calcium and arsenic on catalyst life. *Note that this plot will differ for each specific catalyst installation and should be used as a rough guideline of relative effects only. Further, boiler specifics, such as fly ash recirculation, will greatly affect the rate of arsenic poisoning for any particular unit.* The figure demonstrates two different poisoning regimes. At low constant calcium in the fuel (roughly <0.3%), arsenic poisoning is the primary deactivation mechanism, and increases in arsenic greatly affect catalyst life. As the calcium level increases, catalyst life improves, but only to a point (roughly 0.7-1.0%). As calcium increases past this point, calcium sulfate poisoning (PRB poisoning) begins to play a role in catalyst life, and further increases in calcium oxide decrease catalyst life.



**Figure 3-7**  
**Comparative Catalyst Effect Due to Calcium and Arsenic Levels in Fuel**

The PRB coal used in this case study had an ash calcium concentration of 21.5%, which equates to a coal CaO level of 1.5%, denoted by the area at the very top of the figure. Thus, catalyst life for this installation would be highly controlled by calcium sulfate poisoning, although the figure demonstrates that there will still be an effect, albeit muted, from increased arsenic in the fuel. It is very important to remember that this figure is based on fuel properties assuming a continuous burn of the particular fuel over the catalyst's life. Thus, short burn durations of any specific fuel will be "averaged" with the other fuels being burned over the catalyst's life. Given that the catalyst injection periods are quite short, on the order of several days, this will help to mitigate greatly any adverse impacts on catalysts which may be installed as part of the unit's SCR system.

In any event, an installation considering processing of spent catalyst may select an allowable maximum increase in the equivalent coal arsenic concentration. The selection of this value is somewhat subjective, and it is important to note that this allowable maximum will not affect the total arsenic fed to the boiler given a specific catalyst batch size and arsenic level. But by decreasing the catalyst feed rate and increasing the injection period, the “spike” in arsenic can be held to some specific value. The selection of this maximum arsenic equivalent may be selected based on installed catalyst protection, whereby limiting the “spike” in arsenic, the calcium to arsenic ratio is maintained at an acceptable level throughout the catalyst injection period. Alternately, the maximum may be selected to allow for greater capture of gas-phase arsenic as a basis for controlling arsenic emissions.

## Case Study #2 – Eastern Bituminous Fuel

### Background

A second case study was performed, similar to that above, for a boiler firing eastern bituminous coal. Table 3-7 gives the general boiler operating parameters. The representative ultimate coal analysis is given in Table 3-8, and the nominal slag and catalyst compositions are given in Table 3-9. The assumed catalyst composition is identical to that in the previous case study. As before, the shown slag composition assumes 100% fly ash recycle and represents the expected base-line value with no catalyst being fed to the boiler. Typical of coals of this type, the slag is composed principally of the oxides of silicon, aluminum, and iron. Unlike the previous case, calcium is not a principal component of the coal ash.

**Table 3-7**  
**Assumed Boiler Design Characteristics**

Parameter	Value
Name Plate MW	650
Boiler Type	Wet-bottom with 100% fly ash recycle
Fuel	Eastern Bituminous
Unit Heat Rate	7,000 MMBtu/hr
Nominal Full Load Coal Burn Rate (dry basis)	250 tons/hr
Full Load Nominal Flue Gas Flow Rate	1.3 X 10 <sup>6</sup> dscf/min

**Table 3-8  
Coal Ultimate Analysis**

Parameter	Value
Btu/lb	13,371
Moisture (as received)	2.00%
Dry Basis Analysis (%)	
Carbon	77.02%
Hydrogen	4.65%
Nitrogen	1.72%
Oxygen	5.63%
Sulfur	0.98%
Ash	10.00%
<i>Total</i>	<i>100.00%</i>

**Table 3-9  
Slag and Catalyst Composition**

Component	Nominal Slag Composition – w/o Catalyst Addition (%)	Nominal Catalyst Composition (%)
SiO <sub>2</sub>	42.6	17
CaO	2.5	1.5
Al <sub>2</sub> O <sub>3</sub>	31.4	3
SO <sub>3</sub>	2.8	2
Fe <sub>2</sub> O <sub>3</sub>	13.8	0.25
MgO	1.1	0.2
Na <sub>2</sub> O	1.1	0.2
P <sub>2</sub> O <sub>5</sub>	0.2	--
TiO <sub>2</sub>	1.3	66
BaO	0.5	--
K <sub>2</sub> O	2	0.2
V <sub>2</sub> O <sub>5</sub>	--	1
MoO <sub>3</sub>	--	0.2
WO <sub>3</sub>	--	6

## ***Analysis Results***

### **General Process Parameters and Effects on Slag**

Using the above assumed design specifications, an engineering analysis was performed, as in the previous case study. The analysis results are summarized in Table 3-10. Note, again, that a catalyst batch of 200 tons was assumed. As with the previous test case, the total slag production rate is not markedly affected at low catalyst feed rates, up to 0.5% or so. As the catalyst feed rate increases however, the total slag production increases, with about 20% more slag being produced at 2% catalyst feed, and roughly 30% more slag being produced at 3% catalyst feed, as compared to the base-line (no catalyst fed) condition. This is a more moderate increase in slag production on a relative basis, than the previous case, since the eastern bituminous coal contained a higher proportion of ash (10% compared to 7% for the PRB coal). Using the same assumed 200 ton batch of catalyst, the total catalyst feed time is slightly longer than in the previous case due to the lower coal burn rate, and the resulting lower tonnage of catalyst being processed per hour. Roughly 13 days (311 hours) would be required to process the 200 tons of catalyst at the low catalyst feed rate of 0.25% (compared to 10 in the previous PRB case). At a high catalyst feed rate of 3%, the total feed time is about 2 days (25 hours), roughly 4 hours longer than in the previous PRB case.

As with the previous case study, the slag becomes more and more enriched in the principal catalyst components as the catalyst feed rate is increased. The total amount of titania in the boiler feed does not exceed the recommended 2.25% under any scenario, so even the highest catalyst feed rate of 3% should not be a concern with respect to this parameter.

**Table 3-10**  
**Analysis Results as a Function of Catalyst Feed Rate**

Amount of Catalyst in Boiler Fuel Feed	0% (baseline)	0.25 %	0.5%	0.75%	1%	2%	3%
Coal burned - dry basis (tons/hr)	256.6	256.6	256.6	256.6	256.6	256.6	256.6
Catalyst added at above feed rate (tons/hr)	0.0	0.6	1.3	1.9	2.6	5.2	7.9
Total feed rate of coal and catalyst (tons/hr)	256.6	257.2	257.9	258.5	259.2	261.8	264.5
Slag produced (w/o catalyst) (tons/hr)	25.7	25.7	25.7	25.7	25.7	25.7	25.7
Total slag produced with catalyst (tons/hr)	25.7	26.3	26.9	27.6	28.2	30.9	33.6
Tons of catalyst fed (tons)	--	200	200	200	200	200	200
Run time required to feed catalyst (hrs)	--	311.0	155.1	103.2	77.2	38.2	25.2
Amount of TiO <sub>2</sub> in total boiler feed (%)	0.13	0.29	0.46	0.62	0.79	1.45	2.11
<b>Slag Composition (%)</b>							
SiO <sub>2</sub>	42.60	41.97	41.38	40.80	40.25	38.26	36.55
CaO	2.50	2.48	2.45	2.43	2.41	2.33	2.26
Al <sub>2</sub> O <sub>3</sub>	31.40	30.71	30.04	29.40	28.79	26.59	24.69
SO <sub>3</sub>	2.80	2.78	2.76	2.74	2.73	2.66	2.61
Fe <sub>2</sub> O <sub>3</sub>	13.80	13.47	13.15	12.85	12.56	11.50	10.60
MgO	1.10	1.08	1.06	1.04	1.02	0.95	0.89
Na <sub>2</sub> O	1.10	1.08	1.06	1.04	1.02	0.95	0.89
P <sub>2</sub> O <sub>5</sub>	0.20	0.20	0.19	0.19	0.18	0.17	0.15
TiO <sub>2</sub>	1.30	2.88	4.40	5.85	7.24	12.27	16.58
BaO	0.50	0.49	0.48	0.46	0.45	0.42	0.38
K <sub>2</sub> O	2.00	1.96	1.91	1.87	1.83	1.69	1.57
V <sub>2</sub> O <sub>5</sub>	--	0.02	0.05	0.07	0.09	0.17	0.24
MoO <sub>3</sub>	--	--	0.01	0.01	0.02	0.03	0.05
WO <sub>3</sub>	--	0.15	0.29	0.42	0.55	1.02	1.42



### Arsenic Effects

The potential for adverse effects from arsenic contained in the processed catalyst on downstream installed catalyst or in terms of arsenic emissions is greatly increased for the eastern bituminous coal case, since the coal does not naturally contain high levels of calcium. The values previously calculated relating the equivalent coal arsenic concentration to the catalyst feed rate and arsenic concentration in the processed catalyst apply to this test case as well (as shown in Table 3-11), since the calculation is based only on catalyst being fed as a proportion of the coal that is fed. *Again, the values represent the coal equivalent arsenic concentrations from the catalyst itself, and are in addition to any native arsenic in the coal.* Even though the coal equivalency values do not change, it should be noted that the equivalent gas-phase arsenic levels will change somewhat, however, since they are dependent on the coal feed rate and the resulting flue gas volumes produced.

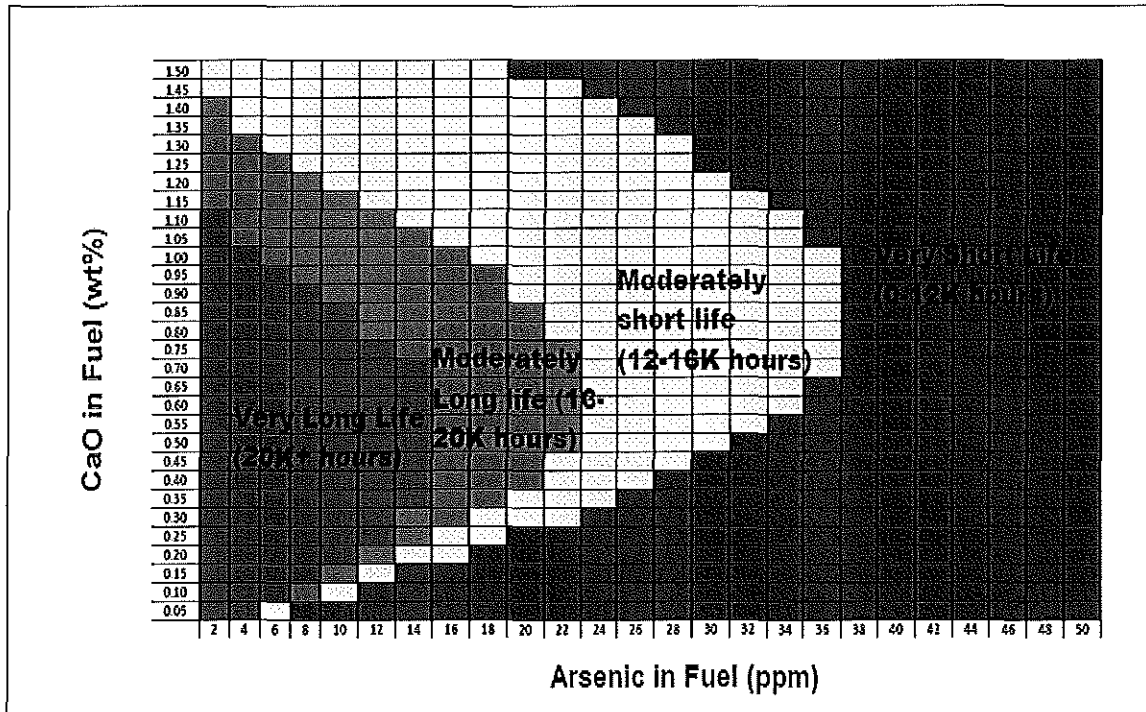
**Table 3-11**  
**Equivalent Coal Arsenic Concentration Due to Catalyst Arsenic Content**

Catalyst Feed Rate •(%)	Arsenic in Catalyst (ppmw)							
	50	100	200	500	1000	2000	5000	10000
	Equivalent Coal Arsenic Concentration (ppmw)							
0.25	0.1	0.3	0.5	1.3	2.5	5.0	12.5	25.1
0.5	0.3	0.5	1.0	2.5	5.0	10.1	25.1	50.3
0.75	0.4	0.8	1.5	3.8	7.6	15.1	37.8	75.6
1.0	0.5	1.0	2.0	5.1	10.1	20.2	50.5	101.0
2.0	1.0	2.0	4.1	10.2	20.4	40.8	102.0	204.1
3.0	1.5	3.1	6.2	15.5	30.9	61.9	154.6	309.3

The eastern bituminous coal selected for this case study has an ash CaO concentration of 2.5%, an order of magnitude lower than PRB coal in the previous case study. This 2.5% ash concentration converts to an equivalent coal CaO content of just 0.25%. Examining Figure 3-8<sup>13</sup> (repeated for convenience), one can see that this level of calcium is much lower on the figure, corresponding to a regime that is dominated by arsenic poisoning. In this regime, catalyst life will be very sensitive to arsenic level. The arsenic in the catalyst will undoubtedly impact the catalyst poisoning rate, but the relative effect will be tempered by the amount of arsenic that is native to the coal, as well as the duration of the catalyst process period. As previously discussed, catalyst is fed only for a very short duration compared to a catalyst typical exposure time on a particular fuel, thus the “averaging” effect of the arsenic will help to mitigate impacts. Further, the total arsenic fed to the boiler will not change due to a change in catalyst feed rate (assuming the catalyst batch size and characteristics do not change), thus it may be immaterial whether

<sup>13</sup> As mentioned previously, the figure should only be used as a guideline as to relative effects. Each specific unit will differ from the example given here, and other process parameters such as fly ash recycling may greatly affect the relationship of coal arsenic and catalyst life.

catalyst is injected fast or slow. In any event, if one selected a catalyst injection rate corresponding to an increase in arsenic of roughly 20 ppmv (fuel equivalent), a moderately deactivating arsenic level, this would then provide a basis for determining the required injection period. This limited level of allowable arsenic increase may also help to reduce emissions by managing a high-arsenic "spike" associated with catalyst injection. In any event, it is clear that the catalyst injection rate must be based on a case-specific analysis, taking into consideration the catalyst arsenic level, coal composition, and other balance-of-plant and operating parameters.



**Figure 3-8**  
**Comparative Catalyst Effect Due to Calcium and Arsenic Levels in Fuel**

An alternative arsenic-related analysis, which is perhaps more meaningful for bituminous fuels, at least from a general perspective, is to examine the total arsenic which is potentially released from the processed catalyst, as compared to that released from the coal combustion. If one assumes, for instance, that a typical SCR catalyst layer will have 16,000 hours of flue gas exposure, the total mass of arsenic to which the catalyst is exposed can be calculated using the coal arsenic concentration. Applying this basis to the boiler in the current case study, the coal feed rate of 256 tons/hr will result in a total of 2.9 million tons of coal being burned for the unit over the 16,000 hour time period (assuming a 70% capacity factor). Using this basis, Table 3-12 shows the total arsenic released as a function of coal arsenic content. For an extremely low coal arsenic concentration of 2 ppmw, the calculation shows that roughly 11,000 lbs of arsenic will potentially be released from the coal, while a very high coal arsenic content of 50 ppmw will result in a release of nearly 300,000 lbs of arsenic. These values can then be compared to the potential arsenic released from the processing of a catalyst batch, as a function of catalyst arsenic concentration. The results of this calculation are shown in Table 3-13. As in the above

calculations, a 200 ton catalyst batch has been selected as the calculation basis. A comparison of the two tables shows that, in general, the potential release of arsenic from the coal is vastly greater than the potential release from the catalyst being processed. The actual difference, of course, depends greatly on the coal and catalyst arsenic levels, as well as the total tonnage of catalyst being processed. If one chooses an average eastern bituminous coal arsenic concentration of 20 ppmw, the table shows potential coal-released arsenic to be roughly 115,000 lbs. Again, using 200 tons of processed catalyst as a basis, this number far exceeds the expected arsenic released from the catalyst, even if the catalyst contained a very high arsenic concentration of 10,000 ppmw (i.e., 115,000 lbs of arsenic released from the coal, compared to a maximum of 4,000 lbs of arsenic released from the catalyst). Based upon this analysis, the occasional processing of catalyst will typically not result in overall arsenic exposures over the life of the catalyst that are very different from the catalyst's native exposure from the coal itself. Of course, this is highly dependent on the amount of catalyst being processed. If catalyst is processed frequently, and in high tonnages, then the impact will be greater. Further, if the typical coal arsenic concentration is very low, and the processed catalyst arsenic concentration is high, the relative impact of the catalyst arsenic loading on the unit will be greater.

It is important to note that the above analysis assumes an arsenic chemistry that is identical for arsenic released from both the coal and the catalyst. If the arsenic speciation differs between the two feed streams, and this speciation results in a difference in the relative rate of deactivation from the arsenic contained in the two sources, then the overall analysis may be impacted. Further, the analysis is performed on a total arsenic throughput weight basis and is illustrative on a comparative basis (total coal arsenic versus total catalyst arsenic released). For a boiler using fly ash recirculation, the actual gas-phase arsenic will be impacted by this recycle stream, which in turn will impact an installed catalyst's deactivation rate. The comparative analysis based on relative amounts of arsenic available from the coal and catalyst still holds for the recycle scenario, but the actual amount of arsenic to which the catalyst is exposed will be greater than the values indicated, since the arsenic is effectively recycled in an ash recycle scenario.

### Impacts of Limestone Addition

The above analyses were performed assuming that no additional calcium, beyond that contained in the coal, was fed to the boiler. Of course, calcium addition, usually in the form of limestone, is sometimes used to mitigate arsenic poisoning. Limestone addition offers a convenient and flexible method of mitigating catalyst arsenic poisoning and can be tailored to mitigate any additional arsenic that is introduced into the boiler due to the processing of spent catalyst. Specifically, calculations similar to those used in the above the coal arsenic equivalency tables can be used to estimate the additional arsenic loading that a boiler will experience due to the processing of spent catalyst. This provides a basis for determining the required additional limestone needed to mitigate the increased arsenic. Thus, facilities equipped with limestone injection will have added flexibility when applying the recycle technology. This added flexibility, plus the added flexibility that limestone injection systems add in terms of physically injecting the catalyst, make boilers equipped with limestone injection particularly attractive for implementing the recycle technology.

**Table 3-12**  
**Potential Total Arsenic Released Due to Catalyst Due to Coal Combustion**

<b>Coal Arsenic Conc. – Dry Basis (ppmw)</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>20</b>	<b>30</b>	<b>40</b>	<b>50</b>
<b>Total Arsenic Released from Coal (lbs)</b> (16,000 hr burn time for unit firing 256 tons/hr coal @ 70% capacity factor)	11,496	22,991	34,487	45,983	57,478	114,957	172,435	229,914	287,392

**Table 3-13**  
**Potential Total Arsenic Released Due to Catalyst Arsenic Content (200 ton basis)**

<b>Catalyst Arsenic Conc. (ppmw)</b>	50	100	200	500	1,000	2,000	5,000	10,000
<b>Potential Arsenic Released (lbs)</b>	20	40	80	200	400	800	2,000	4,000

## Economics

The economics of slag incorporation will depend heavily on factors, such as the boiler modifications needed for catalyst injection, the costs associated with permitting, and the amount of catalyst to be processed. As a result, no detailed economics can be evaluated which would be meaningful for any particular boiler/utility. Boilers which already have provisions for pulverizing and injecting non-coal materials, such as those equipped with limestone injection, may be able to incorporate catalyst injection at a very low cost, since physical equipment modifications may be minimal. Similarly, if a pulverized coal slag-tap boiler is utilized, and the catalyst can be milled along with the coal, the physical modifications required for the boiler may be minor. However, in all cases, some provision will have to be made for catalyst preparation, storage, and feed metering. These boiler modifications would in large part be a fixed cost, so larger volumes of catalyst processed tend to reduce the \$/ton catalyst processing cost. Costs can be minimized on a \$/ton basis by selecting a single boiler for the processing of the entire utility's spent catalyst production, assuming that transport costs do not heavily influence the economics. Ultimately, these \$/ton costs must be compared to the costs of other recycle/re-use routes, as well as the offset costs of landfill disposal (taking into account factors such as liability and environmental good-will).

## Conclusions

The available data and analyses indicate that, at least from a fundamental technical standpoint, catalyst injection into wet-bottom boilers is a feasible recycle scenario. The applicability of the technology is highly specific to both the characteristics of the catalyst potentially being processed and the characteristics of the proposed boiler and downstream equipment. Some highlights of the findings follow.

- Process is generally only applicable to wet-bottom boilers.
- Boilers with high fly ash recycle ratios are most attractive, but not required for the technology.
- Multiple mechanical methods for introducing the catalyst into the boiler are patented.
- Processed catalyst characteristics, especially in terms of arsenic concentration, will impact downstream SCR systems. Coal and flue gas properties (arsenic to calcium ratios) must be evaluated in a case by case basis. Experience is limited to tail-end SCR applications.
- Boilers equipped with limestone injection are particularly attractive for use in this recycle scenario.
- General process parameters and impacts will be a strong function of catalyst feed rate, tonnage of catalyst processed, and frequency of processing.
- Implementation of the technology is highly case-specific, requiring careful analysis of the project specifics prior to implementation.
- Laboratory analyses may be highly beneficial in determining the effects on various slag parameters for potential specific cases, especially melt point and viscosity effects.

- Economics will be highly case-specific, depending heavily on the ease with which the technology can be implemented for any particular boiler, and the total amount of spent catalyst that will be processed.

More work will be required to fully evaluate the technical aspects of the technology, potentially relying on laboratory and pilot-scale studies. In addition, other logistical and regulatory issues must be addressed prior to implementation. These include obtaining the required environmental permits, making appropriate arrangements for catalyst crushing, storage and injection, and insuring worker health and safety when implementing the technology. All of these aspects of process implementation would need to be addressed in a highly case-specific manner, most likely after a specific target installation has been identified.

# 4

## UTILIZATION OF SPENT CATALYST IN THE CEMENT MANUFACTURE (CO-PROCESSING)

### Introduction

Prior EPRI work identified portland cement manufacture as a possible utilization route for spent SCR catalyst. Some basic laboratory data from published sources was reported which addressed the impacts of high-titania materials on cement quality.<sup>14</sup> Moderate additions of titania were found to act as a mineralizer, lowering the viscosity of the clinker liquid phase, and various studies have shown that titania can be incorporated successfully into cement clinker up to about 5 wt% in normal clinker phases. Given that this utilization route appeared to be potentially attractive, further investigations were conducted to determine the feasibility, technology details, logistics, and economics.

### Cement Manufacturing Process Description

The manufacture of cement includes three basic steps: 1) the grinding of the “raw mix” typically consisting of limestone and clay or shale to make a fine powder (with other components being added for varying purposes, including incorporation of recyclable materials into the product), 2) the heating of the raw mix in a kiln to a sintering temperature of up to roughly 2,750°F to convert the raw mix into cementitious compounds, and 3) grinding the resulting product, termed “clinker” to make cement. The vast majority of portland cement produced worldwide is manufactured in rotary cement kilns. Rotary kilns provide the thermal efficiency, material contact time, temperatures, and solids handling characteristics required for large-scale efficient commercial production of portland cement. Historically, rotary kilns have also been favored for the co-benefit of recycling waste materials. In the case of organic solvents, kilns effectively utilize the materials as a fuel, while providing for complete burnout of potentially hazardous organic compounds. Other potentially hazardous non-combustibles that may be present as contaminants in the solvents, such as heavy metals, are captured at various rates depending on the volatility of the constituents and the specific characteristics of the kiln and associated equipment. Capitalizing on the kiln’s innate design nature, high organic burn-out, and pollutant capture capabilities, solid waste materials have also been incorporated into kiln feeds with good success. This processing of solid waste is typically termed “co-processing.” Materials such as used rubber tires and other combustibles are commonly used since they provide both a source of fuel for the kiln and offer an environmentally sound recycle service. Other solid waste materials may provide a source of raw materials, offsetting the required mineral feed for the kiln.

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<sup>14</sup> See EPRI Technical Report, “Selective Catalytic Reduction (SCR) Recycle, Re-Use, and Disposal Options,” Product ID 1017554, 12/16/09.

### ***Rotary Kiln Design***

Rotary kilns for cement production vary greatly in detailed design, depending on such factors as type of fuel burned, feed material characteristics, required processing temperature and contact time, and desired kiln capacity. All rotary kilns do, however, conform to some basic design characteristics and have basic components in common, such as a rotating refractory lined steel tube which represents the “kiln” itself, combustion air and fuel injection systems, raw material feed systems, and provisions for cooling the product (and typically for pre-heating the raw feed and combustion air).

A generalized rotary kiln diagram is shown in Figure 4-1. The overall system operates in a countercurrent flow mode, where raw feed is introduced at the upper “cool-end” of the kiln, and where exhaust gases exit. The opposite lower end or “hot-end” contains the primary fuel burners, and it is in this location that the cement clinker product exits. The kiln itself is composed of a refractory lined tubular vessel of several meters in diameter and typically around 100 meters in length, although kilns of 6 meters or more in diameter and several hundred meters in length have been utilized historically. The exact kiln design will reflect different operating needs as a function of fuel, feed, and product specifications, as well as typical engineering design variations and capacity requirements. Thus, any specific kiln may deviate substantially from the size and general design discussed above.

Kilns are installed at a slight incline of 1 to 4° to facilitate the slow travel of the feed materials through the kiln. Rotational speed is typically 0.5 to 4 rpm. Incline and rotational speed are selected (along with numerous other parameters) to control the throughput and final quality of the cement product. Since the processed clinker becomes semi-molten at the higher-temperature areas of the kiln, it is extremely important that material flow be carefully managed throughout the process.

Kiln thermal efficiency must be carefully managed to maintain a low-cost competitive product. Heat recovery is extensively utilized and constitutes a major focus of operations. Kilns will have heat recovery systems at both the “hot-end” of the kiln where fuel and air are introduced and where product is removed, and at the “cool-end” where raw feed is introduced and exhaust gas exits. At the hot-end, the thermal energy available from the very hot clinker product is captured by a heat-exchanger, which preheats incoming combustion air, similar to the function of the air preheater on a coal-fired boiler (although the combustion air may be heated to much higher temperatures than is common to coal-fired boilers, as high as 1,500°F). Although the heat exchanger acts as an air preheater, the system is termed a “cooler” since the product is cooled to a relatively low temperature (~200°F) for ease in product handling. At the opposite hot-end of the kiln, hot flue gases are used to pre-heat the incoming kiln feed material, thus this system is generally termed the “preheater.” A favored method of preheating is to use a cascade (series) of cyclones, which serve the dual purpose of preheating the incoming feed and removing particulate from the outgoing exhaust gas stream. Although only three cyclones are shown in the diagram, four or more are typical in modern installations, and multiple parallel trains of cyclones may be utilized.

During the manufacture of cement clinker, three general temperature zones are often referenced: a drying zone, a calcining zone, and a clinkering zone. These three zones, along with their corresponding temperatures, are included in Figure 4-1. Although these zones are depicted in the



figure as distinct zones within the rotary kiln, in practice, a portion of the process corresponding to the zones may be conducted outside of the kiln. For instance, drying and calcining may be performed largely in the raw mix pre-heater section of the overall system, utilizing ancillary fuel firing to raise the raw mix temperature into the calcining regime. This operating philosophy helps to minimize kiln size, since a portion of the fuel combustion occurs outside of the kiln itself. In any event, as the temperature of the raw mix is raised, distinct chemical reactions occur which are associated with the formation of the cementitious compounds found in the product clinker. Figure 4-2 shows the primary reactions that occur and their corresponding temperature ranges. The final clinker product is characterized by a partially melted (20-30% by weight) granular material with relatively high amounts of alite ( $\text{Ca}_3\text{O}\cdot\text{SiO}_4$ ), the principal mineral phase of the cement. Fine grinding of the clinker produces the final cement product.

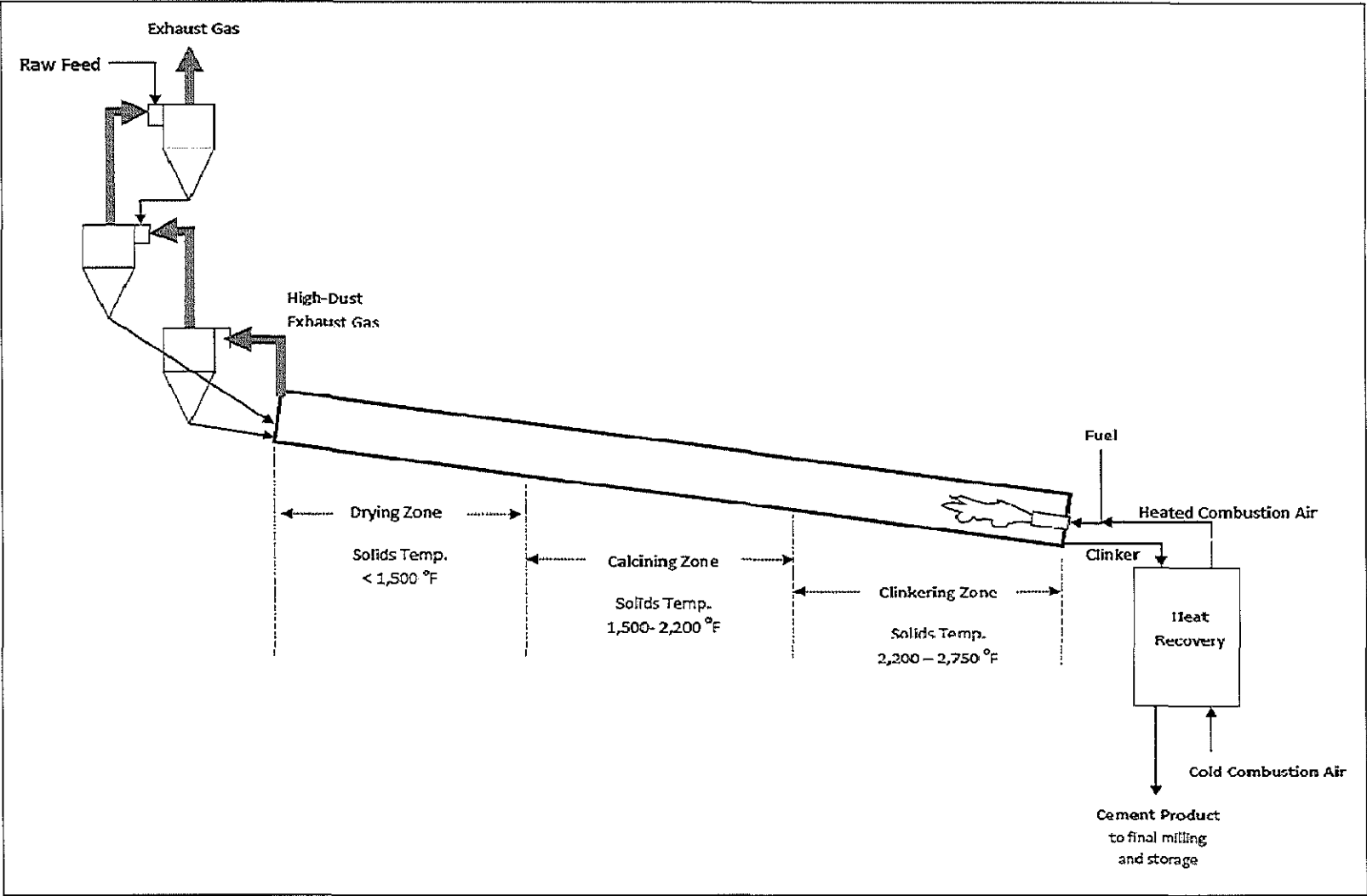


Figure 4-1  
Generalized Schematic of Rotary Cement Kiln

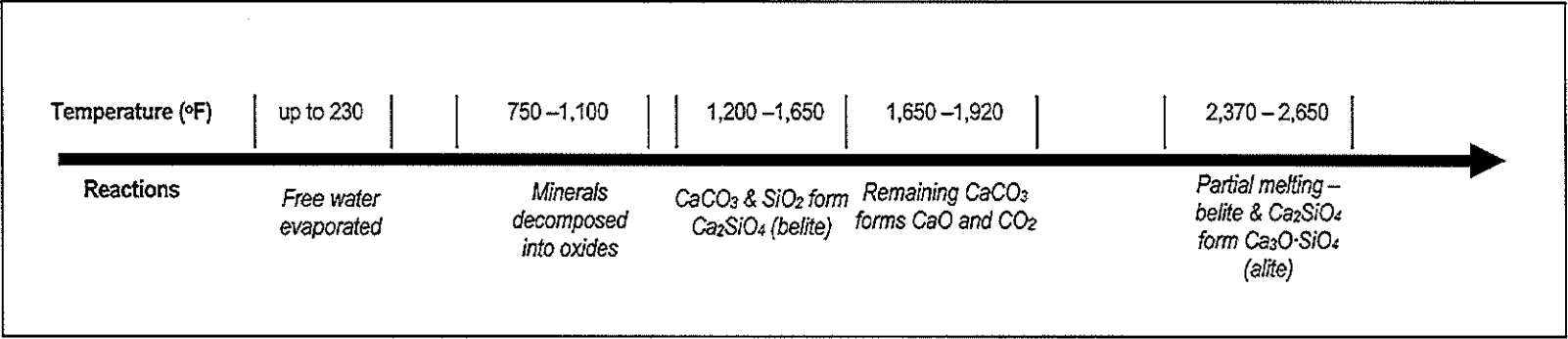


Figure 4-2  
 Primary Cement-Forming Reactions and Corresponding Temperatures

### ***Cement Kiln Emissions***

Cement kilns have emission concerns similar to those associated with coal-fired boilers in the utility industry. Namely, such flue gas constituents as particulate matter, CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>2</sub>, CO, unburned hydrocarbons, halogens, and trace elements, are of interest. CO<sub>2</sub> is produced from both the decarbonization of limestone, and the fuel used to fire the kiln. Dust is typically controlled using various methods, which often include ESPs or baghouses as polishing devices, with the majority of particulate being collected by cyclone preheaters (overall 99.999% particulate removal is common for cement kilns processing waste materials). NO<sub>x</sub> is typically controlled using staged combustion or SNCR, while SO<sub>2</sub> is typically controlled inherently due to the formation of alkali sulfates, which prevent free SO<sub>2</sub> release. The high temperatures and relatively long residence times within the kiln limit unburned hydrocarbon emissions. Halogen compounds are typically emitted only in small quantities owing to the formation of alkali-halogen compounds, although a recycle within the system may produce very high internal halogen concentrations.

Perhaps of most interest to the current study is the fate of trace elements. Trace element emissions are ultimately controlled by the characteristics of the kiln feed and fuel inputs, the collection efficiency of the particulate control devices, and the exact design details of the system as a whole. Volatile trace elements may evaporate in high-temperature zones of the kiln, only to be condensed in cooler sections, such as during feed pre-heating. This may result in the formation of cycles within the kiln, as well as cycles within external devices. Overall, trace elements are typically emitted to an extremely small extent due to the inherent retention capacity of the kiln and feed preheater. Non-volatile metals, such as arsenic, vanadium, and nickel, are typically completely bound in the cement clinker, while other elements, such as lead and cadmium, may react with chlorides and sulfates. The relatively volatile compounds condense within the cooler kiln sections and are precipitated in the preheater. This forms a recycle loop ultimately forcing the majority of the metals to the clinker phase. Unlike most other trace metals, mercury can be problematic for kilns, owing to its high volatility. As such, cement kilns have recently been the target of relatively stringent mercury control regulations.

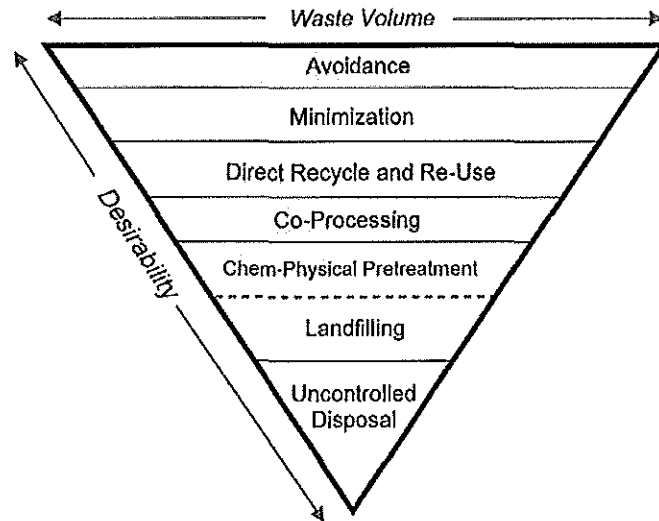
### **Co-Processing of Waste Materials in Cement Manufacture**

#### ***Introduction***

Waste material co-processing in cement kilns generally falls into two categories: co-processing of wastes that provide thermal energy to the process and co-processing of wastes that ultimately become incorporated into the cement product. The processing of spent SCR catalyst falls into the latter category, since there is no BTU value in the catalyst. The co-processing of waste materials typically serves a dual benefit; waste materials are effectively recycled/re-used thereby avoiding disposal, and the required kiln feed is reduced since the waste replaces a portion of the normal feed required (either mineral or fuel feed).

Sound environmental management practices generally adhere to the hierarchy as shown in Figure 4-3. The hierarchy focuses on waste avoidance and minimization as the preferred methodology for the bulk of potential waste materials. Direct recycling and re-use follows in preference (this includes such familiar direct recycle routes as paper and aluminum recycling).

Following these management techniques is the co-processing of waste. Least attractive is landfilling (including landfilling with chemical or physical pretreatment), followed by uncontrolled disposal. Catalyst reconditioning (including cleaning, rejuvenation, and regeneration) generally falls into the category of “Direct Recycle and Re-Use” and is preferable to disposal if reconditioning is feasible. Given that virtually all catalysts that are not reconditioned are currently landfilled, the development of cement kiln co-processing for spent catalysts is highly desirable.



**Figure 4-3**  
**Preferred Waste Management Hierarchy**

### ***Types of Wastes Co-Processed***

#### **General Waste Types**

Historically, a wide variety of waste materials have been co-processed in cement kilns. Kilns that do accept waste materials evaluate the incoming material on a case-by-case basis to establish the potential effects on the process. Table 4-1 shows some typical materials and their industrial sources that are common to cement kiln co-processing (focusing on materials that are not BTU sources). The primary compounds inherent in the wastes are also shown – typically these compounds act as beneficial mineral sources. The substitution rate (proportion of waste in kiln feed) is usually quite small for most waste materials, on the order of 1% or less, although fly ash substitution rates may be considerably higher. The exact rate of substitution will be determined on a case-by-case basis, with factors such as raw feed composition, waste composition, potential cement effects, operational effects, and emissions effects all being considered.

**Table 4-1  
Common Wastes Co-Processed in Cement Kilns**

Primary Compounds	Waste Material	Industrial Sources
Clay Mineral/ $Al_2O_3$	Coating residues	Foundries
	Aluminum recycling sludge	Aluminum industry
Limestone/ $CaCO_3$	Industrial lime	Neutralization process
	Lime sludge	Sewage treatment
Silicates/ $SiO_2$	Foundry sand	Foundries
	Contaminated soil	Soil Remediation
Iron Oxide/ $Fe_2O_3$	Roasted pyrite	Metal surface treatment
	Mechanical sludge	Metal industry
	Red sludge	Industrial waste water treatment
Si-Al-Ca-Fe	Fly ashes	Incinerator
	Crushed sand	Foundries
Fluorine	$CaF_2$ filter sludge	Aluminum industry

The above table lists common co-processed wastes, but in practice a very large number of potential wastes are applicable to cement kiln co-processing. These include various materials such as mixed dirty paper, cartons, plastics, textiles, packaging material, tires, wood, sorted wastes, oils, solvents, and hospital wastes. As mentioned above, specific wastes, especially unfamiliar wastes, must be evaluated on a case-by-case basis to determine if they can be accepted for co-processing. Figure 4-4 shows an example generalized decision tree that helps show the types of evaluations that may be conducted when considering a waste for co-processing. Each individual co-processor will have specific internal methodologies and requirements for accepting wastes. Ultimately, the waste acceptance decision will be a function of many factors including economics, commercial issues, and varied technical issues related to the kiln and waste characteristics.

#### Hazardous vs. Non-Hazardous Waste Designation

The waste designation (hazardous or non-hazardous) will affect how the waste is handled, transported, and ultimately treated. Specific kilns and associated pre-processing facilities will have different capabilities in terms of their ability to accept hazardous wastes. In addition, there may be a difference in a kiln's ability to accept liquid hazardous wastes versus solid hazardous wastes, since many highly desirable high-BTU wastes are liquid, and thus there is generally an incentive to permit for this type of waste. Clearly, the waste designation of the catalyst will greatly affect what facilities are able to pre-process and co-process spent catalyst, and a clear understanding of the waste's potential designation is an important aspect in determining appropriate potential treatment facilities.

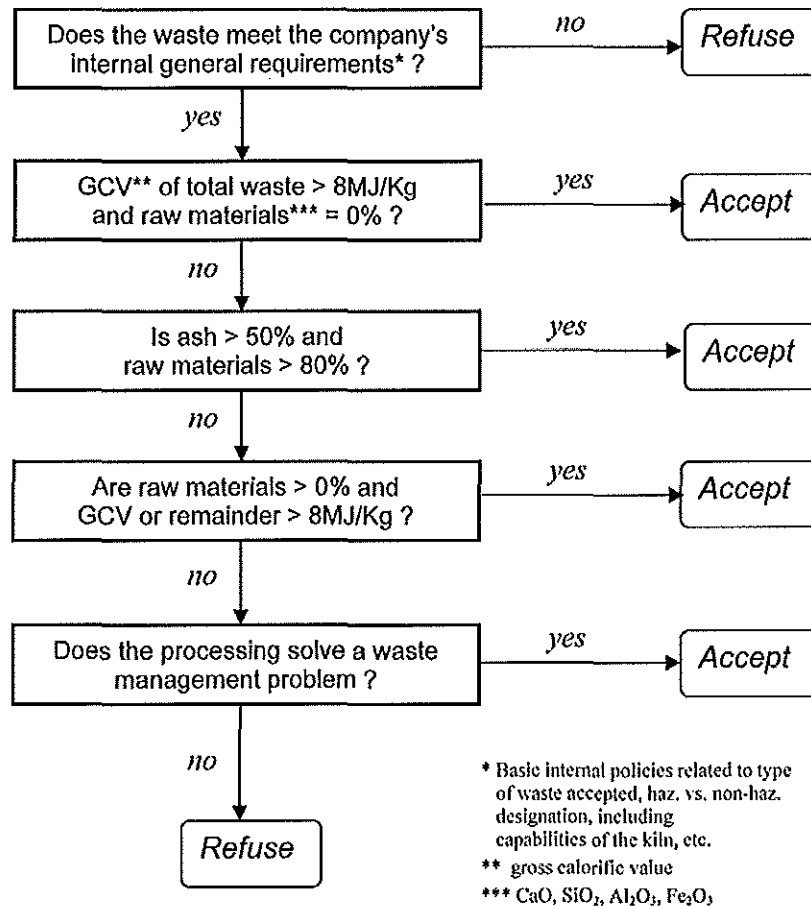


Figure 4-4  
 Example Generalized Decision Tree for Waste Acceptance

## Case Study

### Introduction

Given that the applicability of any particular waste to cement kiln co-processing must be determined on a case-by-case basis (unless the waste material is known to the industry), it was decided that a case study should be performed in conjunction with a cement manufacturer/co-processor using an actual spent catalyst sample. This would provide the most definitive information possible and would generally follow the initial steps of a full-scale co-processing project where the waste catalyst is initially subjected to analysis and consideration for acceptance.

**Hypothetical Source Unit and Catalyst Amounts**

Table 4-2 shows the hypothetical source unit characteristics and the assumed amount of catalyst to be treated. The unit represents a relatively large PC unit, with one layer of catalyst requiring disposal. This “hypothetical” unit was modeled after an actual unit from which an actual spent catalyst was obtained for evaluation. The case assumptions result in a moderately sized “batch” (248 tons/225 modules) of catalyst being processed.

**Table 4-2  
Assumed Spent Catalyst Source Information and Quantity**

Parameter	Value
Boiler Size	900 MW
Boiler Type	Wall-Fired PC
Coal Type	Eastern Bituminous (Central Appalachian)
Catalyst Type	Honeycomb
Catalyst Exposure Hours	22,000
Amount of Catalyst Processed	1 layer 225 modules 2,200 lbs/module 248 tons - total module weight
Amount of Ceramic Portion Processed	150 tons <sup>15</sup>
Total Bulk Metals Recovered	98 tons
Transport Distance	300 miles

**Catalyst Characteristics**

An actual catalyst sample was acquired for use in the study, as mentioned above, with an exposure history roughly conforming to the hypothetical case scenario. One honeycomb element, roughly crushed, was sent to the co-processor for evaluation. They performed a compositional evaluation of the catalyst as shown in Table 4-3. This provided the basic characterization of the material for their evaluation.

The elemental analysis showed that the majority of the catalyst sample was composed of titania (roughly 60%) as would be expected. Other principal catalyst constituents were also noted, such as silicon, tungsten, and vanadium. As usual, many other constituents were present, mainly related to fly ash contamination. Note that in the case of silicon, the total amount present on any particular aged catalyst sample is typically a combination of both silicon in the catalyst (as-manufactured) and silicon in the fly ash. Not all catalyst formulations contain silicon, but the levels can be appreciable in certain catalyst formulations. Of particular interest is the arsenic level of the catalyst sample. This sample showed roughly 5,000 ppmw of arsenic, a moderately

<sup>15</sup> Based on a ceramic proportion of 60%.



high level of arsenic, and consistent with arsenic contamination associated with catalyst exposed long-term to eastern bituminous coal flue gas. Another analyte of interest, mercury, was below the detection limit of 0.02 ppmw.

**Table 4-3  
Catalyst Sample Bulk Elemental Composition**

Analyte	Value	Analyte	Value
Moisture (%)	6.92	<b>Trace Constituents (ppmw)</b>	
LOI (%)	3.32		
Chloride (%)	0.02		
<b>Principal Oxides (%)</b>			
SiO <sub>2</sub>	14.41		
Al <sub>2</sub> O <sub>3</sub>	5.89		
Fe <sub>2</sub> O <sub>3</sub>	2.11		
CaO	1.48	Antimony	<100
MgO	0.14	Arsenic	4547
Na <sub>2</sub> O	0.31	Barium	109
K <sub>2</sub> O	0.52	Beryllium	5
SO <sub>3</sub>	1.69	Cadmium	80
TiO <sub>2</sub>	60.7	Lead	<10
P <sub>2</sub> O <sub>5</sub>	0.19	Mercury	<0.02
ZnO	<0.01	Silver	<2
Mn <sub>2</sub> O <sub>3</sub>	<0.01	Selenium	<20
SrO	0.02	Thallium	<20
Cr <sub>2</sub> O <sub>3</sub>	0.02	Nickel	<10

**Cement Manufacturer/Co-Processor Evaluation**

The cement manufacturer selected for the study is a large manufacturer with a global presence. Waste co-processing is a significant pillar of their business model. All functions associated with co-processing are conducted through a dedicated wholly owned subsidiary. Given their significant market share and national service network, the company is well poised to offer services to the utility industry as a whole.

The company has several operational cement kilns with each having specific characteristics. Specific facilities are targeted for the co-processing of waste, and part of the waste evaluation is to determine which facility is most applicable for processing the waste according to the waste characteristics, quantity, and originating location. Much of the evaluation process is internal and proprietary, and therefore not transparent to EPRI. A typical waste evaluation is predictive in nature, using waste analyses to predict the effect on overall cement kiln operation and product quality, based on the known behavior of the various waste constituents.

Using internal characterizations and general information related to expected catalyst quantities, etc. the co-processor evaluation resulted in several primary findings, as summarized below in Table 4-4. Details of the findings are included in subsequent discussions.

**Table 4-4  
Summary of Evaluation Findings**

Category	Findings
Effect on Kiln Operation and Product Quality	Spent SCR catalyst does not add beneficial components to the raw mix kiln feed – it does not act as a raw material replacement.
	In appropriate feed ratios, spent catalyst will not adversely affect kiln operation, emissions, or cement/clinker quality.
Benefits	The primary benefit of co-processing catalyst will be to solve a waste management problem (i.e. offer an alternative to landfilling).
	The process offers a “closed” loop method of recycling where the entire catalyst module is ultimately incorporated into useable products.
Direct Regulatory Issues	The designation of the waste as hazardous vs. non-hazardous will not greatly affect the ability to co-process the waste.
	Additional permitting requirements are not necessary to include spent SCR catalyst as a co-processed waste, at least from the standpoint of the co-processor.
Economics	Processing of the entire catalyst module is most attractive from an economic standpoint.
	A “tipping fee” would be required to offset processing costs, typically on the order of \$200-\$250/ton, but exact costs must be determined on a case-by case basis.

### Process Scenario

The co-processor determined an overall process scenario which would be applicable to most SCR catalyst “batches” considered for processing. Figure 4-5 shows the general steps in the process scenario. Initially, a catalyst sample would be sent to the co-processor for chemical composition evaluation. This would provide needed information in terms of primary oxides and trace elements present. This is especially important in determining emissions impact. Additional information provided to the co-processor during the preliminary evaluation would be related to general project scope, such as number of modules, module weight, location of the catalyst, and bulk metal to ceramic proportion of the modules as a whole.

With the above information, the co-processor would then make their evaluation and determine if the spent catalyst can be accepted, and what the costs would be. Commercial terms would be negotiated and the project would be approved by both parties. Necessary permits and regulatory approvals, if required, would be obtained at this stage. Actual transport of the catalyst would then take place. Note that the co-processor utilized in the case-study provides “turn-key” services, thus transportation arrangements, etc., could be provided by the co-processor as needed.

Under the currently envisioned process scenario, the co-processor would accept entire catalyst modules. As part of their recycle service, they would remove the bulk metals (including screens on plate-type catalysts) as a first processing step (pre-processing). The recovered metals value would help to offset processing costs (this would be considered in the price quote determined by

the co-processor). This bulk metal recovery would be performed in conjunction with the co-processor's metal recycle partner at adjoining facilities to the actual cement kiln operation. Note that the specific kiln identified in the case study as the target facility for processing does not currently accept solid hazardous wastes, nor does the associated pre-processing facility. This does not preclude the treatment of catalysts deemed hazardous, but this designation would require that an alternate facility be used, or that permitting changes be made at the identified facility.

After the ceramic portion of the catalyst is separated from the bulk metals, any grinding/milling of the catalyst that is required will take place. At this stage, the catalyst is ready for incorporation into the raw mix feed to the mill (or separate feed, if required). As discussed previously, the catalyst becomes incorporated into the clinker product, as it is processed through the kiln. The clinker is then finely milled, and blended if needed, to produce a final cement product. Additives may be incorporated into the milled clinker depending on its properties and the desired characteristics of the final cement product.

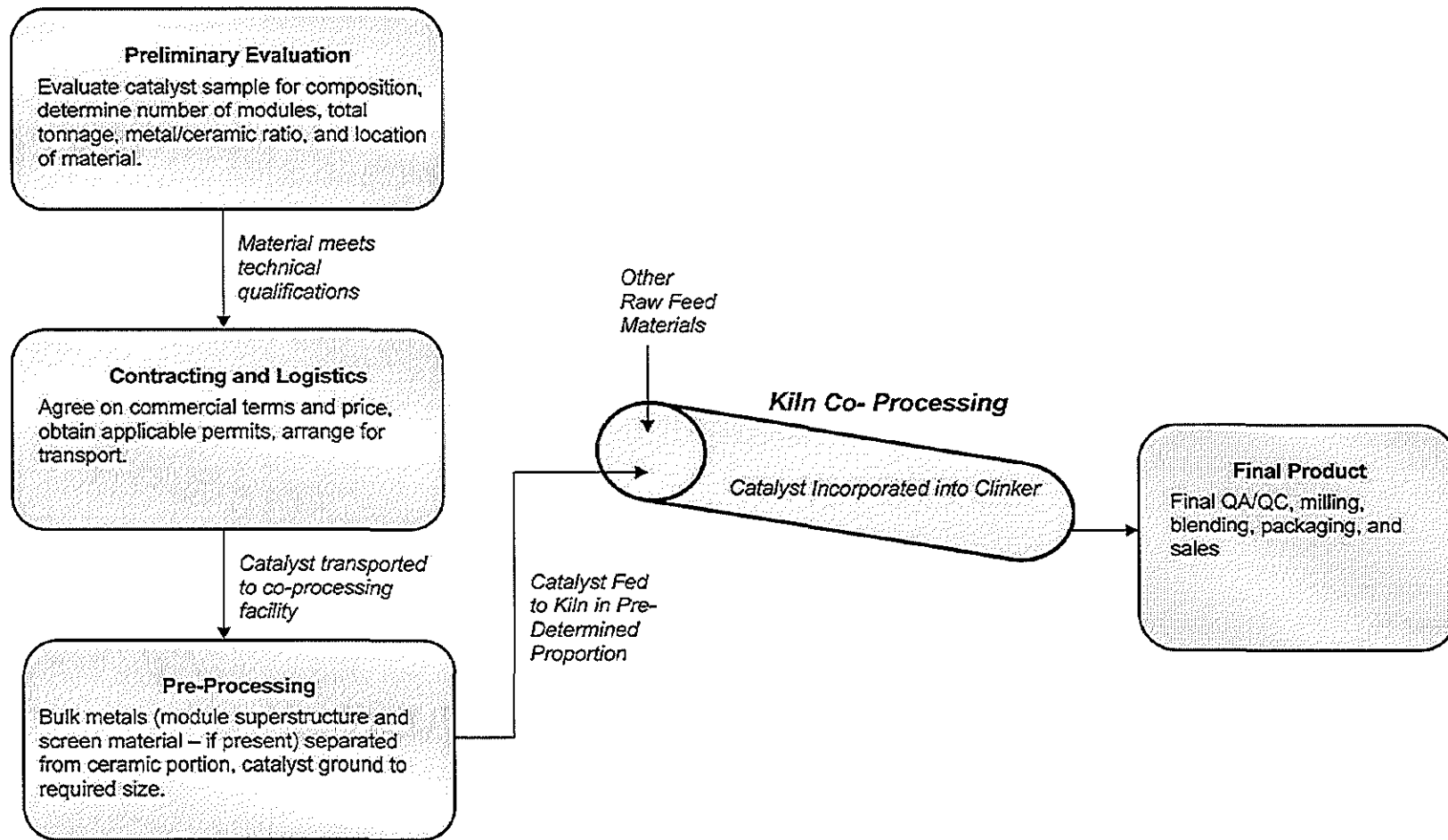


Figure 4-5  
Process Scenario for the Co-Processing of SCR Catalyst

### Effect on Kiln Operation and Product Quality

When co-processing wastes, the paramount consideration is the effect that the waste will have on cement kiln operation and product quality. These effects are well understood for frequently processed wastes, such as those discussed previously. However, as is the case with waste SCR catalyst, unusual or infrequently processed wastes must be evaluated carefully to predict any adverse consequences that may occur. This is typically done by an evaluation of the characteristics of the waste in light of past experience and knowledge of how the various waste constituents affect kiln operation and product quality. In the case of SCR catalyst, no BTU value can be derived from the material, thus the focus of the analysis is how the elemental composition of the catalyst will affect the cement clinker product, and how emissions may be adversely affected due to the catalyst contaminants.

The principal components of kiln raw mix feed that provide beneficial cementitious properties to the product clinker include calcium, silicon, aluminum, iron, and sulfur. Given that these constituents are relatively minor in spent SCR catalyst, it is apparent that the catalyst does not provide enough of these materials to significantly offset the amount of raw mix feed needed for the kiln. As a result, there is no benefit in co-processing spent catalyst from a feed material standpoint. A companion analysis is to evaluate whether the spent catalyst components are detrimental to the clinker product. The evaluation showed that since the principal catalyst component is titania, and since the catalyst would be fed at a relatively low rate compared to other kiln feed materials, the presence of the catalyst components would act essentially as inerts in the clinker product and would therefore not adversely affect product quality. It is important to note that the potential for adverse consequences of co-processing catalyst must be mitigated on a case-by-case basis with consideration given to the global feed composition to the kiln, the kiln operating parameters, the characteristics of the spent catalyst, the amount of catalyst to be processed, and the rate at which catalyst is fed to the kiln. Thus, kiln operators will depend on their experience to set co-processing parameters which do not adversely affect kiln operation and product quality.

In terms of the potential for adverse effects associated with emissions, a similar analysis to that above must be conducted, based on past experience and catalyst characteristics. The behavior of various feed constituents, such as heavy metals and organics, within the overall cement manufacturing process, is relatively well known. Using this knowledge and an understanding of the catalyst characteristics, appropriate kiln operating parameters and catalyst feed rates can be selected which do not result in increased kiln emissions. Emission control is generally aided by the inherent native trace metal capture capability of cement kilns in general. Thus, the principal metal contaminants of concern in catalyst, such as arsenic and selenium, are not generally problematic in terms of emissions. Again, the overall emissions effects will be predicted and mitigated by evaluating the global feed characteristics and catalyst feed proportion to the kiln.

### *Catalyst Co-Processing Capacity and Feed Rates*

The co-processing capacity for any particular kiln will depend both on the kiln's size/production capacity, and the rate at which the spent catalyst can be fed to the kiln (proportion of catalyst to other raw mix feed material). A large kiln, consistent with this case study, will require a raw mix feed quantity on the order of 1,500,000 tons/year. The maximum rate at which catalyst can be fed will depend on such factors as catalyst composition, and the composition of other feed

materials, but it is reasonable to assume that feed rates as high as 1% would be generally applicable. Based on this assumption, a large kiln could process as much as 15,000 tons/year of catalyst.<sup>16</sup> Comparing this value to the expected industry-wide spent catalyst generation rates, as previously shown in Figure 1-2, it is apparent that there is sufficient industry-wide kiln capacity to theoretically process the utility industry's spent catalyst. Although, this is a rough calculation, it is helpful in establishing an order-of-magnitude capacity for cement kilns in general, as compared to the predicted spent catalyst generation rate. For the moderately sized batch of catalyst used in this case study (248 tons total module weight/150 tons ceramic), the required processing time for a large kiln (1,500,000 tons feed/year) would be on the order of 90 hrs at a catalyst feed rate of 1%, and roughly 48 hours for a catalyst feed rate of 2%. This appears to be a very reasonable process time duration.

### Benefits of Catalyst Co-Processing

Cement kiln co-processing effectively offers an alternative route to disposal by landfilling, potentially mitigating some liability concerns, as well as improving environmental good-will by "closing the loop," since the material is ultimately incorporated into a useable product. (Note that potential economic benefits will be discussed in a subsequent section.) Environmental liability, as well as environmental good-will is notoriously difficult to quantify and is case-specific, so the value of these factors cannot be determined in a general manner with any degree of confidence. For regions where landfill disposal is difficult to permit, cement kiln co-processing can offer a vital alternative route to landfilling.

Overall, the process offers a closed loop "cradle-to-grave" concept of catalyst recycle whereby no distinct waste stream requiring landfill disposal is created. This offers an environmentally attractive alternative to landfill disposal of spent catalysts, potentially offering economic benefits (as discussed below), reduction in environmental liability, and an improvement in public perception.

### Direct Regulatory Issues

This subject area is related to various topics such as permitting and regulations that are currently in place governing cement kiln co-processing, waste transport, and specific waste disposal and recycle rules governing utilities.

The co-processor determined that their current operating permits and regulatory requirements would not be impacted by the co-processing of spent catalyst. Thus, no direct permitting or regulatory clarifications would be needed to proceed with commercial co-processing of the catalyst, at least in their particular circumstances. However, as mentioned previously, the co-processing facility identified for this case study is not capable of accepting hazardous solid wastes. Thus if the catalyst were deemed hazardous, then an alternate facility would have to be utilized, barring any permit changes.

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<sup>16</sup> Note that the cement manufacturer used in the study case stated that a maximum non-BTU solid waste processing rate would probably be limited to 10,000 tons/year for the identified target processing facility.

From a transport standpoint, under most cases the governing regulations would be virtually identical to those already in place for the transport of spent catalyst to a landfill. Thus, there may be no transportation-related differences between co-processing and landfilling, other than potentially transport distance. However, depending on the specific nature of the case, as well as the governing local, state, and federal regulations, the transport to the co-processor may be deemed transport for recycle purposes, while transport to a landfill would be deemed transport for disposal purposes. Certain permitting and regulatory differences between these two scenarios may be present and would need to be addressed on a case-by-case basis. The waste designation (hazardous vs. non-hazardous) would of course impact transport and handling, and the associated permitting requirements. Previous EPRI work examined this topic in some detail<sup>17</sup> and the reader is urged to consult the previous EPRI effort.

### Economics

Detailed economics of co-processing must be evaluated on a case-by-case basis, thus no global economic analysis can adequately predict the cost of co-processing compared to other options such as landfilling for any particular project. The actual costs for any specific project will be a function of many parameters including the following.

- Catalyst characteristics
- Bulk metal to ceramic ratio
- Amount of catalyst to be processed
- Location of material
- Availability and location of co-processing facilities
- Transportation costs
- Applicable regulatory and permitting requirements

Even though actual economics will be highly case-specific, some general economic guidelines have been developed to give a sense of the cost factors that are involved, as well as to give a rough order of magnitude estimate of costs. These estimates have been developed primarily as a comparison to the alternative of landfilling. The above referenced EPRI report provided a detailed analysis of potential landfill disposal costs, and updated versions of these costs will be used in the current evaluation.<sup>18</sup> Table 4-5 shows the basic analysis assumptions, consistent with the case-study assumptions, already given.

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<sup>17</sup> See previous EPRI report entitled "Selective Catalytic Reduction (SCR) Catalyst Recycle, Re-Use, and Disposal Options," Product ID: 1017554, 12/16/09.

<sup>18</sup> The non-hazardous landfill data are based on state-by-state average costs. Thus, certain individual landfill costs may lie outside of the minimum and maximum values given in the table.

**Table 4-5  
Economic Analysis Assumptions**

Parameter	Value
Tonnage in catalyst batch (total weight of modules)	248 tons
Bulk metal portion of batch	98 tons
Ceramic portion of batch	150 tons
Average distance to landfill/co-processor	300 miles
Truck load capacity	20 tons
Loaded per mile transportation cost per truck	\$4-7 hazardous \$1-2 non-hazardous

The economic analysis results are shown in Table 4-6, based upon the spent catalyst being treated as a hazardous or non-hazardous waste. For landfill disposal, this distinction is a governing factor, controlling to a large degree the actual landfill tipping fee. For co-processing, this distinction may not be an overriding factor. Expected low, high, and median values for the various parameters are also given, based upon the bulk of the information available. *(Note that the data should be taken as a guideline only, especially for hazardous co-processing costs, as these costs may vary significantly from project to project.)* It is clear that in most cases, the landfill or co-processor fee will represent the bulk of the overall costs (with the exception of low-cost non-hazardous landfill disposal). It also appears from the available data, that landfill tipping fees have the greatest potential variability of the parameters evaluated. Overall variability is limited somewhat for the co-processing option, since the range of co-processor fees is expected to be much less broad.

Transportation costs on a per-mile basis are comparable for both options, but a differential may occur on specific projects due to their being a difference in distance for the landfill facility as compared to the co-processor facility. Whether or not this distance difference has a significant impact on the overall economics will be dependent on the project costs as a whole. Taxes and generator fees have not been applied to the co-processing option, since in this recycle scenario, these types of fees are generally less applicable.

From a direct economic standpoint (without consideration given to a dollar value of liability limitation and environmental good-will), it appears that co-processing would not be directly competitive with landfill disposal for non-hazardous designated spent catalyst (with the possible exception of unusually high-cost individual landfill scenarios). However, for high-cost non-hazardous disposal, co-processing is roughly on par with landfilling, especially if some consideration is given to liability and good-will factors.

In terms of disposal with a hazardous waste designation, co-processing becomes much more attractive. In fact, co-processing appears to be competitive for most hazardous waste scenarios, except for very low-cost hazardous waste disposal. Considering the additional liability and good-will concerns associated with hazardous waste disposal, co-processing offers added relative



benefits. Thus, co-processing appears to be highly attractive under scenarios where the spent catalyst is treated as a hazardous waste.

Again, it is very important to note that the analysis is highly generalized in nature. Specific projects must be treated on a case-by-case basis, with consideration given not only to direct costs, but to potential environmental impacts and public perception. It is also important to note that co-processing costs, in particular, are market driven. Thus, fees may be negotiated as a function of catalyst batch size, frequency of co-processing, and company-wide volume. Therefore, it is important not to exclude any particular disposal/recycle option based solely upon the analyses present here.

Table 4-6  
Co-Processing versus Landfill Disposal Economics Analysis

Parameter	Landfill Disposal			Cement Kiln Co-Processing		
	Low	High	Approximate Median Value	Low	High	Approximate Median Value
<b>Non-Hazardous (per ton basis)</b>						
Landfill or Co-Processor Fee	\$14	\$100	\$32	\$200	\$250	\$225
Transportation Costs	\$12	\$25	\$18	\$12	\$25	\$18
Taxes and Generator Fees	\$2	\$20	\$5	NA	NA	NA
<b>Total Cost – Non-Hazardous</b>	<b>\$28</b>	<b>\$145</b>	<b>\$55</b>	<b>\$212</b>	<b>\$217</b>	<b>\$243</b>
<b>Hazardous (per ton basis)</b>						
Landfill or Co-Processor Fee	\$50	\$800	\$300	\$250	\$300	\$275
Transportation Costs	\$50	\$90	\$70	\$50	\$90	\$70
Taxes and Generator Fees	\$1	\$105	\$20	NA	NA	NA
<b>Total Cost - Hazardous</b>	<b>\$101</b>	<b>\$995</b>	<b>\$390</b>	<b>\$300</b>	<b>\$390</b>	<b>\$345</b>

## Use of Ceramic Material with Chemical Processing

Through the use of chemical processing, it is possible to recover some of the metal species contained in the ceramic matrix of spent SCR catalyst. This metal recovery should not be confused with the bulk recovery of metals, such as the module superstructure and catalyst plate screens. The matrix of the ceramic is by nature quite stable, and the metallic species are present as the oxides. Aggressive chemical processing is therefore necessary to recover the metals with high efficiency. At first glance, one might assume that the high titania content of the catalysts would represent a potentially valuable source of titanium metal. However, this is not the case. The value of titanium metal lies not in the presence of titanium specifically, but in the fact that it is in metallic form. Titanium in mineral form is quite ubiquitous in the environment (titanium is in fact the ninth most abundant element in the earth's crust, making up about 0.6%). The issue is that titanium is found naturally in the oxide or other compound form, requiring costly processing to produce titanium metal. Thus, the value of any titanium source is strongly a function of the form in which titanium is present. The oxides of other metals such as vanadium, molybdenum, and tungsten may be more valuable due to their relative scarcity in the environment, as well as the relative ease at which the oxides can be converted to the metals.

Historically, metal recovery has been practiced for catalysts types such as precious metal catalysts (usually platinum-group metals supported on aluminas or zeolites), and sometimes for nickel and cobalt catalysts. To explore the feasibility of metal recovery from spent SCR catalyst, EPRI contracted with a specialty catalyst recycling firm to perform a first-phase laboratory study. The results of this work follow.

### ***Metals Recovery Feasibility Study<sup>11</sup>***

#### Background

EPRI contracted with LEMetrix Solutions, LLC<sup>12</sup> to perform a small-scale study to evaluate the technical and economic feasibility of recovering metals from the ceramic portion of SCR catalyst. For this study, two honeycomb logs of catalyst were utilized, one sourced by EPRI and one sourced by LEMetrix. These samples were exposed in large utility boilers firing eastern bituminous fuels. These catalyst samples are considered roughly representative of spent SCR catalyst, associated with eastern fuels. Both samples were similar in chemical composition and contained roughly 4.5% W and 1% V with no molybdenum.

#### Thermodynamic Calculations

A thermodynamic study was conducted using FactSage to determine the equilibrium species after roasting.  $\text{TiO}_2$ ,  $\text{WO}_3$ ,  $\text{Na}_2\text{CO}_3$ ,  $\text{V}_2\text{O}_5$ ,  $\text{As}_4\text{O}_6$ , S, CaO,  $\text{Al}_2\text{O}_3$ ,  $\text{SiO}_2$ , and  $\text{Fe}_2\text{O}_3$  were input as reactants to the thermodynamic model which then predicted the product species. A reaction temperature of 800°C was selected.

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<sup>11</sup> Much of the following discussion is excerpted directly from information and data provided by LEMetrix.

<sup>12</sup> LEMetrix Solutions, LLC – Plant, 110601 Twitty Drive, Rolla, MO 65401, Tel: 573-426-6449.

The model results predicted that sodium would react with tungsten and vanadium to form their sodium salts. The order of thermodynamic stability of the sodium compounds would be: sodium sulfate, sodium aluminosilicate, sodium tungstate, sodium vanadate, followed lastly by sodium titanate. Iron would be converted to hematite which would not be soluble in the leach solution. Arsenic would react with calcium to form calcium arsenate. It is unknown whether calcium arsenate or sodium titanate would be soluble in the leach solution. Note that if calcium is present in the catalyst in amounts greater than that which can react with arsenic to form the more stable calcium arsenate it could form insoluble calcium tungstate and calcium molybdate--reducing leach recoveries for tungsten and molybdenum. This may in fact be the case for catalysts associated with the firing of PRB fuels. Since it would be ill-conceived to add arsenic to the roast to bind up calcium in order to improve tungsten and molybdenum leach recoveries, it is possible that phosphorus (similar to arsenic in chemical properties) could be added instead.

## Laboratory Results

### *Analytical Procedures - Salt Roast and Water Leach*

The SCR samples were first ground, and then roasted at 800°C for 2 hours with stoichiometric amounts of sodium carbonate to convert both vanadium and tungsten into their soluble sodium salts. The soluble sodium compounds were then leached with water for 1 hour and filtered after which the solutions and tails were assayed for vanadium and tungsten to determine the recoveries of these two elements. Initial assays of the materials, as well as the leach pregnant (preg) solution and leach residue from the first sodium roast were performed both at LEMetrix and at QChem Laboratories for comparison. LEMetrix used a sodium fusion, boil, and filter process on solid samples, followed by analysis of the solution by atomic absorption. Solutions were assayed "as is" by atomic absorption. QChem used an ICP which is not influenced by interferences like the flame AA. It was found that the solution assays from both labs were within 5% of each other. The solid assays using the fusion process, however, were about 25% higher than the solid assays using ICP. The most likely cause of the AA Flame assay discrepancy is potassium interference. Further testing will determine if the samples can be matrix matched to minimize interferences. This testing is important in order to minimize the costs of outside analytical. Recovery results for the EPRI-sourced sample are shown in Table 4-3 below. Note that a calcium analysis was not performed on this sample so it is possible that if calcium was present the leach recoveries could be improved with the addition of sodium phosphate in the roast. Future testing will investigate this possibility. In any event, considering the low tungsten and vanadium feed concentrations, the recoveries were very respectable.

**Table 4-3  
Metal Recovery Results for SCR Catalyst Sample**

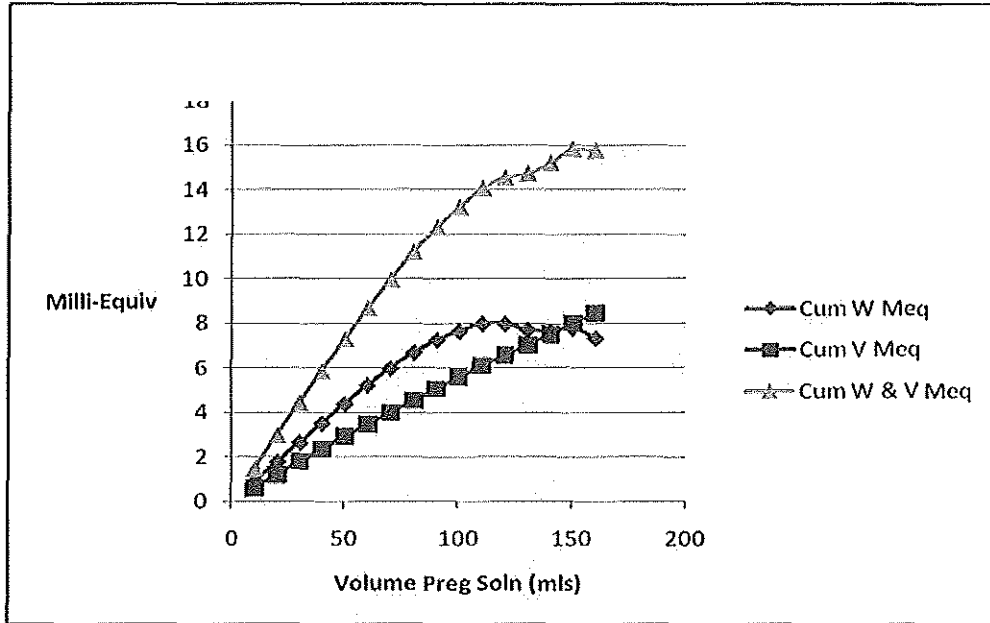
Stream	Wt (g)	Assay (%)	Recovery <sup>13</sup> (%)
<b>Vanadium</b>			
Feed	35.15	1.49	
Preg	91.00	0.51	73.82
Wash	75.00	0.07	8.85
Tails	35.43	0.31	17.33
<b>Tungsten</b>			
Feed	35.15	3.60	
Preg	91.00	1.66	74.12
Wash	75.00	0.28	10.23
Tails	35.43	0.90	15.64

*Ion Exchange Resin Testing with DOWEX 21K XLT*

The preg solutions from the above processing were used to determine if a tungsten and vanadium separation could be performed using a column containing Dowex 21K XLT. For this work, resin containing approximately 16 milliequivalents capacity was loaded into a glass cylinder. Preg solution was dripped through the resin column and the effluent measured and assayed. Figure 4-2 is a plot showing the loading of the column. The amount of tungsten and vanadium loaded is expressed in terms of milliequivalents (Meq). Both tungsten and vanadium were found to initially load onto the resin. However, as the resin approached its maximum capacity successive additions of preg solution caused tungsten to desorb in preference for vanadium. The preference of the resin for vanadium over tungsten does not appear to be high enough to use the Dowex 21K XLT to absorb vanadium from high concentrations of tungsten.

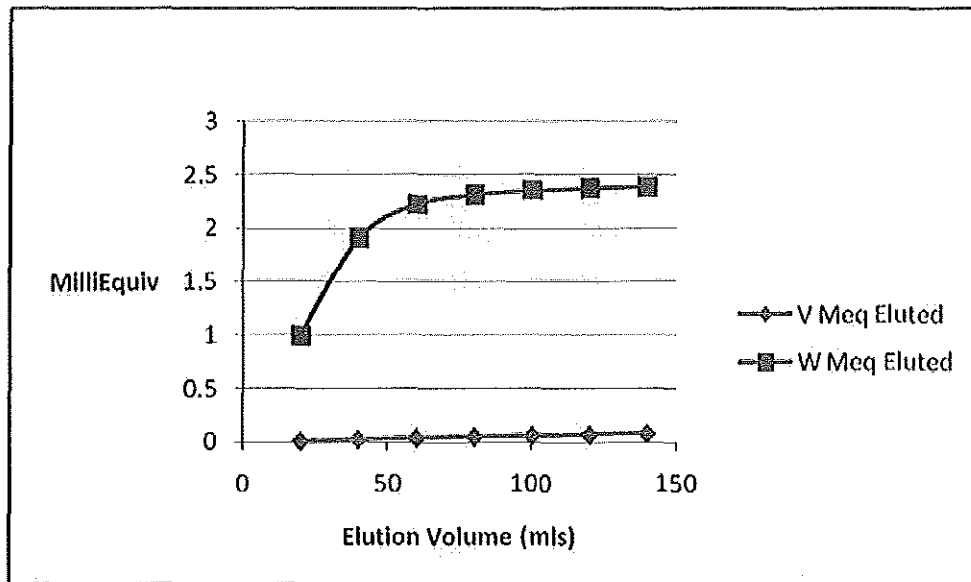
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<sup>13</sup> Recovery values are calculated as the fraction of material found in the various streams compared to the material in the sum of the streams. These values differ from a comparison to the feed, due to differences in the analytical accuracies on the raw solid material.



**Figure 4-2**  
**Dowex 21K XLT Loading Curve**

A saturated sodium chloride solution was used to strip the loaded resin. Figure 4-3, below, shows the elution graph. It appears that while effective in removing tungsten without vanadium, it left a considerable amount of tungsten on the resin. Future test work will try and improve these results. Different solvating ions (ammonia or chloride anions instead of hydroxides which were present in this case) may improve the separation selectivity of the resin.



**Figure 4-3**  
**Dowex 21K XLT Elution Curve**

### Economic Analysis

An economic analysis was developed based upon analyses originally developed by LEMetrix. This analysis uses a basis of 500 tons of catalyst and is based upon information developed from the above described testing. Table 4-4 shows the basic assumption utilized in the analysis, and Table 4-5 shows important calculated quantities and resulting dollar values. This analysis assumes the recovery of bulk metals, vanadium, and tungsten. As discussed below, the fate of the titania will likely be an important driver in the overall economics.

**Table 4-4  
Catalyst Recycle – Assumptions for Economic Analysis**

Parameter	Value
Analysis Basis – Amount of Catalyst	500 tons of catalyst (1,000,000 lbs)
Module Weight	1 ton/ module
Number of Modules	500
Catalyst Type	Honeycomb
Proportion of Bulk Steel in Module (by wt.)	33%
Proportion of Ceramic Catalyst in Module (by wt.)	67%
Vanadium Content	1 %
Tungsten Content	4.5 %
Titanium Content	36%
Carbon Steel Recovery Rate	100%
Vanadium Recovery Rate	80%
Tungsten Recovery Rate	80%
Vanadium Sales Price (as V2O5, 85% of market)	\$12.75/lb
Tungsten Sales Price (APT powder, 85% of market)	\$12.13/lb
Scrap #1 Heavy Melt Carbon Steel Price	\$250/ton
Current Estimated Processing Cost	\$800/ton

**Table 4-5  
Catalyst Recycle – Economic Analysis**

Parameter	lbs	tons
Total Weight of Spent Catalyst Modules	1,000,000	500
Ceramic Catalyst Portion	670,000	335
Carbon Steel Portion	330,000	165
Total Available Tungsten	30,150	15.1
Total Available Vanadium	6,700	3.4
Total Available Titanium (as metal)	241,200	121
Total Available Titanium (as oxide, TiO <sub>2</sub> )	402,000	201
Recovered A36/A569 Carbon Steel (scrap)	330,000	165
Recovered Tungsten	24,120	12.1
Recovered Vanadium	5,360	2.7
Carbon Steel Sales	\$41,250	
Tungsten Sales	\$292,580	
Vanadium Sales	\$68,340	
Titanium Sales	---	
Total Recovered Materials Sales	\$402,170	
Processing Cost	\$400,000	
Gross Profit (total for 500 tons catalyst)	\$2,170	

The above economic analysis is very approximate at this time, but it does show that the recycle of the ceramic portion of the catalyst for metals recovery is potentially feasible. As presented, the analysis shows essentially break-even with the assumed metal recoveries, metal values, and processing costs. Tungsten sales represent the biggest source of revenue, followed by vanadium sales, and bulk metal (scrap) sales.

It is clear from the analysis that the recycle economics will be governed by several primary parameters: processing cost, metals content, metal recovery rates, and metal values. As these parameters vary, the economic attractiveness of recycling will change accordingly. Looking at the tungsten content in particular, one can see that for the above example, an increase in catalyst tungsten content of just 1% (from 4.5 to 5.5%, for instance) increases revenue in the example case by roughly \$65,000. An improvement in processing cost of 10%, increases revenue by \$40,000. Thus, the overall economics are quite sensitive to a number of parameters. Catalyst would likely need to be evaluated on a case-by-case basis to determine the feasibility of recycling. In addition, process optimization to lower processing costs will necessarily be an important part of the overall economics.



One major consideration is the fate of the titania portion of the catalyst. As previously discussed, titania makes up a major part of the ceramic portion of the catalyst. Finding a use for this material (and avoiding disposal costs) would be a huge benefit to the overall recycling process. The above economic analysis assumed no value for this material, but a disposal cost was not applied either. Thus, the final disposition of the titania will have a major impact on overall economics. At a minimum, a low-value use for the titania would allow disposal costs to be avoided and would be environmentally attractive, since virtually 100% of the catalyst would be recycled in this case. Thus finding a use for the remaining titania material is a high priority.

#### *Future Testing for Catalyst Recycling*

Additional work is required at both the Lab Scale and Pilot Scale to further develop the recycling processes and to fully assess the feasibility and economics. Areas of particular interest include:

- Refinement of the roasting step to improve metal recoveries.
- Potential utilization of sodium phosphate to ameliorate depression of tungsten recoveries by calcium.
- Finding a suitable industrial use for the leach residues (containing mostly titania).
- Optimization of the separation of vanadium, molybdenum, and tungsten via anion exchange resin.
- Investigation of methods for the purification of solutions (phosphorus removal, etc.) and precipitation techniques.

#### **Metal Recovery Results Summary**

Overall, the preliminary results of the metal recovery recycle testing are very promising, achieving 70-85% metal recoveries into the preg solution. Ion exchange testing for metals separation also showed promising results, however, much more testing is needed to determine a viable detailed recovery process. Rough economic analyses showed that the recycle process has the potential to be feasible and warrants additional study. Under the current rough economic analysis, recycle appears to be break-even. Improvements in processing cost and by-product utilization (titania) will improve the overall economic attractiveness. Ultimately, the recoverable metal content of the catalyst will have a major impact on the recycle economics; thus, the cost/benefit of recycle will need to be determined on a case-by-case basis as a function of the particular catalyst design.

#### **Re-Use of Catalyst in Alternate Applications or for New Catalyst Manufacture**

One catalyst re-use possibility is to utilize catalyst removed from one installation in an alternate installation. This option is typically most often applied to fairly young catalysts with high relative activity for which their specifications do not continue to match the intended application. For instance, a fuel change may render an installed catalyst formulation inapplicable for an installation. Another driver for this type of catalyst re-use may be the need to lower SO<sub>2</sub> conversion (due to SO<sub>3</sub> problems, fuel changes, operating condition changes, etc.). If the remaining activity is high, this catalyst can be utilized in another installation. This may be done within the original owner's system of plants, or the catalyst may be sold to an alternate utility. Although catalyst re-use in this way is an attractive scenario, the opportunities to utilize this option are quite rare.

Another re-use option is to utilize spent catalyst in the manufacture of new catalyst. This option has been investigated in some detail in previous EPRI reports, with the conclusion that the volume of catalyst that can be utilized in this way is not significant, and the method does not have widespread applicability. Current industry information does not indicate that these findings have changed.

# 5

## ON-SITE CATALYST WASHING

### Background

The washing of catalyst on-site is an area of particular interest to EPRI members. Previous EPRI studies have examined catalyst regeneration and rejuvenation, primarily off-site (although on-site rejuvenation is potentially an option), but these studies did not address in detail on-site washing. A previous EPRI report discussed the general process of catalyst washing, as well as gave references as to specific technology firms experienced in catalyst washing.<sup>14</sup> This report also gave some information related to the determination of whether a specific batch of spent catalyst would be a candidate for washing.

The identification of a specific process as “washing” or “rejuvenation” is somewhat of a grey area, but in this study washing is defined as wet treatment of catalyst, primarily for fouling, where no aggressive chemical solutions/agents are used to strip chemically bound poisons from the catalyst, and no active components are added via these chemical solutions. (Note that some removal of chemical poisons may occur as a matter of course during washing, but this is not the primary targeted purpose of the washing process.) Thus, washing is generally considered to be less technically demanding than rejuvenation or regeneration, certainly in terms of the chemistry involved. However, the washing procedures may be quite sophisticated in terms of mechanical processing, the wash solutions that are utilized, and the drying procedures, etc. As a consequence, washing processes may vary greatly in their level of sophistication, from carefully designed proprietary treatment utilizing specialized equipment with highly controlled wash solutions (high-tech processes), to very simple hose-down or “dunk” procedures using basic plant equipment (low-tech processes).

The current work with catalyst washing is divided into two primary areas of effort: 1) a review of the existing industry experience and available data and 2) a detailed “case study” where an actual field washing effort is followed closely by EPRI. In reference to the latter area of effort, no on-site washing project was identified which could be followed by EPRI to be included in the current reporting effort. As a result, a follow-on technical update will be issued which details an on-site washing project which has been identified and will take place in the spring of 2009. This identified project will be a simple wash utilizing on-site plant contractors with no specialized equipment or processing.

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<sup>14</sup> See the prior EPRI report entitled “*Catalyst Disposal, Recycle, and On-Site Washing/Rejuvenation Options*,” EPRI Report 1012657, February 2007.

## General Washing Process

The specifics of any washing process will necessarily be highly case-specific. However, in a very general sense, washing follows a step-wise process. This generalized process is shown in Figure 5-1 to assist in the understanding of the industry experience as described below. Note that one or more of these steps may be omitted based upon the specific case. The following paragraphs briefly discuss the primary steps involved in a catalyst washing project.

**Initial Evaluation** – Catalyst must be evaluated initially to determine if it is a candidate for washing. Catalysts that are relatively young and have experienced loss in functionality due to physical fouling mechanisms are usually considered good candidates for washing. Catalysts which are highly aged and have experienced long-term chemical deactivation would be expected to respond less favorably, and may not be candidates. Economics and logistics will play a major role in the decision to wash catalyst.

**Process Optimization** – The washing process may be optimized by using catalyst samples to determine the most effective washing parameters, such as soak time, solution composition, required agitation, and drying methods. Laboratory testing is used as an aid in determining the effects on the catalyst due to different washing parameters.

**Dry Cleaning** – In almost all cases, the exposed catalyst is cleaned via dry vacuuming, agitation, etc., prior to the actual wet processing. In the case of plate and hybrid catalysts, the modules may be disassembled during this stage of processing to facilitate dry cleaning and future wet processing.

**Wet Processing** – The actual wet processing of the catalyst may involve several stages, such as soaking, agitation, deluge, and rinsing. The treatment of the catalyst, especially in terms of the physical handling, may be refined during actual processing to minimize the effort and maximize the effectiveness.

**Drying** – A final drying stage may be conducted using heated forced-air drying, or the catalyst may simply be allowed to dry naturally. In any event, the moisture level of the catalyst would be required to be reduced prior to heating in the reactor.

**Effectiveness Evaluation** – A final evaluation of the effectiveness of the washing process would typically be conducted after the treatment of the catalyst. This evaluation would usually involve laboratory analyses on samples to determine the activity and SO<sub>2</sub> conversion, and other parameters such as porosity, surface area, chemical composition, and strength. A physical inspection will reveal the effectiveness in terms of the removal of macro-fouling.

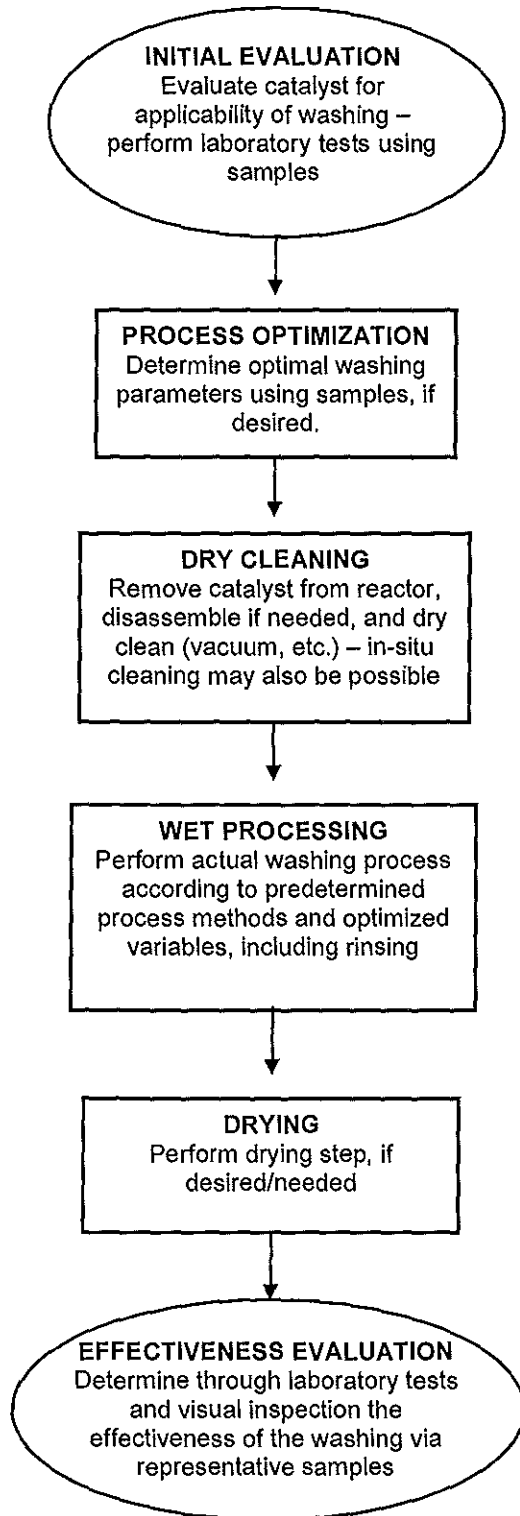


Figure 5-1  
General Process Flow Diagram for Catalyst Washing

## Industry Experience

As stated, the current reported information focuses on industry data currently available and is presented in the form of three case studies reflecting full-scale washing projects. Note that this information is based upon industry data and has not been independently validated by EPRI. Results from Cases #1 and 2 were obtained from the host Utilities, while Case # 3 was obtained from the vendor performing the services.

All of the following cases involve the removal of the catalyst from the reactor for on-site ex-situ washing. It should be noted however, that in-situ washing is a possibility and may be considered based upon logistical and technical considerations.

### ***Catalyst Washing – Case #1***

#### Background

The first case study involves two SCRs located on twin units. These units had large T-fired boilers burning eastern bituminous coal. Major plugging of the first layers of both SCRs was experienced due to LPA ash, and ultimately it was determined that the first layer of catalyst would be removed from the reactors for on-site washing. The utility contracted with Enerfab<sup>15</sup> to provide catalyst washing/cleaning services. Given the specialized physical processing utilized, along with optimized process parameters, this particular washing case would be considered a relatively high-tech washing process compared to more simple non-optimized water-wash techniques. The catalyst was of honeycomb type and had been in service for only a short period of time. Thus, very little deactivation due to arsenic poisoning would be expected. Given that the underlying activity of the catalyst was still quite high, this represented an excellent case for on-site catalyst washing. Note that these units were operated in the ozone season only, at the time. Thus, the catalyst washing activities were undertaken during the non-ozone season.

#### Technology Description

##### *Laboratory Pretesting*

As a preliminary step to the implementation of the technology, laboratory tests were performed to help optimize some of the washing parameters for the particular catalyst being treated. These tests were performed utilizing representative samples. In particular, the technology offered by Enerfab includes proprietary wash solutions containing various additives. The results of some of this additive testing are shown in Figure 5-2 which shows the effect of three different washing solutions on the catalyst open channels after processing. Note that the catalyst had only 35% open channels prior to processing, which would result in significant pressure losses, and a severe reduction in the apparent catalyst activity (i.e., reactor potential). Significant improvement in catalyst open channels could be realized by the selection of the optimum wash solution.

Figure 5-3 shows the effect of washing duration on the catalyst open channels. These data clearly show that there is an optimum washing duration. It should be noted that the duration options are randomly presented, thus “Option C” should not necessarily be construed as being of longer

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<sup>15</sup> Enerfab, Inc., Clean Air Technologies Group, 4955 Spring Grove Ave, Cincinnati, OH 45232. Telephone: 513 / 641-0500

duration than the optimal option, "Option B." (Also note that the catalyst had only 31% open channels, slightly lower than that shown in the previous figure. This difference is due to the difference in the actual open channels present for the sample being utilized in the laboratory testing.)

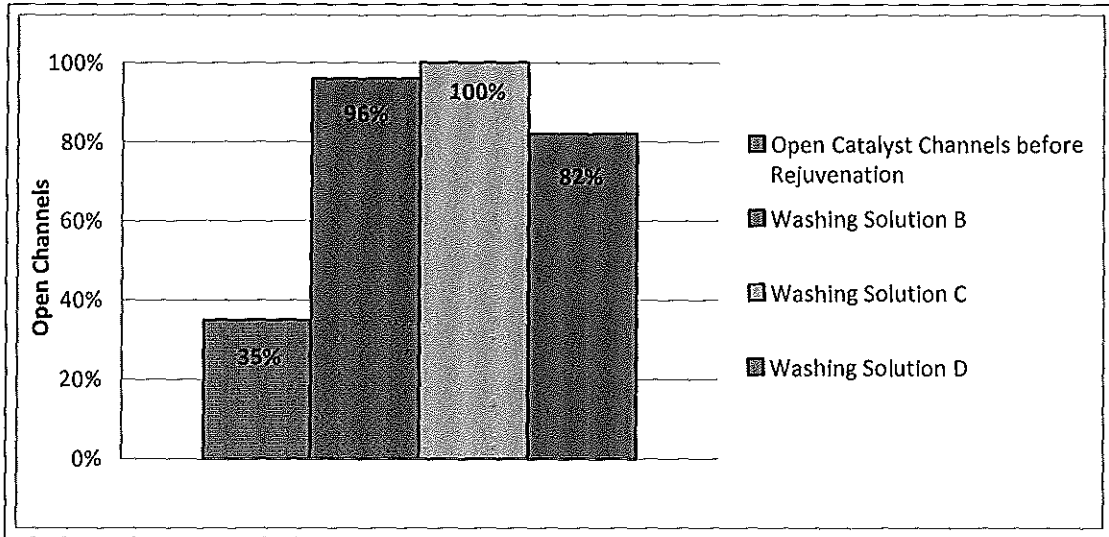


Figure 5-2  
Effect of Various Washing Solutions on Open Channels

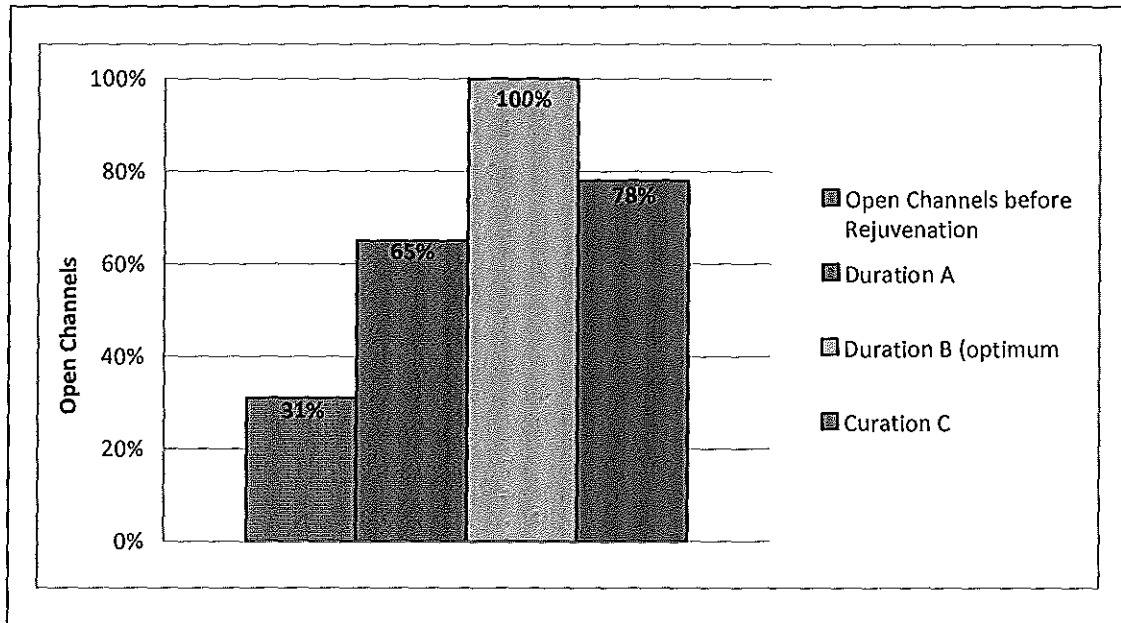
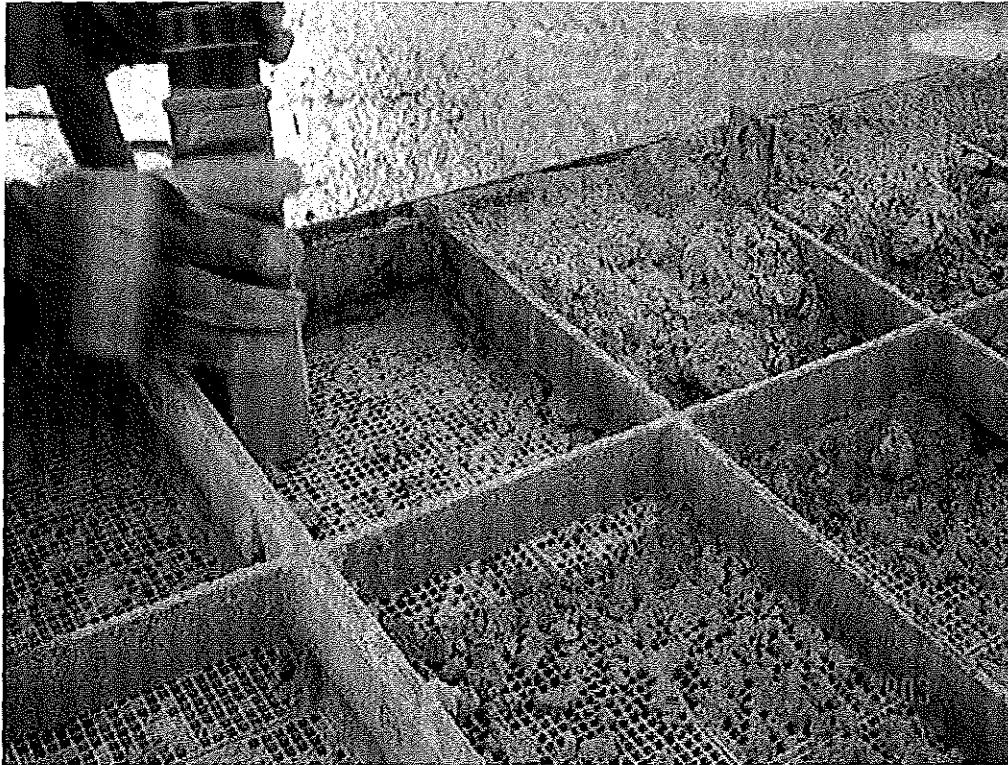


Figure 5-3  
Effect of Washing Duration on Open Channels

*Full-Scale Implementation*

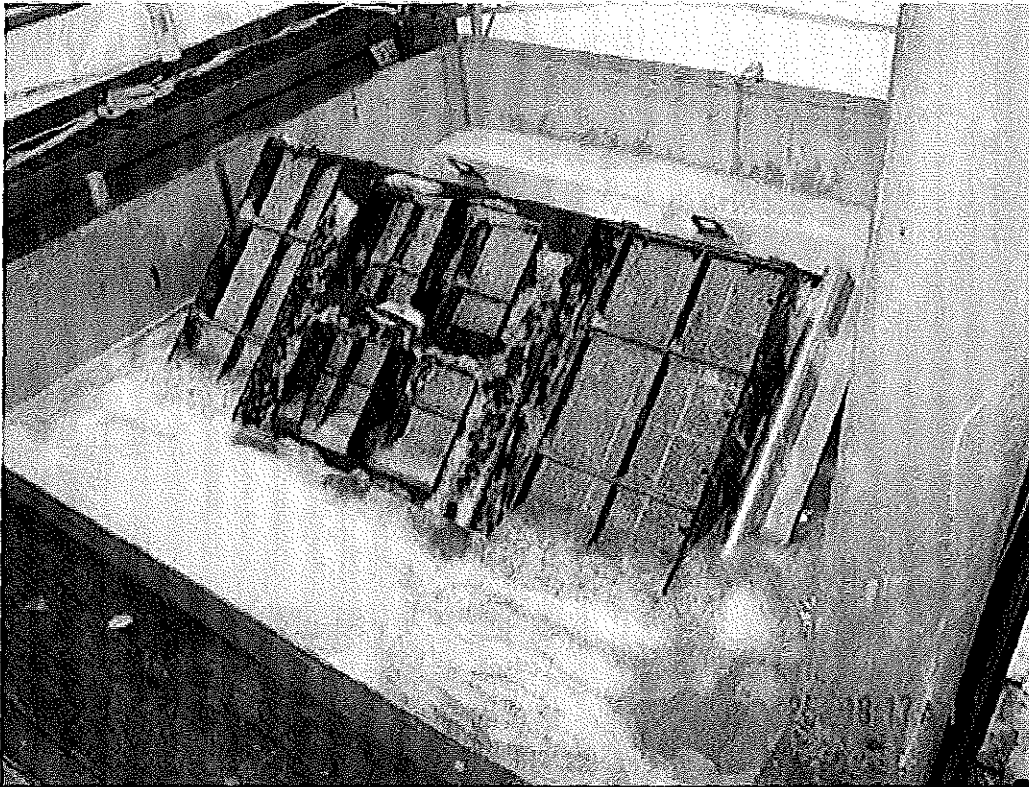
Full-scale processing was conducted utilizing the optimized process parameters as determined from the laboratory testing. Enerfab utilizes an “oscillation” process, which consists of multiple stages. The first stage begins with mechanical cleaning, which removes the loose fly ash and LPA ash present on the catalyst face. This allows for a closer inspection of the actual channel plugging. This removal of bulk material also aids in minimizing the washing solution volume and chemicals required. This cleaning stage is shown in Figure 5-4 where the heavily fouling and LPA can be seen.



**Figure 5-4**  
**Photograph of Catalyst Vacuuming to Remove Bulk Fouling Material**



The second stage of processing involves the oscillation washing step. In this stage, the modules are fixed in a cage and slowly agitated in a basin filled with the washing solution. This processing step removes fly ash that is packed in the catalyst channels. During this stage, some chemisorbed compounds may be removed. (For true catalyst rejuvenation, the removal of chemisorbed compounds, such as arsenic, will be a focus of the processing, whereas in washing processes this removal is somewhat of a side effect.) Figure 5-5 shows the catalyst oscillation being conducted with a single module in a process vat.



**Figure 5-5**  
**Catalyst Module Oscillation Processing**

The next process step involves the further removal of ash deposits using a combination of water and air flow through the channels of the catalyst. This mechanical action is highly effective at removing LPA ash wedged in the catalyst channels, as well as other ash deposits deep within the catalyst. In this step, air is injected in the process vat from below the catalyst module, causing an upward flow of cleaning solution and air. This “aeration” step is depicted in Figure 5-6. Note that the catalyst module itself is under the water surface – the steel shown represents the module “cage” used for handling the catalyst during processing.

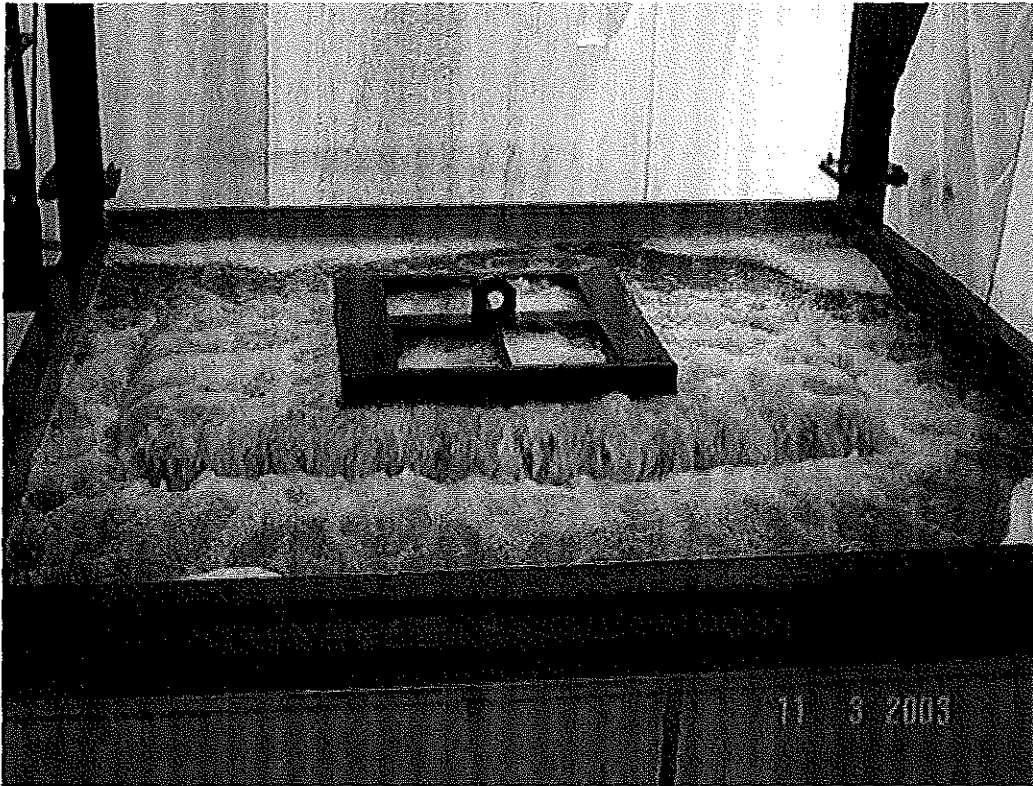
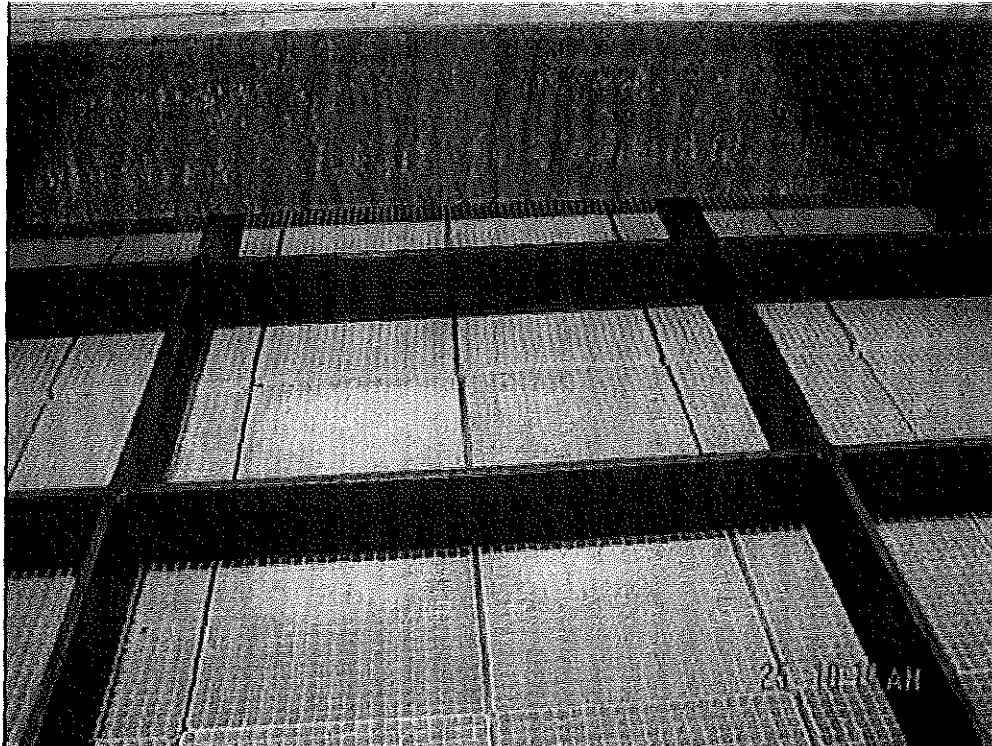


Figure 5-6  
Aeration of Catalyst Module

The final stage of processing involves drying, where hot air is used to reduce the humidity of the catalyst, making it ready for re-installation into the reactor. Figure 5-7 shows the cleaned catalyst.



**Figure 5-7**  
**Cleaned Catalyst Ready for Reactor Re-Installation**

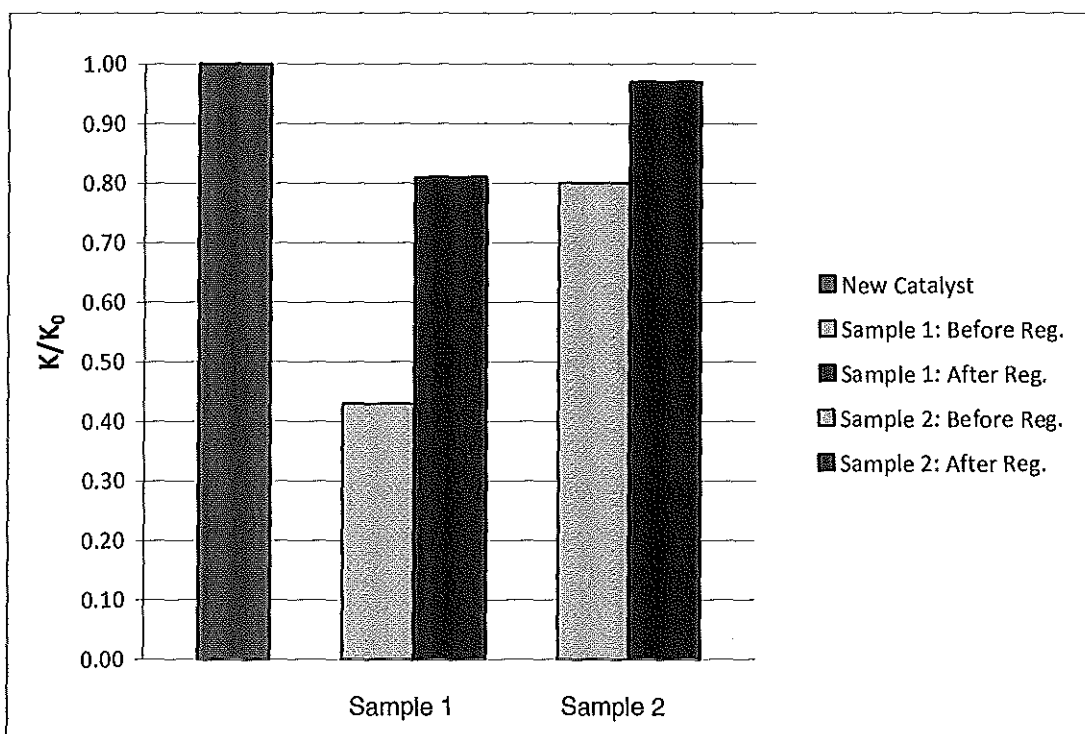
#### *Technology Effectiveness*

The general effectiveness of the technology as implemented for the described example case is best shown by the measurement of the relative activity of the catalyst after treatment. Note that relative activity is a highly applicable measurement because this parameter includes effects from both fouling (associated in this case primarily with channels being plugged) and any effects that may be associated with the intrinsic activity of the catalyst itself, such as vanadium level, dispersion, etc. Thus, relative activity is a macro-parameter, providing the single best measurement for determining catalyst deNO<sub>x</sub> potential before and after the washing process. Since relative activity includes a component associated with the intrinsic activity of the catalyst, it is also a good indicator to determine if any adverse effects have occurred due to the washing process related to catalyst species removal, or solubilization of catalyst poisons, etc. Note however, that catalyst relative activity will not reveal all performance parameters that may have been affected by the washing process. This includes parameters such as catalyst strength and SO<sub>2</sub>

conversion – these parameters would need to be measured directly to assess the effects due to washing.<sup>16</sup>

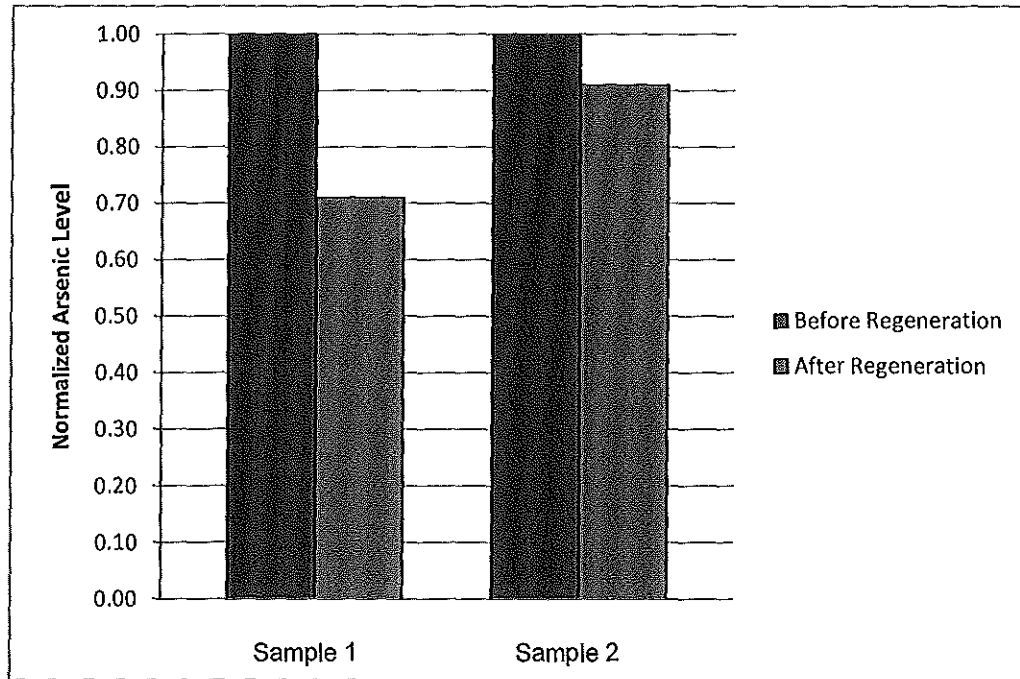
Figure 5-8 shows the relative activity of two samples before and after washing. The plot shows a marked improvement in activity with the cleaned samples, with one sample showing an activity returned to that of new, while another sample showed an activity return of roughly 80% of new. It is important to note that variability between samples is common, and a good assessment of the overall effectiveness will require the analysis of multiple samples, along with visual inspections.

As mentioned previously, one side-effect of the washing is the removal of some of the arsenic present. This arsenic removal is not the primary purpose of the washing, and processing focusing on arsenic removal would theoretically be termed a rejuvenation process. In any event, as shown in Figure 5-9, the washing did produce some reduction in arsenic. The contribution of this arsenic removal to the overall improvement in activity cannot be determined from the available data.



**Figure 5-8**  
**Effectiveness of Washing on Relative Activity**

<sup>16</sup> Note that this is predicated on catalyst being tested which is representative of the catalyst as installed in the reactor. Thus, if LPA is removed for instance, prior to laboratory testing, measurement of relative activity will not provide a representative assessment of activity before and after washing that would include effects from fouling. In this case, when fouling material is removed prior to laboratory testing, the relative activity would be primarily a measure of intrinsic activity only.



**Figure 5-9**  
**Effect of Washing on Arsenic Concentrations**

***Catalyst Washing - Case #2<sup>17</sup>***

**Background**

For washing Case #2, catalyst was washed on-site to remedy a LPA problem. Table 5-1 presents boiler and SCR background information. The host site was a 350 MW Mid-Western utility plant. The boiler was cyclone fired and burned 100% PRB coal.

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<sup>17</sup> The following discussion contains information that in many cases is excerpted directly from information provided to EPRI from the participating utility.

**Table 5-1  
Boiler and SCR Background Information**

Parameter	Value
Plant	Mid-Western Utility
Boiler Type	Cyclone
Unit Size (nominal)	350 MW
SCR Inlet NOx (nominal)	200 ppm
SCR NOx reduction	90%
Reactor Configuration	2-layers
Fuel Type	100% PRB
SCR Normal Temperature (Full load)	720° F
Washed Layer Position	First layer
Washed Catalyst Type	Honeycomb

### Process Description

The washing process utilized for this example case was developed by the host utility while the actual work was performed by a local contractor under the utility’s direction. Compared to the previous example, this case would be considered a relatively low-tech process, since no highly specialized proprietary process, equipment, or labor was used. All necessary permits were obtained by the utility to dispose of waste water into the on-site ash pond.

As a preliminary step to the washing process, catalyst modules were vacuumed to remove loose ash. The basic washing process involved an initial soak of the modules in a vat of water for approximately 20 minutes, with a longer soaking duration being used for severely fouled modules. The water utilized was raw lake water, with a typical pH of 6.5-7.0. Thus, there was no adherence to any special water quality specifications. The soaking step was followed by a “dunking” step, where a crane was used to slowly “dunk” the modules approximately 10-20 times to aid in the removal of pluggage. The number of repetitions could be adjusted according to the level of fouling in the module. The utility reported that roughly 8 modules could be treated in a 10-hour shift when utilizing a single processing vat.

After completion of the wet processing, the modules were dried by blowing hot air down through the modules for approximately 24 hours. The washed modules were then stored in a heated warehouse. Note that residual moisture would be removed as the reactor is started up.

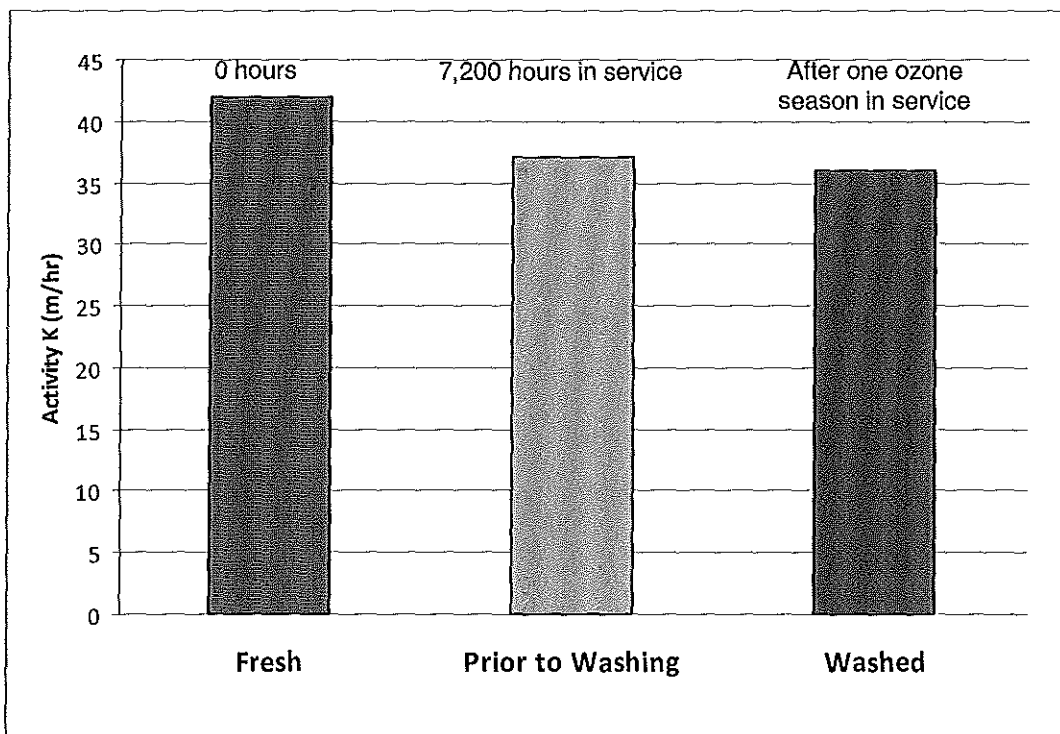
### Washing Effectiveness

Catalyst samples were tested before washing. A washed catalyst was tested after one ozone season in service. All tests were performed at the catalyst supplier’s laboratory. The evaluation tests utilized are summarized in Table 5-2 below.

**Table 5-2  
Catalyst Evaluation Tests**

Test	Method
Activity	Microscale reactor
Specific surface area	Brunauer-Emmett-Teller (BET) method
Bulk and surface chemical analysis	X-Ray Fluorescence (XRF)
Pore volume	Water saturation method
Pore size distribution	Mercury porosimetry
Abrasion resistance	
Transverse and longitudinal compression	

The critical evaluation of washing effectiveness was done primarily via the determination of relative K-values before washing and one ozone season after washing. Activity test results are summarized Figure 5-10. The unwashed catalyst presented a relative activity of 0.87 after 7,200 hours in service, while the washed catalyst presented a relative activity of 0.84 after one ozone season in service. Given the tolerance of the activity measurement, it would be concluded that washing had no adverse effect on the activity. It is important to note that this activity measurement differs somewhat from the previous case. In this case, it is presumed that the macro-fouling is removed from the catalyst samples prior to testing. Thus, the relative activity measurement assesses the change in intrinsic activity only, and does not make an assessment about the effectiveness of removal of the LPA ash. LPA ash removal was assessed visually, showing roughly 90% open channels, where a much larger portion was fouled originally. Note that blockage was found at all depths within the catalyst channels, not just on the catalyst face. Thus the washing procedure appeared to be effective at removing fouling found deep within the catalyst channels. Consequently, given no loss in intrinsic activity, and a marked improvement in open channels, the catalyst functionality was greatly increased.



**Figure 5-10**  
**Activity Test Results**

The results of the physical tests as shown in Table 5-2 indicated that the catalyst experienced no physical or thermal damage. The specific surface area test showed that no significant area loss occurred due to washing. In addition, the pore volume and pore size distribution tests indicated that there was no significant decrease in number of pores or pore structure. The abrasion resistance test and compression strength tests exhibited acceptable values and indicated that the washed catalyst was in good mechanical condition.

The bulk and surface analysis results indicated that the washing process removed calcium masking; however, poisons such as phosphorous and arsenic remained in the catalyst. It should be noted, however, that the overall objective was to unplug the channels and remove ash fouling as opposed to ‘rejuvenate’ or strip poisons from catalyst surface, so a significant removal of chemisorbed poisons would not be expected.

Overall, the outcome of the catalyst washing process was considered very successful as approximately 90% of the plugged channels were opened, and intrinsic activity was not affected. In addition, the physical integrity of the catalyst appeared not to be jeopardized by the washing process.

*Estimated Costs and Potential Issues*

The utility estimated the cost to wash catalyst at \$600 per module (approximately \$300/m<sup>3</sup>). This estimate reflects costs that were primarily associated with project planning, labor for catalyst removal and re-installation, labor for actual catalyst washing, permitting, and catalyst testing. It should be noted that this case experience is associated with a cyclone boiler burning PRB fuel



with LPA ash acting as the primary cause for washing. Results from this project may not apply to other boiler types, fuels, and deactivation mechanisms. In addition, results are restricted to honeycomb catalysts – plate or corrugated catalyst types may behave differently. In all cases, an evaluation of the washing process should be conducted on test samples prior to full-scale treatment. The utility performing the described work recommended independent (other than the catalyst supplier) verification of test results, as well as long-term evaluations (including SO<sub>2</sub> to SO<sub>3</sub> conversion) of catalyst performance. The utility noted that wet catalyst must be dried after washing to protect its mechanical integrity, and recommended that drying and calcinations be performed in the SCR by slowly starting up the unit.

### ***Catalyst Washing – Case #3***

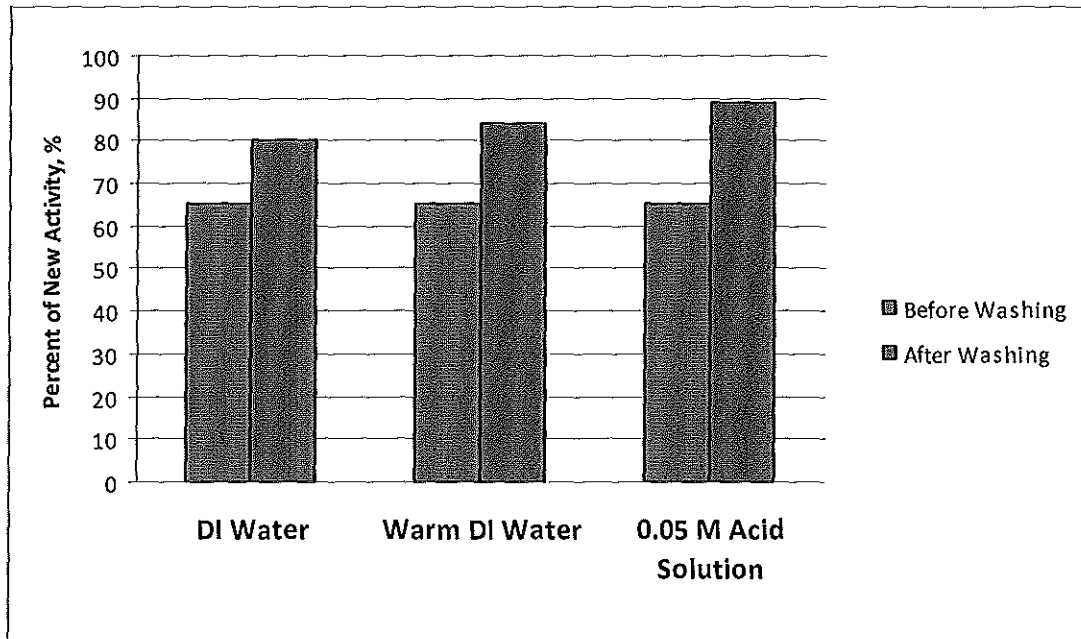
The information presented in this Case is based upon vendor data. EPRI has not had the opportunity to independently validate the final catalyst performance.

#### **Background**

Catalyst washing Case #3 involved the washing of catalyst associated with corrugated type catalyst. Two specific cases are reported: 1) treatment of catalyst from four large operating units firing PRB coal and 2) treatment of catalyst from three units firing eastern bituminous fuel. In the case of the PRB-fired units, these units were washed five times over a 20,000 hour operating period. In the case of the eastern bituminous fired units, one unit's catalyst was washed three times over 120,000 operating hours, and two unit's catalyst were washed one time each. Additional foreign and domestic experience not reported here includes biomass and industrial units.

#### **Process Description**

In all washing cases, the basic physical processing of the catalyst is similar. Some details of the processing, such as treatment times, may be adjusted according the needs of the specific catalyst being treated. Preliminary bench-scale testing may be warranted to determine optimal treatment parameters, such as the treatment water characteristics. One such example of laboratory testing is shown in Figure 5-11, where different treatment solutions are compared for effectiveness on activity. Note that this is an example case and can not necessarily be applied globally to all washing processes.

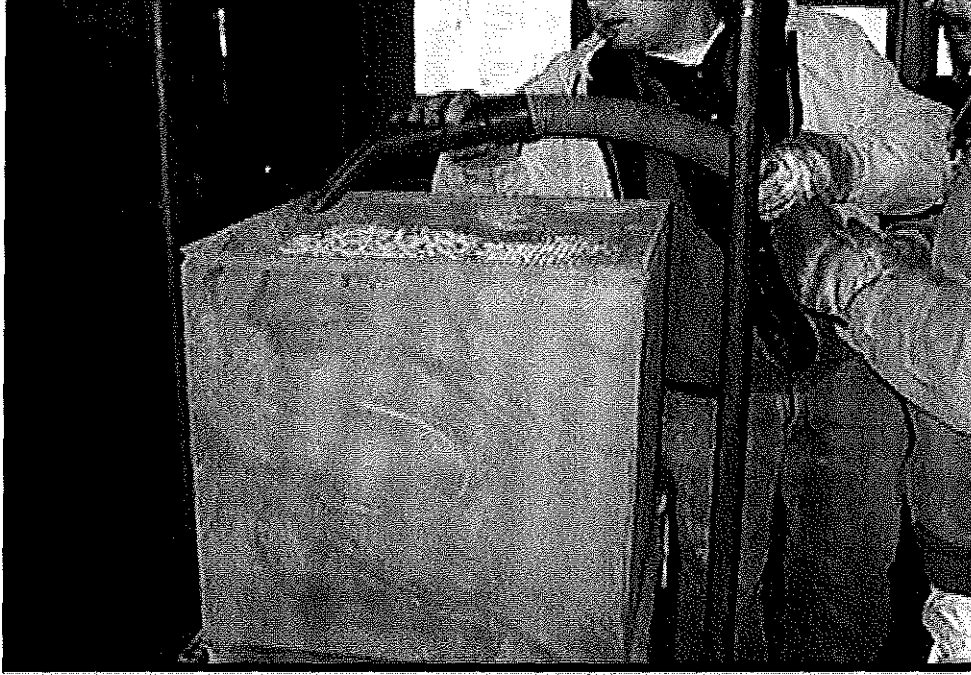


**Figure 5-11**  
**Comparison of Wash Solutions on Relative Activity (Example)**

The actual treatment of the catalyst involves several steps including: 1) initial dry cleaning, 2) washing, 3) water rinse, and 4) air dry. Each of these steps is discussed below. Note that each of these treatment steps may be modified depending on the need of the catalyst being treated.

#### *Initial Dry Cleaning*

Dry cleaning of the catalyst modules is conducted prior to wet treatment to remove loose bulk deposits of accumulated fine and LPA ash. The most thorough dry cleaning is accomplished by separating the individual catalyst elements/blocks from the module. This allows cleaning to be conducted from both the inlet and outlet of each individual block. Although this separation of the blocks is not absolutely required, it was performed on both the PRB and eastern bituminous cases described here. Dry cleaning may involve vacuuming, vibrating, and air blowing depending on the severity of the fouling and the ease with which the fouling material can be removed. Figure 5-12 shows the vacuuming of an individual catalyst element.

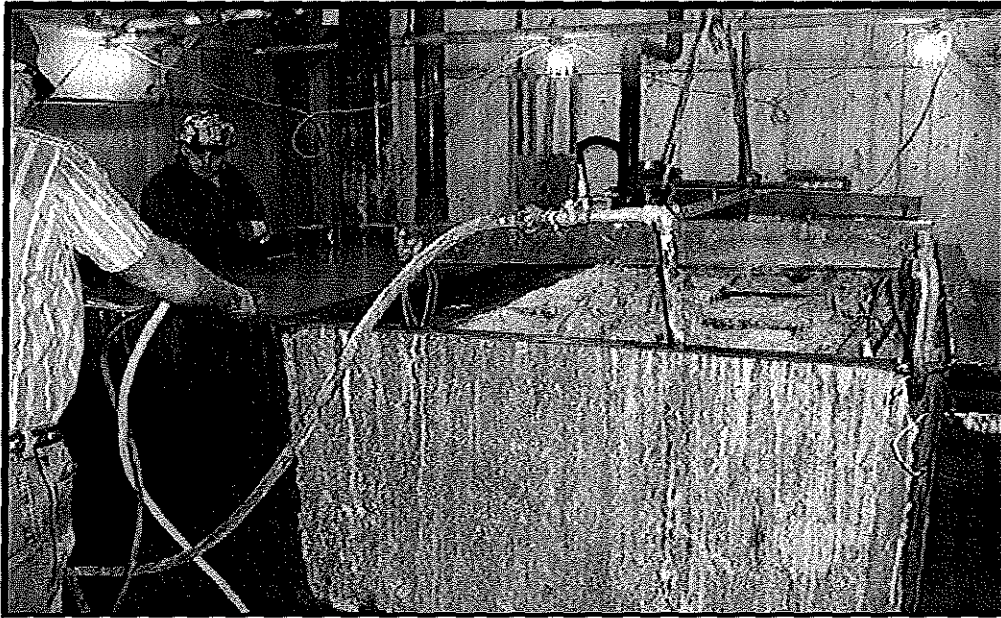


**Figure 5-12**  
**Vacuuming of Individual Catalyst Element**

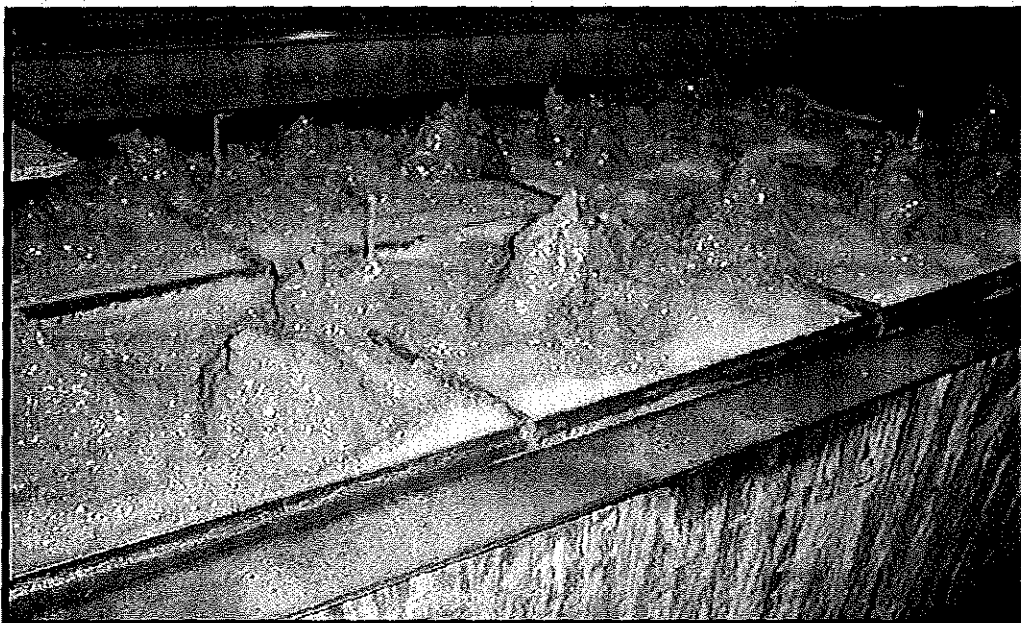
#### *Wet Processing*

The actual washing of the catalyst may be conducted in-situ, but both of the cases described here utilized ex-situ processing, where catalyst modules were removed from the reactor and processed in a treatment area. In both cases, the first stage of wet processing involved soaking in a solution of warm demineralized water for a period generally of 15-30 minutes. In the case of the catalyst associated with eastern bituminous coal, air agitation was used to improve the ash removal. After the soaking period, the catalyst was rinsed with clean demineralized water prior to drying. The general recommendations from the catalyst supplier are to use clean potable water or better, to use a 30-min warm water soak, and to monitor the water and exchange frequently.

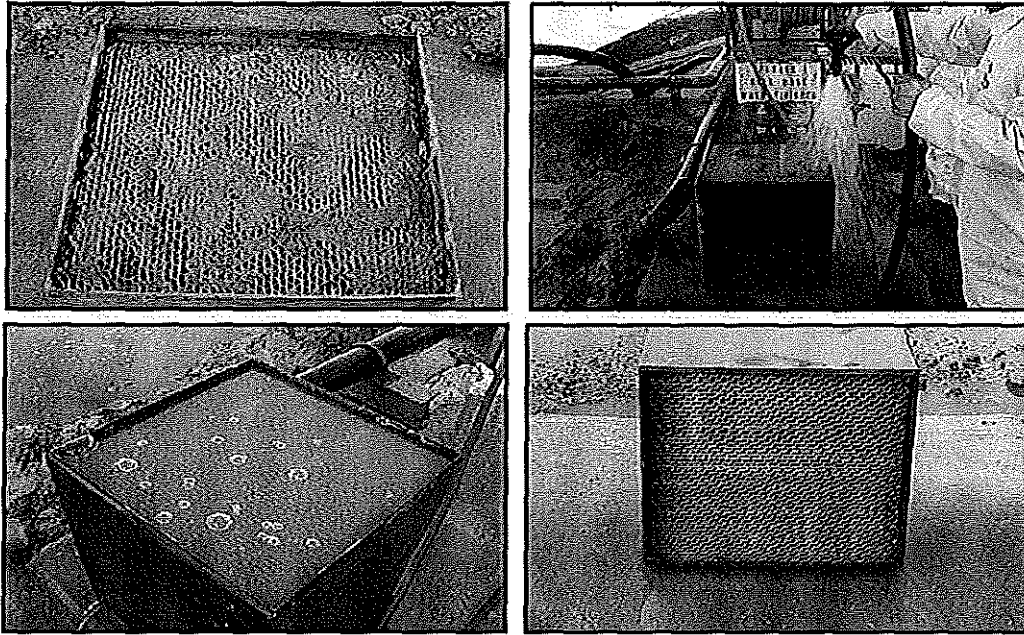
Figure 5-13 shows a large vat where several catalyst elements are being soaked along with air agitation. Figure 5-14 shows the air agitation in detail. It is clear from these photos that the air agitation provides an energetic washing, which aids in the removal of ash deposits. Figure 5-15 shows several pictures of an individual catalyst element during the treatment process, including prior to washing, during a spray-down wash, during soaking, and after washing. The relative cleanliness of the processed catalyst element is clearly discernable.



**Figure 5-13**  
**Catalyst Elements Being Soaked with Air Agitation**



**Figure 5-14**  
**Detail of Air Agitation**

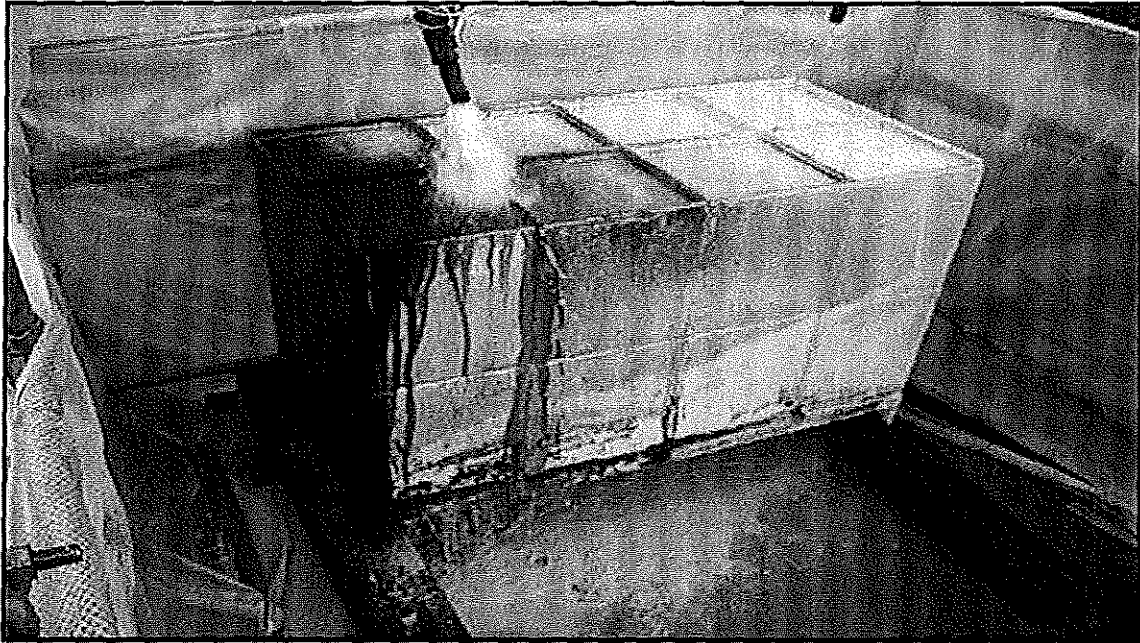


**Figure 5-15**  
**Elements Before Washing, During Spray-Down, Soaking, and After Washing**

Figure 5-16 and Figure 5-17 show catalyst elements being washed/rinsed. Figure 5-17 shows, in particular, ash that is removed during the process. This type of washing would typically be used for the final rinse of the catalyst, but also may be used in lieu of, or in conjunction with, soaking.



**Figure 5-16**  
**Catalyst Elements Being Washed/Rinsed**



**Figure 5-17**  
**Catalyst Elements Being Washed/Rinsed with Removed Ash Visible**

### *Drying*

After completion of the wet processing phase of the catalyst treatment, the catalyst is air dried. In this “drip-dry” process, no particular effort was made to force air through the catalyst with heating, etc. After this step, the catalyst can be stored for future use, or can be re-installed into the reactor.

### Process Effectiveness

The effectiveness of the washing is best established through the measurement of catalyst activity before and after treatment, along with visual inspections of the catalyst cleanliness, where the proportion of open channels can be determined. Figure 5-18 shows the relative activity of three catalyst samples before and after washing for one of the PRB washing cases conducted at 15,000 hours of operation. These data were acquired with samples for which the fouling was representative of the full scale installation; thus, the noted improvement in activity includes effects from both the removal of fouling material, and any effects on the intrinsic activity of the catalyst itself. The data show some variation between the samples, as would be expected, but also show the marked improvement in the catalyst functionality. Complementary data, shown in Figure 5-19, shows the effect on certain chemical constituents of the catalyst, associated with common PRB poisons and ash constituents.

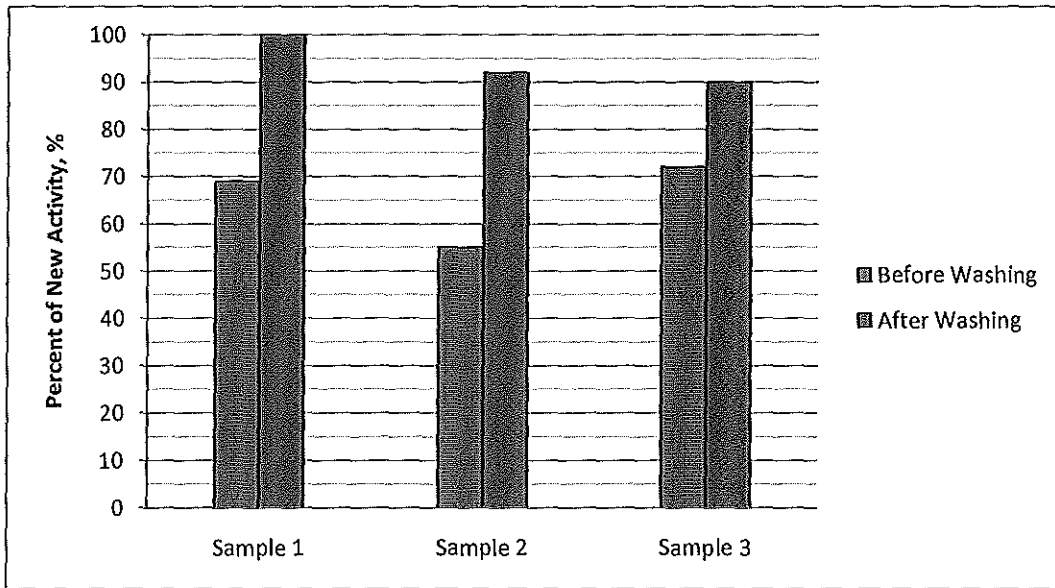


Figure 5-18  
Effectiveness of Washing on Relative Catalyst Activity – PRB Case

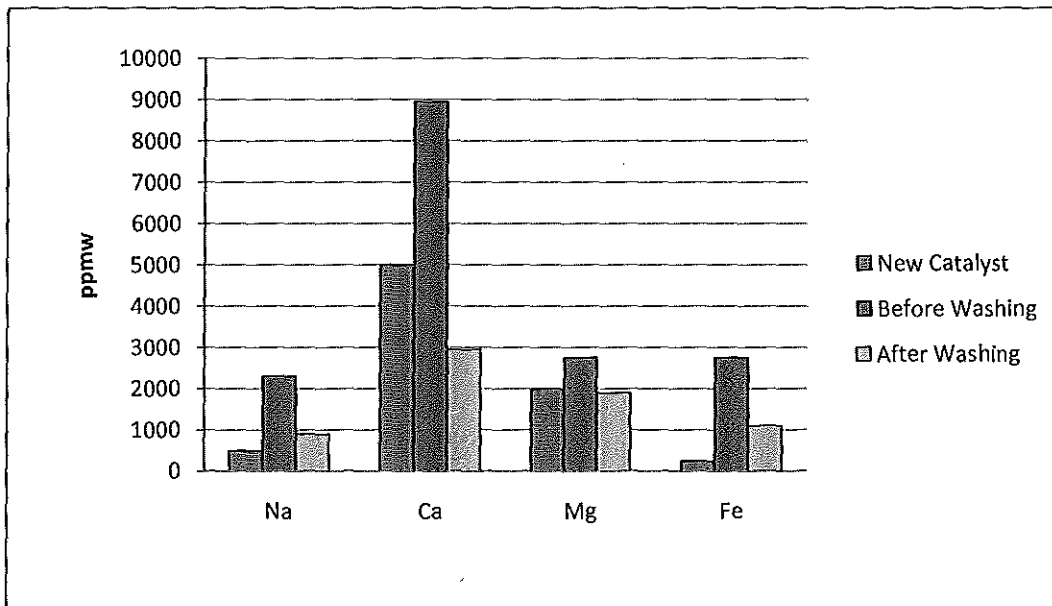
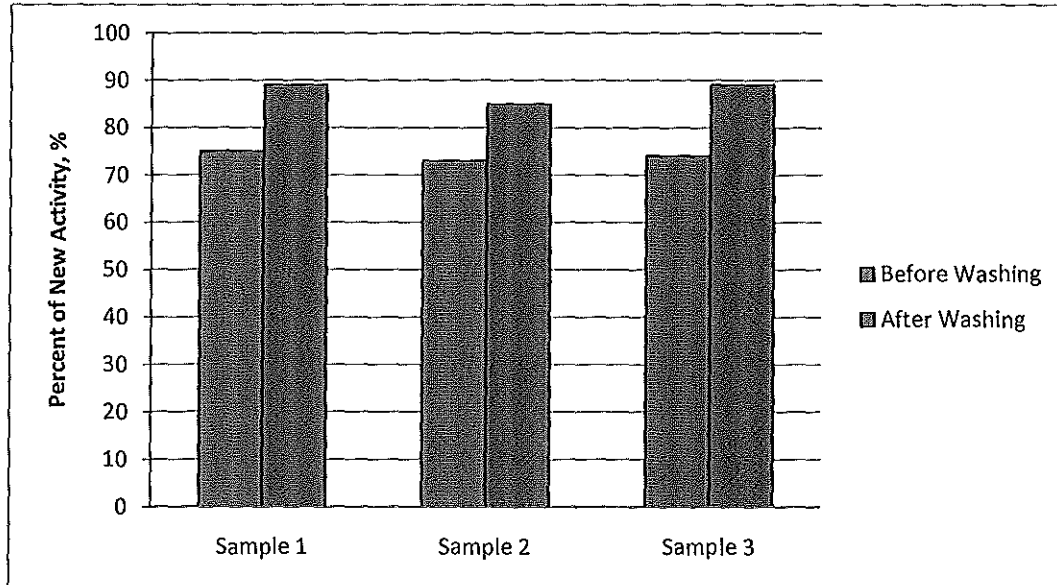


Figure 5-19  
Washing Effect on Chemical Constituents – PRB Case



Figure 5-20 shows the relative activity for the eastern bituminous case. This data was taken at a wash that occurred at 28,000 hours of operation, and shows a clear improvement in activity which included effects associated with fouling.

Overall, the results of Case #3 show that the washing was effective at restoring the functionality of the catalyst. Case #3 data are especially valuable because they describe washing effectiveness on similar catalyst associated with both PRB and eastern bituminous fuels.



**Figure 5-20**  
**Washing Effect on Relative Activity – Eastern Bituminous Case**

### **Overall Washing Experience Summary and Recommendations**

Based upon the available information, the effectiveness of catalyst washing appears to be quite good. Although the volume of data is not extensive, multiple fuels and catalyst types are represented, offering some confidence in the overall effectiveness of washing. The following bullet items highlight some of the findings from the industry washing experience to date.

#### ***Highlights of Industry Experience***

- Catalyst washing is generally effective at removing physical fouling, helping to restore the functionality of the catalyst.
- The intrinsic activity of the catalyst does not appear to be substantially adversely affected by washing.
- Although washing is not specifically designed to remove chemically bound deactivation species, some reduction of these species may occur.
- The applicability of washing to any particular batch of catalyst is highly case-specific.



- Catalyst experiencing long-term chemical deactivation, such as with arsenic poisoning, will not likely respond favorably to washing, unless physical fouling is also playing a large role in the catalyst performance.
- Relatively young catalysts experiencing catastrophic plugging, such as with LPA, are very good candidates for washing, since the underlying activity of the catalyst is still high.
- As catalysts age due to long-term poisoning and general attrition, washing may become less viable as a means of restoring activity, especially in absence of a physical fouling component to the deactivation.
- Honeycomb and corrugated catalysts are well represented in the industry washing experience. No experience with plate catalysts was reported.
- Catalyst washing technologies range from decidedly low-tech processes, to relatively high-tech proprietary processes. Low-tech processing can be performed under the direction of the utility itself, while high-tech processes are typically managed by specialized external technology firms.
- Washing may be very attractive compared to new catalyst purchase in terms of economics. The most attractive economic scenario is the treatment of relatively young catalyst for which the underlying (intrinsic) activity is still high.
- Logistics will play a role in the decision to wash catalyst, since allowances must be made for the actual processing time. This is contrasted with new catalyst purchase, where the replacement catalyst is available for immediate installation into the reactor upon removal of the old catalyst.
- Washing effects on SO<sub>2</sub> to SO<sub>3</sub> conversion needs to be further investigated. Particularly in units burning high sulfur fuels.

### ***Recommendations for Washing***

Based upon the report findings, several washing recommendations have been developed as follows;

- As a preliminary step, the mode of deactivation (i.e. physical or chemical) will help to determine if washing would be effective. As mentioned, if chemical deactivation is playing a major role in the functionality of the catalyst (such as arsenic poisoning), the catalyst may not be a good candidate for washing, since washing is most appropriate for addressing loss of functionality associated with physical issues.
- Trial testing of catalyst samples (which includes laboratory assessment of the effects on intrinsic activity, as well as an assessment of the physical improvements in the catalyst) should be utilized, if possible, to help determine the optimal treatment parameters and establish a prediction of the process effectiveness. This information can help to determine the relative economics of the various treatment options, as well as offer a basis of comparison to new catalyst purchase.
- The catalyst OEM is likely to be a good source for laboratory testing, and potential advice as to critical washing parameters. Independent catalyst testing laboratories can also provide the needed laboratory testing support, and may be able to provide advice relative to washing procedures, as well.
- The determination of the actual washing procedures and optimum process parameters must be done on a case-by-case basis. Many parameters such as soak time, level of agitation, etc.,

will be dictated by the condition of the catalyst, as well as the original design of the catalyst. Flexibility in modifying the catalyst washing procedures in real time will be helpful in maximizing the treatment effectiveness.

- Principal process parameters that must be determined include: the dry cleaning needs, soak time and solution characteristics (water quality will likely be an important factor), level of agitation, rinse water requirements, and drying requirements.
- Firms are available which can provide turn-key catalyst washing services utilizing proprietary methods. These are choices for utilities that want to minimize the internal effort related to the actual task of washing the catalyst. As an alternative, utilities may undertake washing with very little external support, with the only outside support being laboratory testing for the evaluation of the catalyst before and after processing.

# 6

## RECOMMENDED FUTURE WORK

The current project has identified several areas for which additional work would be of great benefit to the industry.

**Catalyst Metals Recycling** – A continuation of the current recycle work to further develop and refine the process for metal recoveries from the ceramic portion of spent catalyst is recommended (particularly vanadium, tungsten, and molybdenum), given that the initial results are very promising and the potential benefits to the industry are significant. Additional lab-scale and pilot-scale testing is required to further develop a recycling process. In addition finding a use for the titania (and avoiding disposal costs) would be a huge benefit to the overall recycling process. At minimum, finding a low-value use for titania would allow disposal costs to be avoided and would be environmentally attractive.

**Catalyst Re-Use** – Further investigation into the utilization of spent SCR catalyst in cement, concrete, and flowable fill products as a recycle route for spent catalyst appears to be warranted. Data from other catalyst types is encouraging, but an experimental program to assess the behavior of spent SCR catalyst in these products would help to establish the viability of such a process. Recommended work would include both performance and environmental aspects of catalyst re-use in these products.

**On-Site Washing** – The technical level of various on-site washing processes varies greatly. Some firm guidance to utilities undertaking on-site catalyst washing without utilizing an external specialty firm would be beneficial. An experimental program establishing basic best-practice washing procedures, including such parameters as water quality, cleaning solution characteristics, agitation guidelines, drying procedures, and followed by catalyst performance testing would be highly valuable.



# **A**

## **DETAILED SURVEY RESULTS**

Cases A to G

Case	A	B	C	D	E	F	G
Volume of Catalyst	790	167	876	1424	434	555	60
SCR Number of Layers in Use	3	3	2	2	2	3	2
Layer that Catalyst was Located	1	1	2	1 and 3	3	4	1
Catalyst Age (hrs)	1500	28254	7200	3600 14400	18000	18000	~9,400
Design Life of Catalyst (hrs)	16000	24000	16000	16000	16000	16000	16,000 hrs before layer addition
Catalyst Type	HC	HC	HC	HC	HC	HC	HC
Initial Catalyst Activity							Unknown
Final Catalyst Activity	K/Ko= 1.0 after on-site cleaning	Deactivation rate is 20% per Envirotherm testing					38-40 before regen / 42.1 after regen
Initial SO <sub>2</sub> /SO <sub>3</sub> Conversion			0.29 @ 720 degrees F	1.11 @ 780 degrees F	0.39 @ 730 degrees F	0.43 @ 700 degrees F	.75%/layer max guaranteed (not lab tested)
Final SO <sub>2</sub> /SO <sub>3</sub> Conversion							Unknown before regen / After regen = 0.58%
Year Round Operation	N	Y	N	N	N	N	N
SCR By-Pass available	Y	N	Y	Y	Y	Y	Y

Case	A	B	C	D	E	F	G
<b>High/Low Dust Configuration</b>	H	Low	H	H	H	H	H
<b>Sootblowing Type</b>	Steam Sootblowers	Heated air sootblowers about twice per day (continuous rotation)	Originally steam Now SH	Originally steam Now SH	Originally air Now SH	Originally air Now SH	Sootblowers
<b>General Effectiveness of Sootblowing</b>	Poor, problems with popcorn ash	Poor (honeycomb catalyst will plug completely forcing a shutdown for cleaning, plate type seems to be much better but still plugs some)	AIG side of top layer needs vacuumed	AIG side of top layer needs vacuumed	AIG side of top layer needs vacuumed	AIG side of top layer needs vacuumed	No vacuuming required but catalyst is plugged w/LPA
<b>Routine Outage Procedures</b>	Vacuum at end of ozone season and blow with compressed air	Vacuum and blown out with compressed air (cleans up well)	Vacuum all layers during outage	Vacuum all layers during outage	Vacuum all layers during outage	Vacuum all layers during outage	None
<b>SCR Design Operating Temperature (F)</b>	650	555-800	HS-626 LS-576	HS-626 LS-578	625	560	641
<b>SCR Actual Operating Temperature (F)</b>	650	710					615-645
<b>Boiler Size</b>	750	484 gross	360 MW	590 MW	345 MW	400	795 MW
<b>Boiler Type</b>	T-Fired	Wall fired PC	Cyclone	Cyclone	Single Wall		Opposed Wall Fired

Case	A	B	C	D	E	F	G
<b>Wet/Dry Bottom Config.</b>	wet	dry					Wet
<b>Coal Type</b>	Eastern Bituminous (central Appalachian), 1.2% S	PRB	PRB	PRB	PRB	Blend 40PRB/60BIT	60% PRB / 40% E Bit
<b>Biomass Co-firing or Coal Additives?</b>	N	N	N	N	N	N	N
<b>Coal Contract Type</b>	Long-term and some spot market purchases	Long term	LT	LT	LT	LT	Long-term
<b>Primary Deactivation Mechanism</b>	Severe LPA plugging	Extreme fouling	Failure mechanism strictly due to fouling – actual PRB poisoning rate consistent with predictions	Failure mechanism strictly due to fouling – actual PRB poisoning rate consistent with predictions	Failure mechanism strictly due to fouling – actual PRB poisoning rate consistent with predictions	Failure mechanism strictly due to fouling – actual PRB poisoning rate consistent with predictions	Extreme fouling due to LPA – accumulated over time



Case	A	B	C	D	E	F	G
<b>Washing/Regeneration/Rejuvenation Considerations and Activities</b>	On-site washing using specialty service provider. Catalyst removed from reactor for processing	Options considered but material was considered undesirable or inapplicable for treatment, or treatment scenario did not match utility needs.	Catalyst washed on-site via internally developed process. Performed by local labor contractor under direction of utility. Permit for on-site waste-water disposal obtained. <sup>18</sup>	Catalyst washed on-site via internally developed process. Performed by local labor contractor under direction of utility. Permit for on-site waste-water disposal obtained. <sup>19</sup>			1,155 me of catalyst regenerated off-site. 60 m3 of catalyst material not repairable – in these cases the module superstructure was re-used and filled with alternate catalyst material.
<b>Treatment Effectiveness</b>	Very good. Returned to near-new condition. 95% recovery in open channels – activity to near new (little chemical deactivation anyway)		Very effective at removing fouling – 90% open channel rate achieved. .	Very effective at removing fouling – 90% open channel rate achieved. .			
<b>Recycling Activities</b>					Baskets dismantled – bulk metal sold for scrap.	Baskets dismantled – bulk metal sold for scrap.	

<sup>18</sup> Utility noted that the wash-water pH was 6.6-7.0. Modules should be fired after washing, but 100% drying is not required. Slow ramp-up in temperature upon SCR startup will dry the modules.

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Case	A	B	C	D	E	F	G
<b>Disposal Preparation</b>		None			Baskets dismantled and catalyst elements removed for disposal	Baskets dismantled and catalyst elements removed for disposal	Catalyst removed from module
<b>Disposal Scenario</b>		Complete modules sent to off-site non-hazardous landfill.			Catalyst material sent to on-site landfill. Material crushed with dozer in landfill.	Catalyst material sent to on-site landfill. Material crushed with dozer in landfill.	Portion of catalyst unsuitable for regeneration was disposed of in off-site non-hazardous land-fill
<b>Economics</b>		Disposal cost was 16,000 for the layer, roughly \$100/m3	Approximate cost - \$600/module for treatment	Approximate cost - \$600/module for treatment	Cost was roughly \$150/module to crush	Cost was roughly \$150/module to crush	\$7,500 for 30 modules (60 m3) disposed of (\$250/module)

Cases H to N

Case	H	I	J	K	L	M	N
Volume of Catalyst	395	395	213	150	477	157	508
SCR Number of Layers in Use	3	3	3	2.5	2	2	2
Layer that Catalyst was Located	Installed in Multiple layers	Installed in Multiple layers	1	3 (half layer)	1 and 2	1	1 and 3
Catalyst Age (hrs)	18,000	18,000	20,000	14000	23,000	8,000	21,000
Design Life of Catalyst (hrs)	16000	16000	16000	16000	24000	24,000	24,000
Catalyst Type	HC	HC	HC	Plate	Plate	HC	HC
Initial Catalyst Activity						37.7 m/hr	
Final Catalyst Activity	K/Ko = 0.75	K/Ko = 0.75	K/Ko=0.70	K/Ko=0.74	K/Ko=0.72 prior to wetting	24.6 m/hr, K/Ko = 0.65	
Initial SO2/SO3 Conversion	.33	.20	.33	0.44% (for full layer – 0.22% for half layer)			
Final SO2/SO3 Conversion							
Year Round Operation	N	N	N	Y	Y	Y	Y
SCR By-Pass available	Y	Y	Y	Y	N	N	N
High/Low Dust Configuration	H	H	H	H	H	H	H

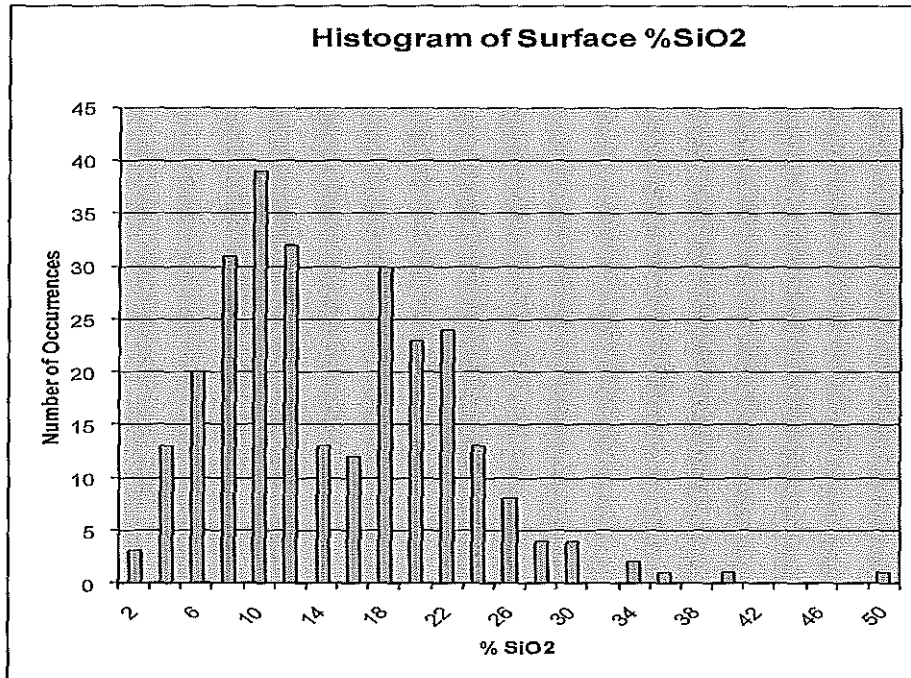
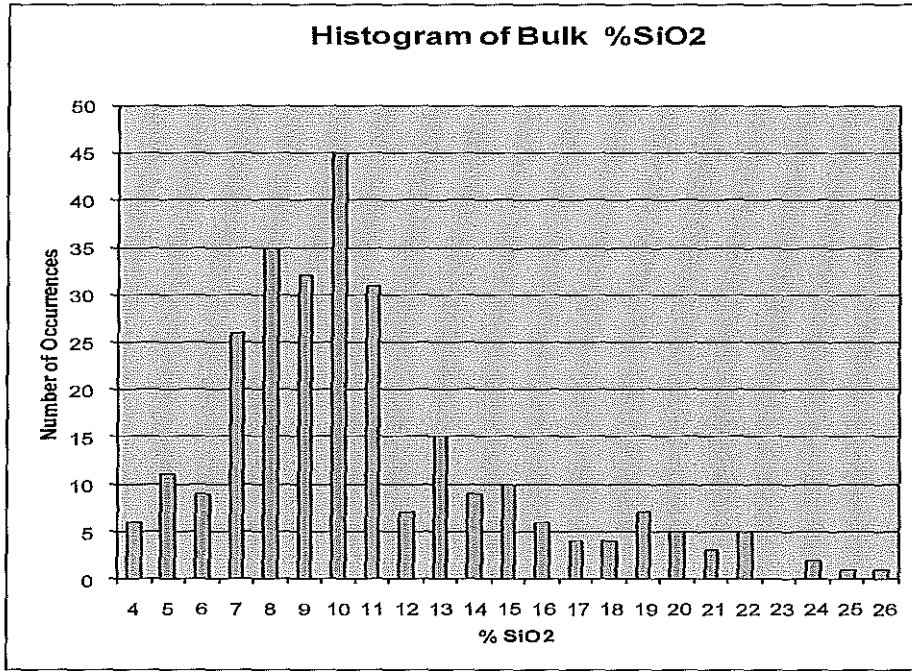
Case	H	I	J	K	L	M	N
<b>Sootblowing Type</b>	Steam Sootblowers	Steam Sootblowers	Steam Sootblowers	Sonic Horns	Sonic Horns	Sonic Horns	Sonic Horns
<b>General Effectiveness of Sootblowing</b>	Poor, problems with popcorn ash	Poor, problems with popcorn ash	good	Good	Vacuuming required	Vacuuming required	Vacuuming required
<b>Routine Outage Procedures</b>	Vacuum at end of ozone season and blow with compressed air	Vacuum at end of ozone season and blow with compressed air	Vacuumed every other season	No specific routine maintenance	Inspect, vacuum deposits	Inspect, vacuum deposits	Inspect, vacuum deposits
<b>SCR Design Operating Temperature (F)</b>	650	650	Up to 750	700 F	695 F	675 F	675 F
<b>SCR Actual Operating Temperature (F)</b>	650	650	Up to 750	700	597-725 F	597-725 F	597-725 F
<b>Boiler Size</b>	750	950	480	500	600	600	600
<b>Boiler Type</b>	T-Fired	T-Fired	Wall-fired	Wall-fired	Wall-fired	Wall-fired	Wall-fired
<b>Wet/Dry Bottom Config.</b>	wet	wet	wet	wet	dry	dry	dry
<b>Coal Type</b>	Eastern Bituminous (central Appalachian), 1.2% S	Eastern Bituminous (central Appalachian), 1.2% S	Central Appalachian, 1.2 % S	Columbian and Illinois Basin	PRB	PRB	PRB
<b>Biomass Co-firing or Coal Additives?</b>	N	N	N	N	N	N	N
<b>Coal Contract Type</b>	Long-term and some spot market purchases	Long-term and some spot market purchases	Long-term and spot	spot	Long term and spot as needed	Long term and spot as needed	Long term and spot as needed

Case	H	I	J	K	L	M	N
<b>Primary Deactivation Mechanism</b>	Arsenic poisoning – but plugging a major factor in decision to replace catalyst	Arsenic poisoning – but plugging a major factor in decision to replace catalyst	Arsenic poisoning	Arsenic poisoning	LPA ash plugging	Economizer tube leak wet portion of layer	Combination of calcium sulfate and phosphorus poisoning and LPA pluggage
<b>Washing/Regeneration/Rejuvenation Considerations and Activities</b>			Off-site regeneration considered, but internal cash-flow issues made purchase more attractive				Options considered but trial tests proved ineffective, logistics a factor (short notice to replace, storage, etc.)
<b>Treatment Effectiveness</b>							
<b>Recycling Activities</b>	Bulk module metals recovered – some module superstructure reused for new catalysts, others sold for scrap	Bulk module metals recovered – some module superstructure reused for new catalysts, others sold for scrap	Bulk module metals recovered – module superstructure reused for new catalysts	None		Steel modules reused, catalyst removed and replaced with new catalyst in-situ	Catalyst material removed from module, module sent to manufacturer for credit and reuse (screens also returned)
<b>Disposal Preparation</b>	Catalyst crushed prior to disposal	Catalyst crushed prior to disposal	Catalyst crushed prior to disposal	None	None	Catalyst logs crushed	Removal of catalyst from modules
<b>Disposal Scenario</b>	Crushed catalyst sent to off-site non-hazardous land-fill	Crushed catalyst sent to off-site non-hazardous land-fill	Crushed catalyst sent to off-site non-hazardous land-fill	Entire baskets sent to off-site landfill – utilized hazardous waste landfill, but material was deemed non-hazardous	Entire baskets disposed by supplying contractor, off-site non-hazardous landfill after TCLP test	Removed logs sent to off-site non-hazardous landfill after TCLP test	Removed catalyst crushed and sent to off-site non-hazardous landfill after TCLP testing

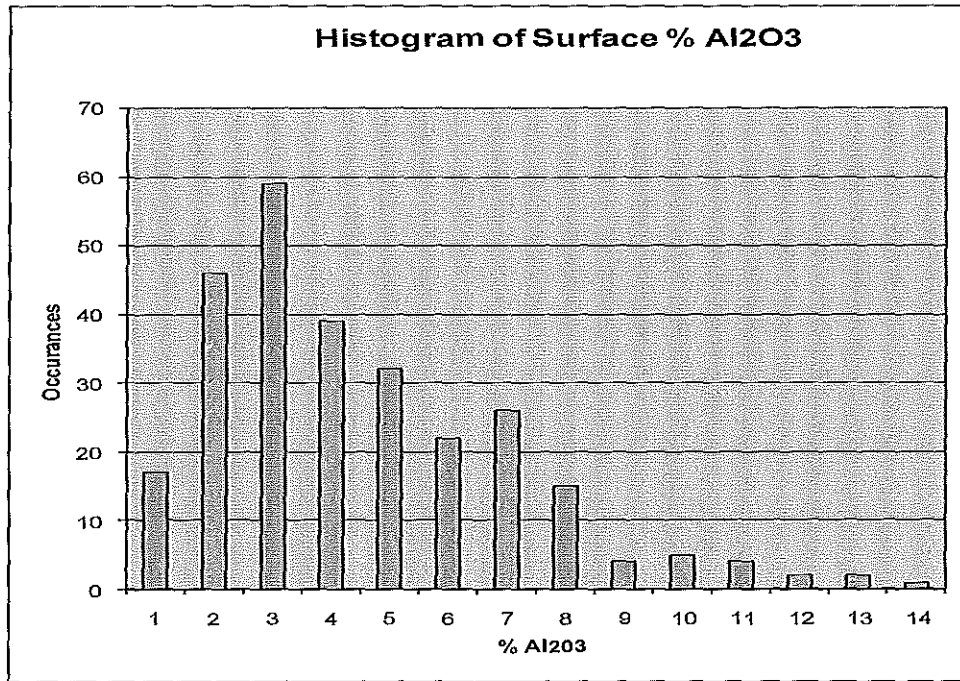
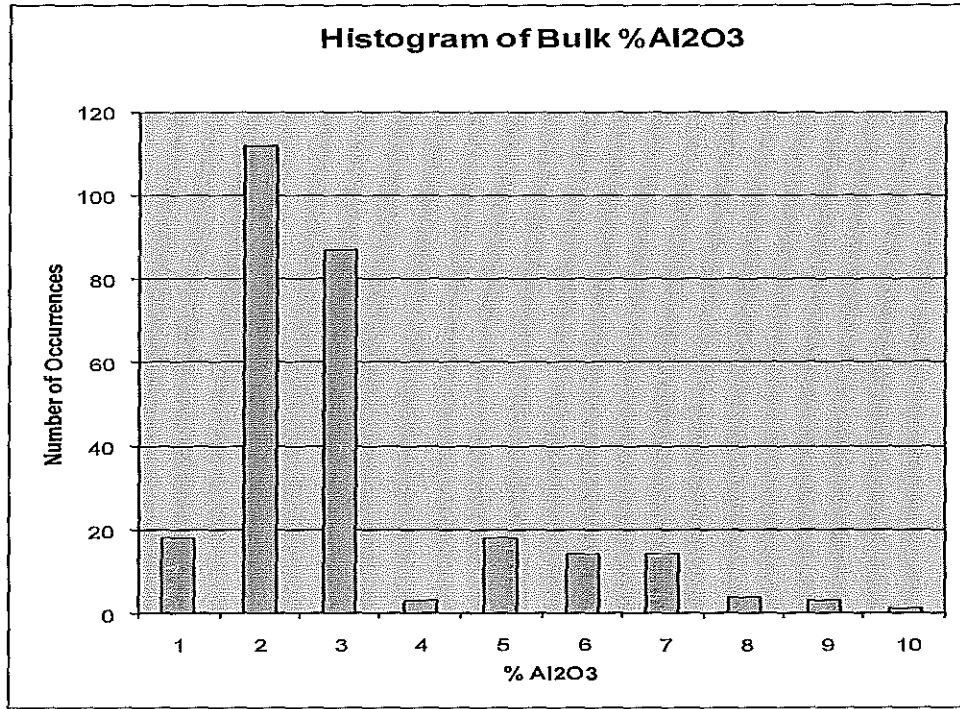
Case	H	I	J	K	L	M	N
<b>Economics</b>	Overall costs a strand function of disposal volume and cost. Most positive cash flow obtained by re-using module superstructure (\$100-200K). Very marginal benefit with removing bulk metals for scrap	Overall costs a strand function of disposal volume and cost. Most positive cash flow obtained by re-using module superstructure (\$100-200K). Very marginal benefit with removing bulk metals for scrap					

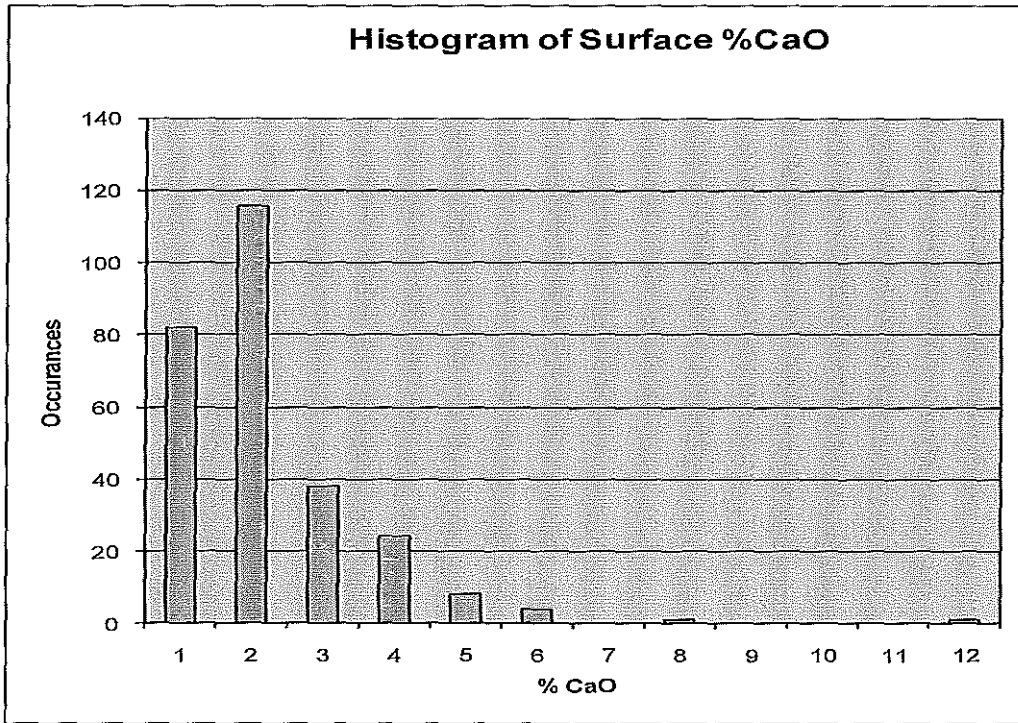
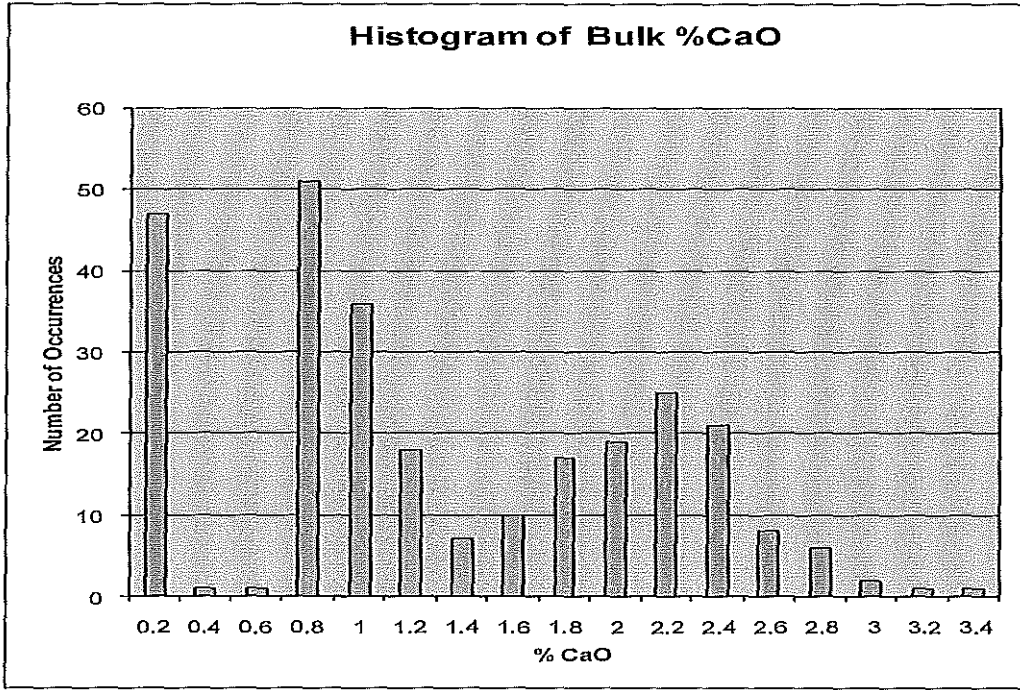
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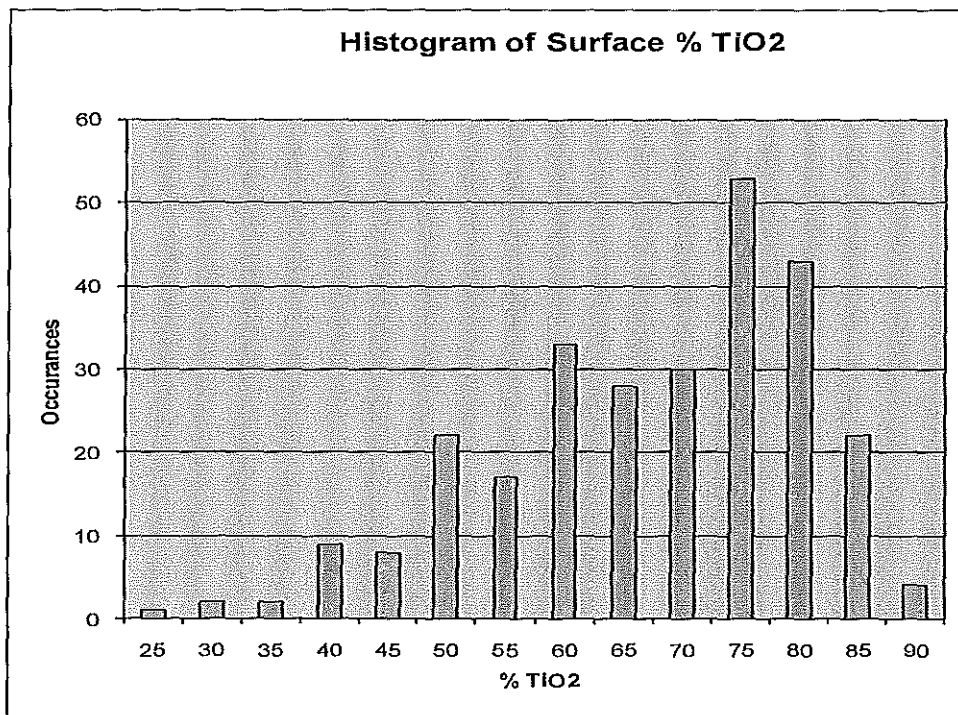
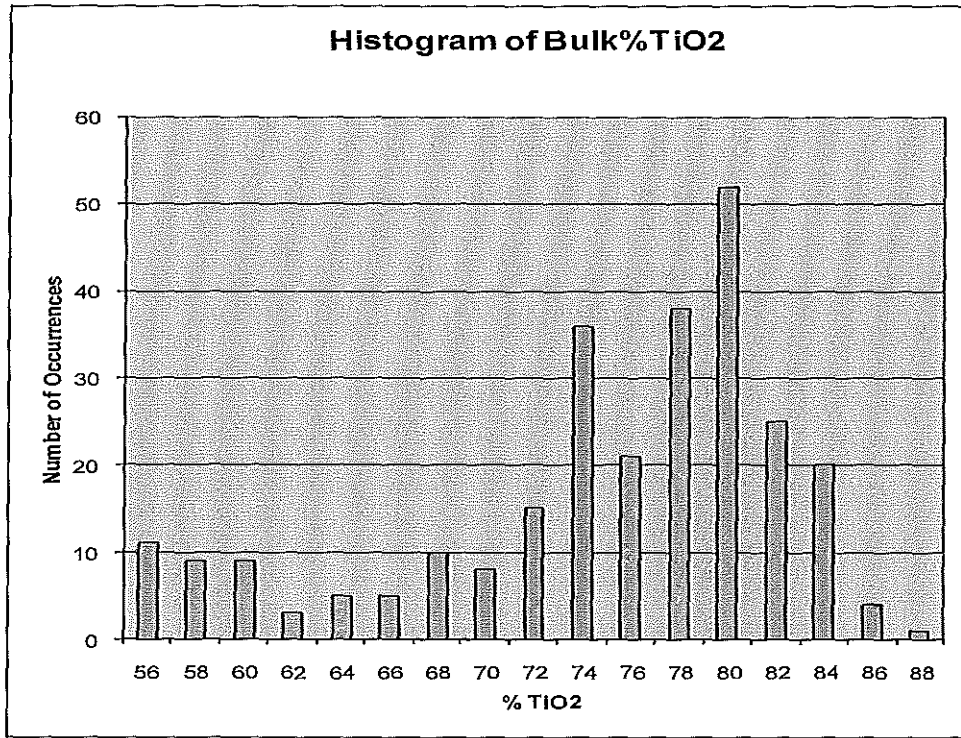
**HISTOGRAMS OF CATALYST CONSTITUENTS**

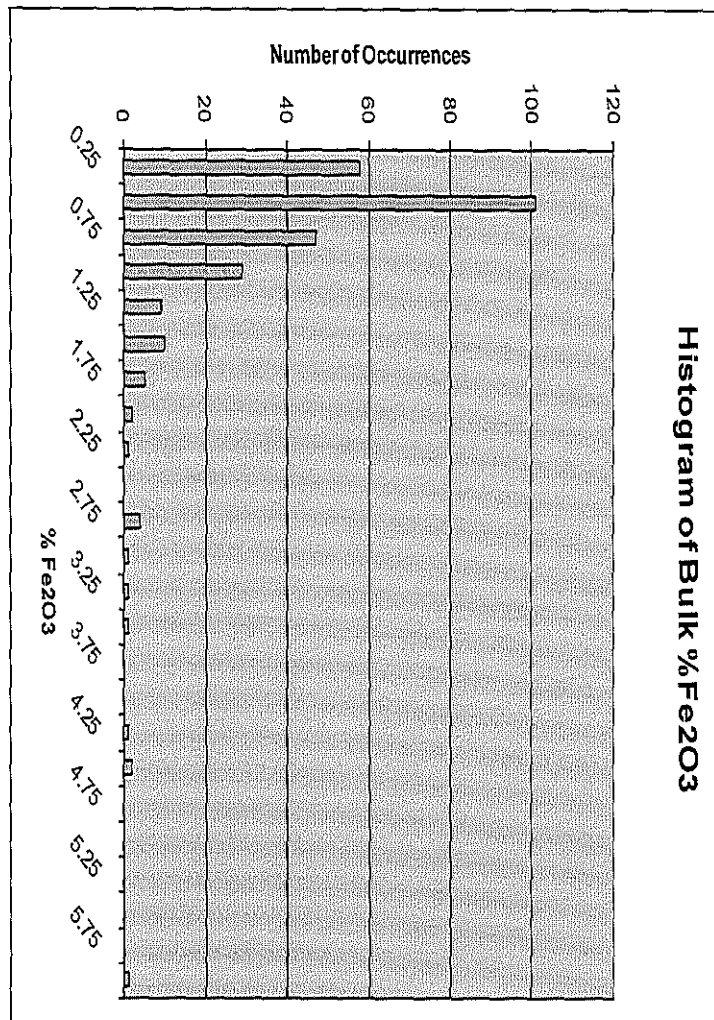
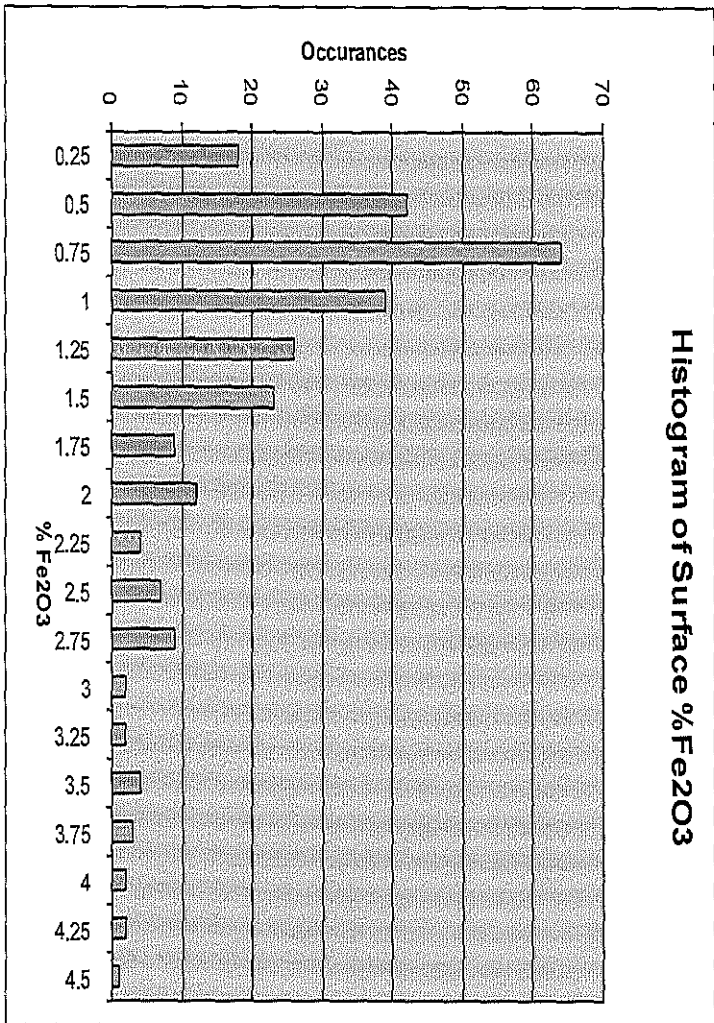


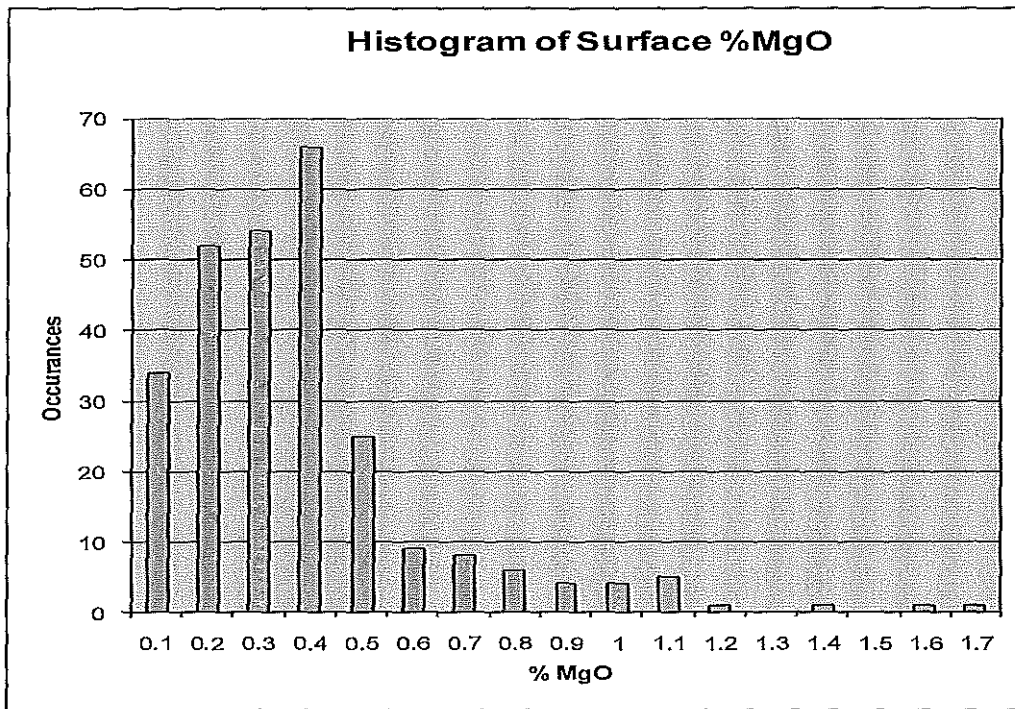
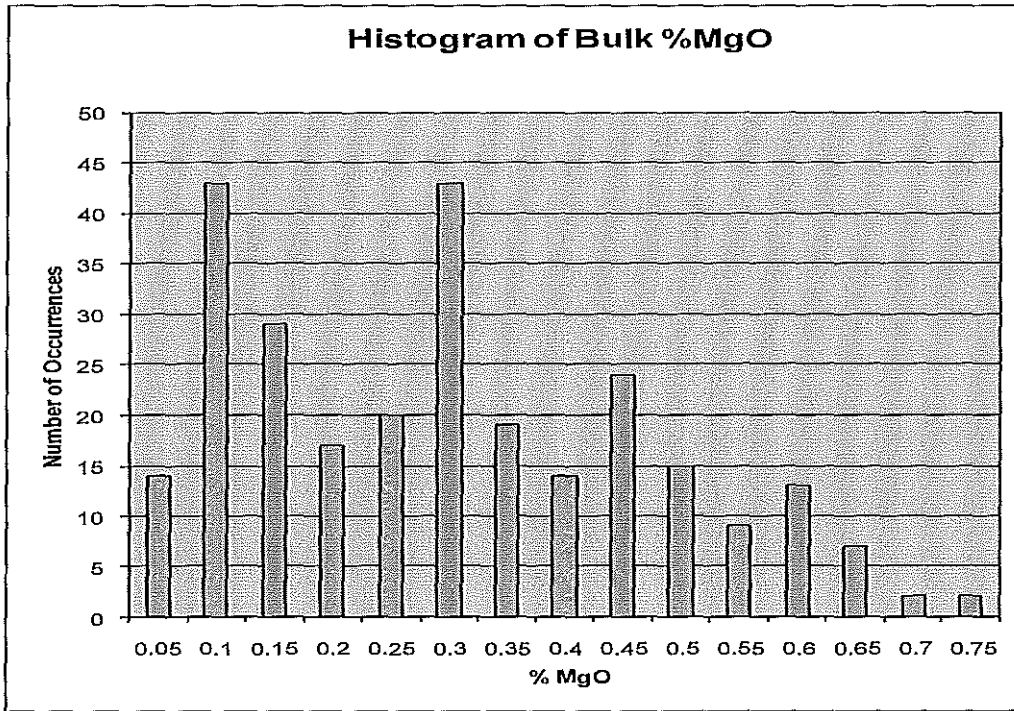




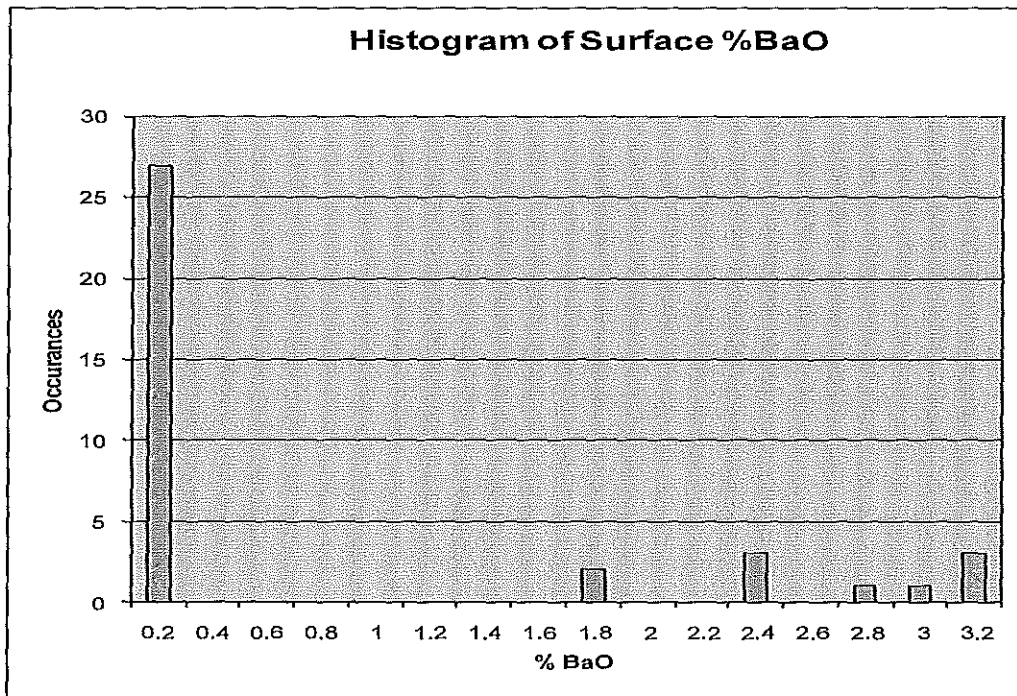
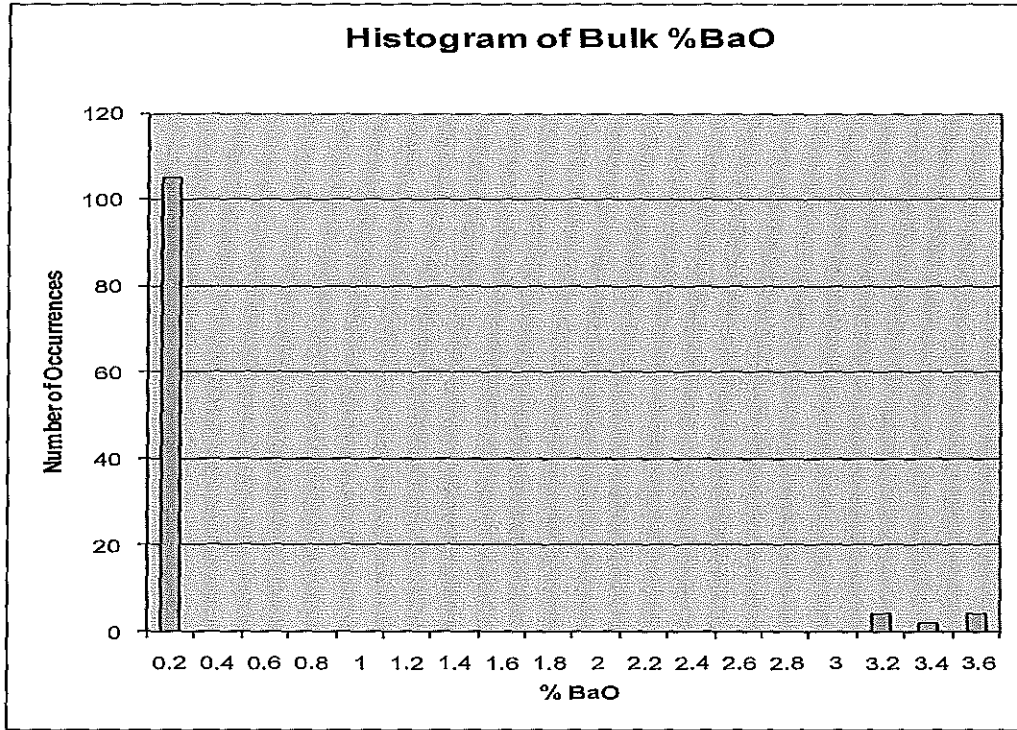


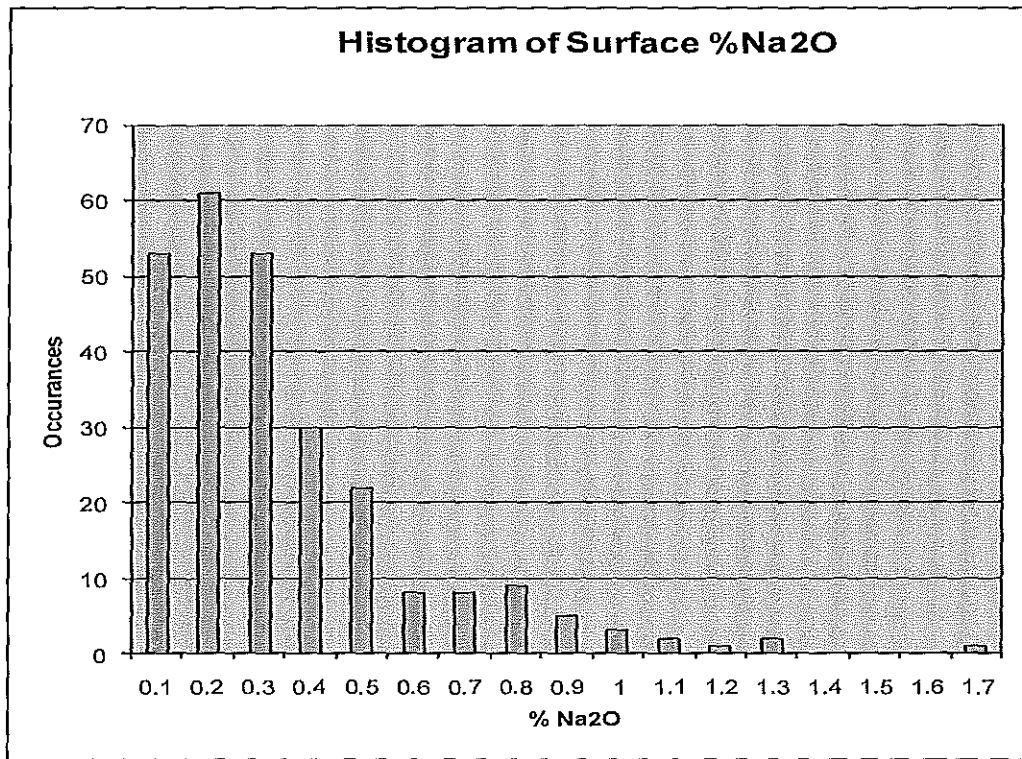
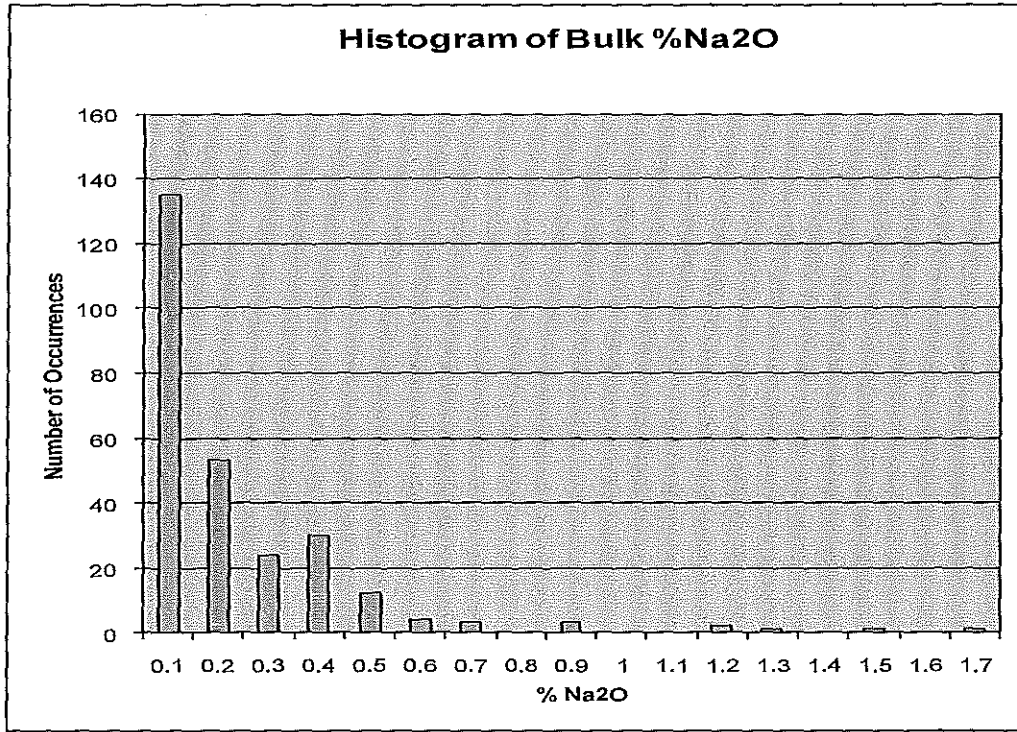


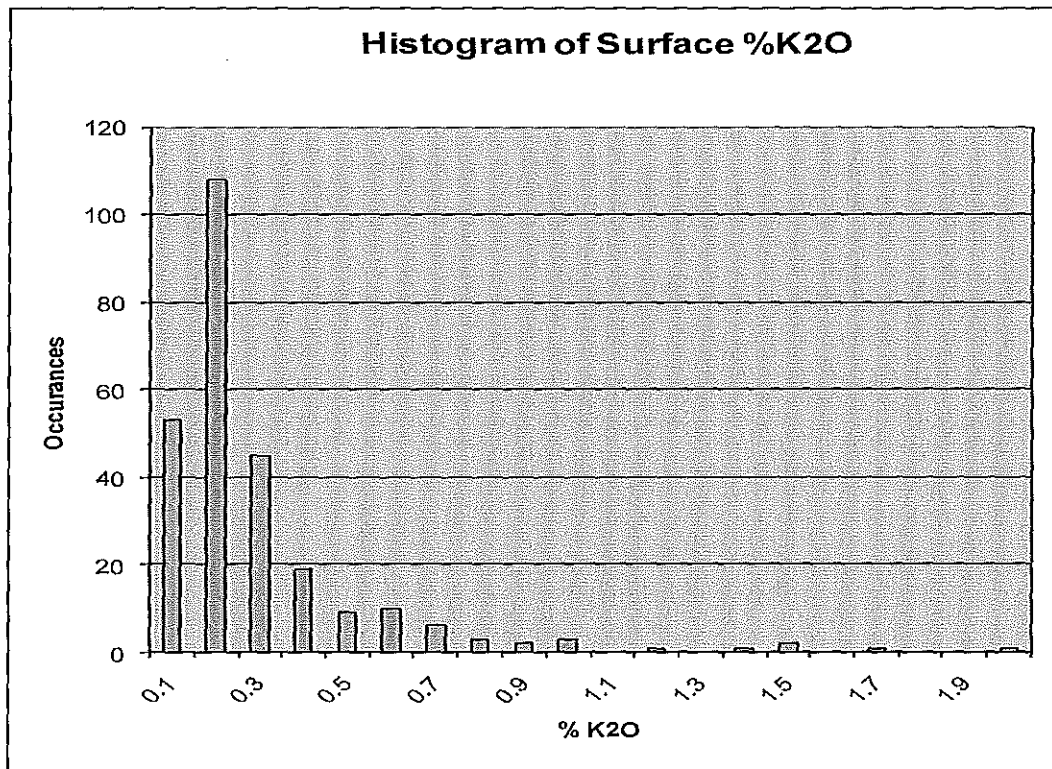
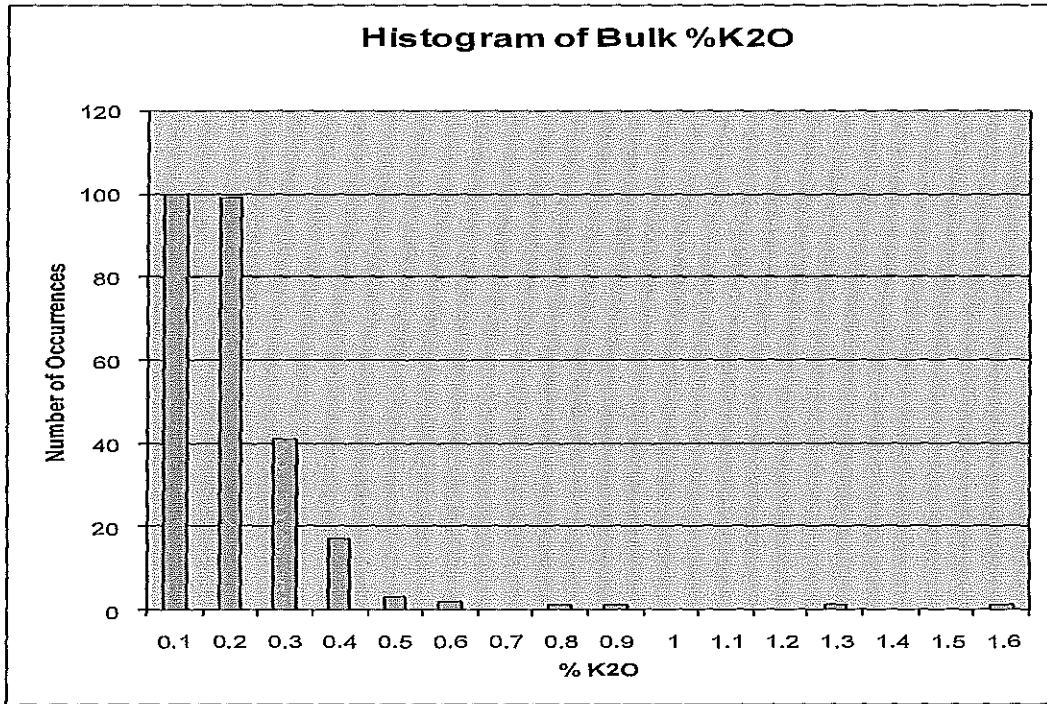




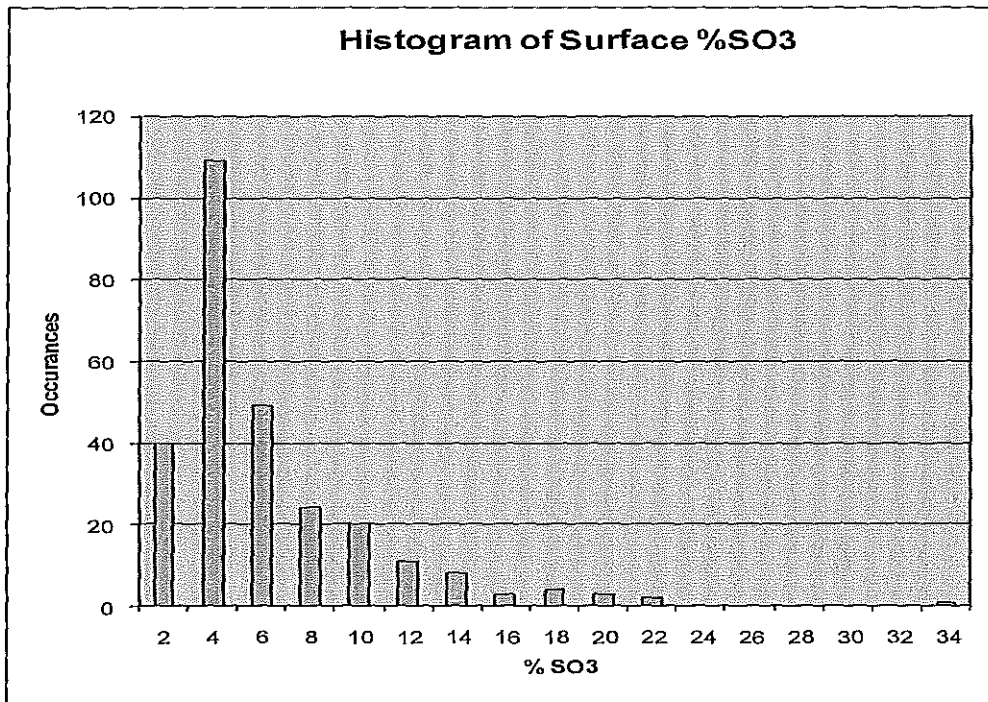
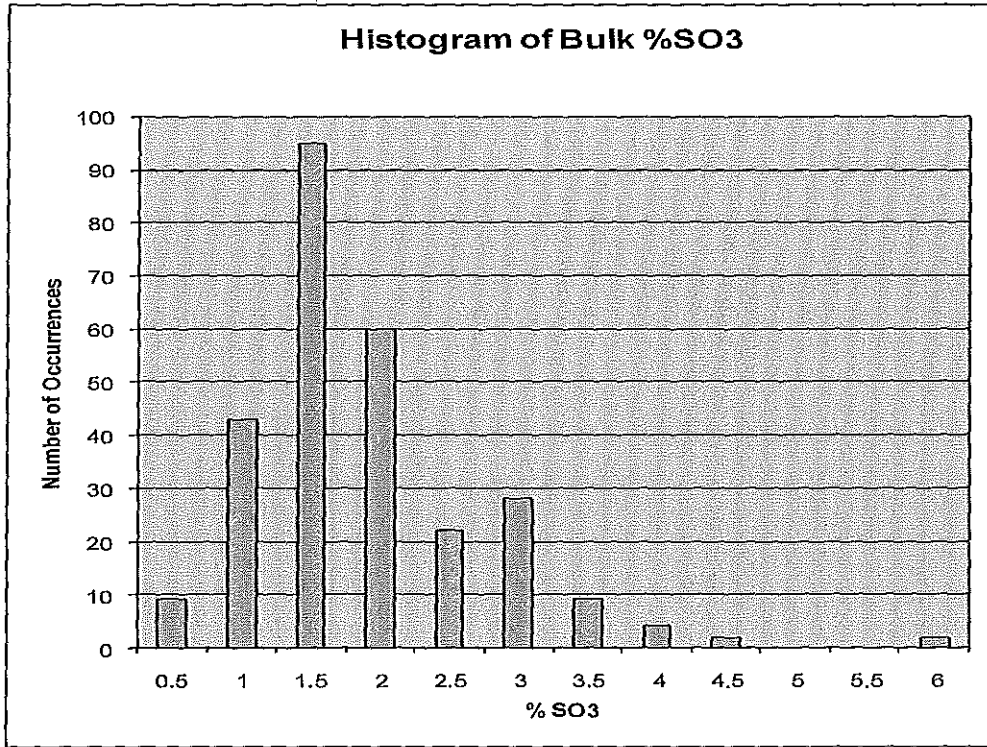


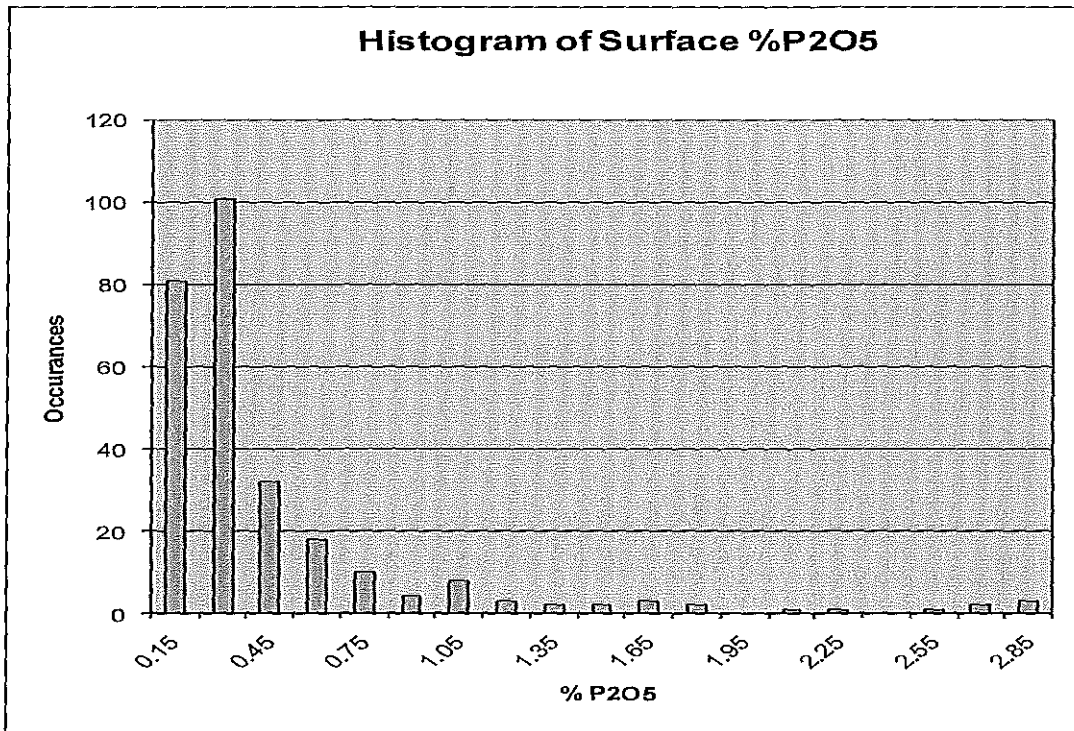
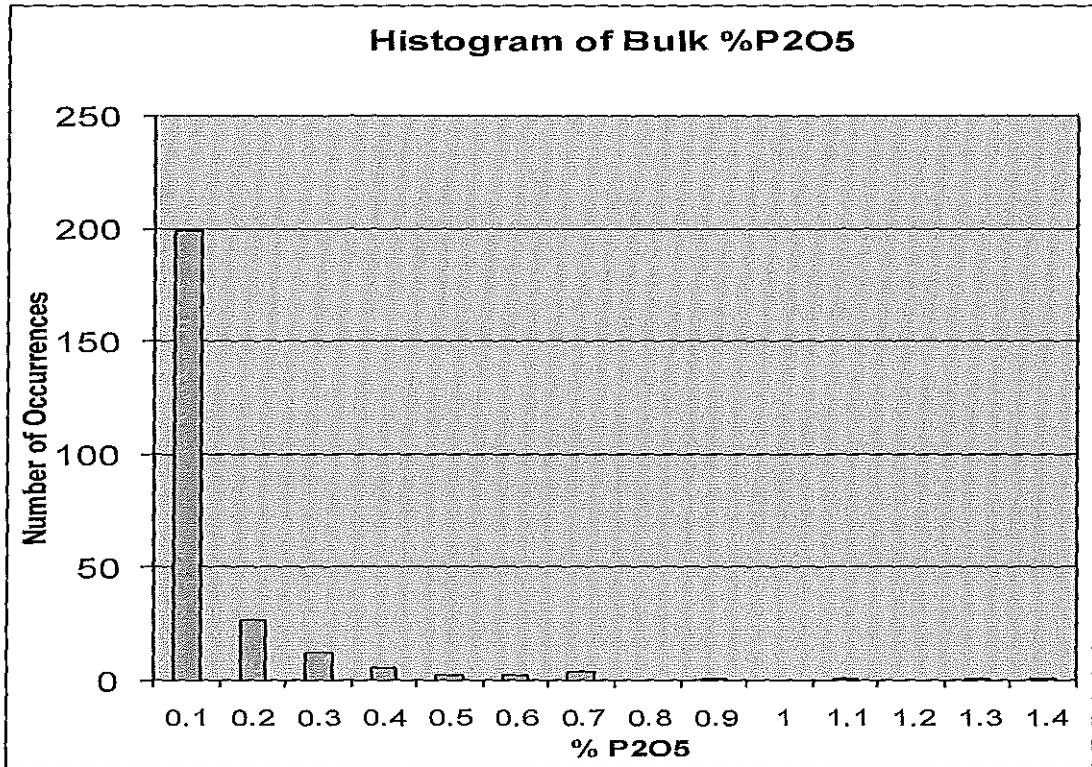


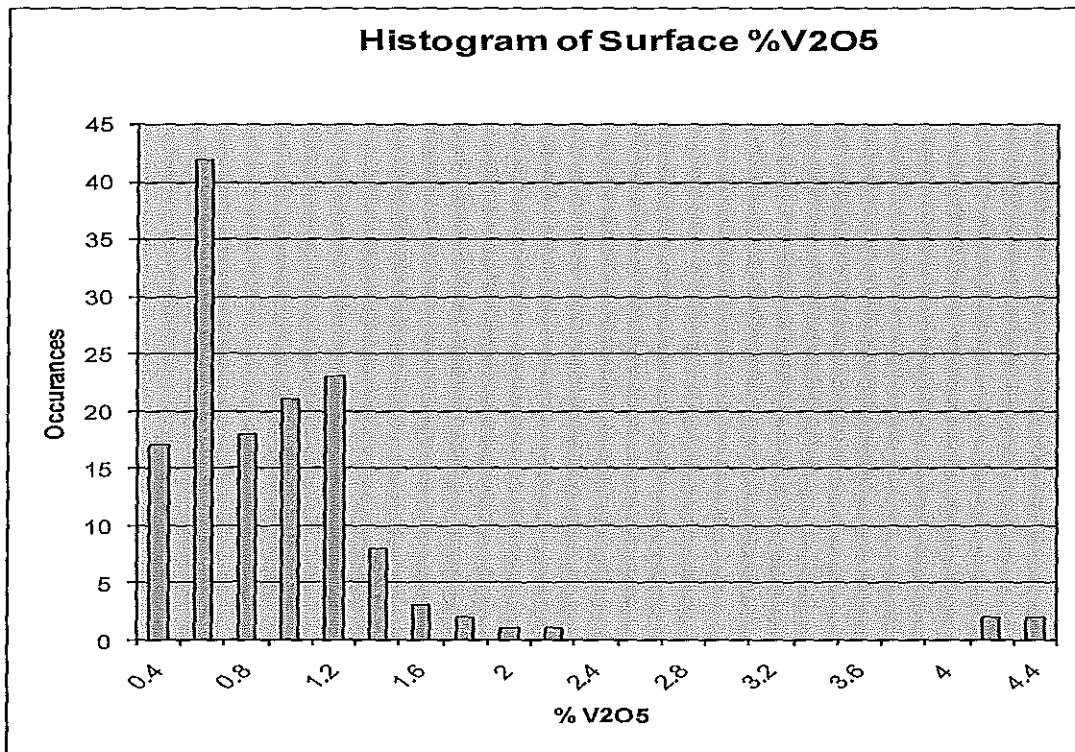
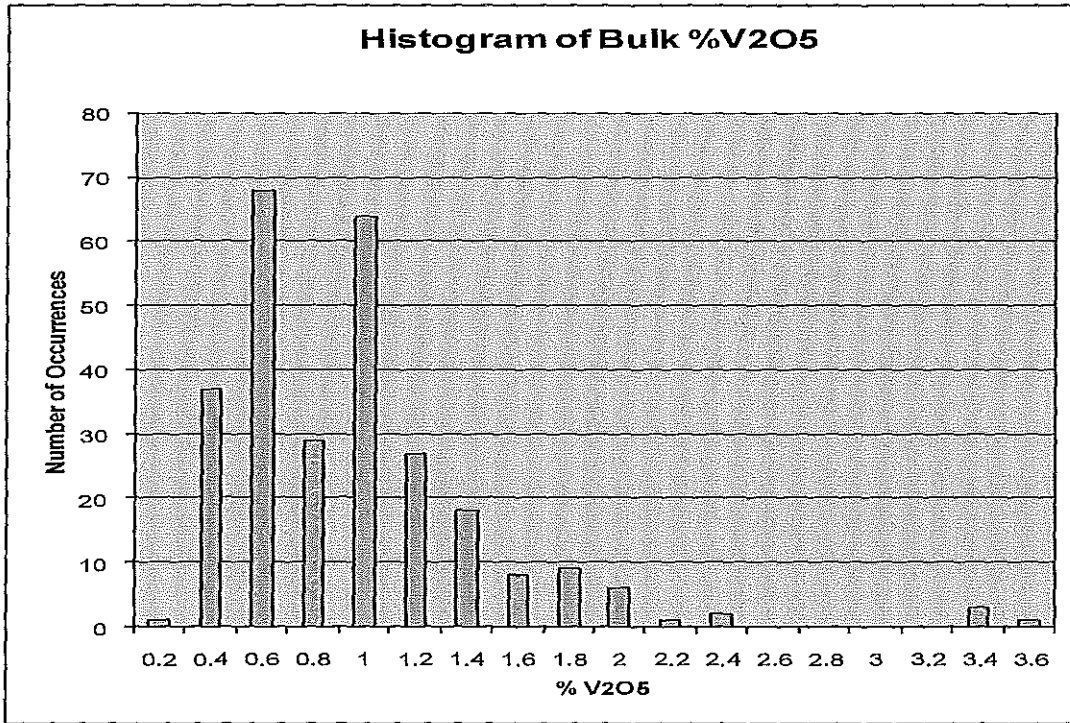


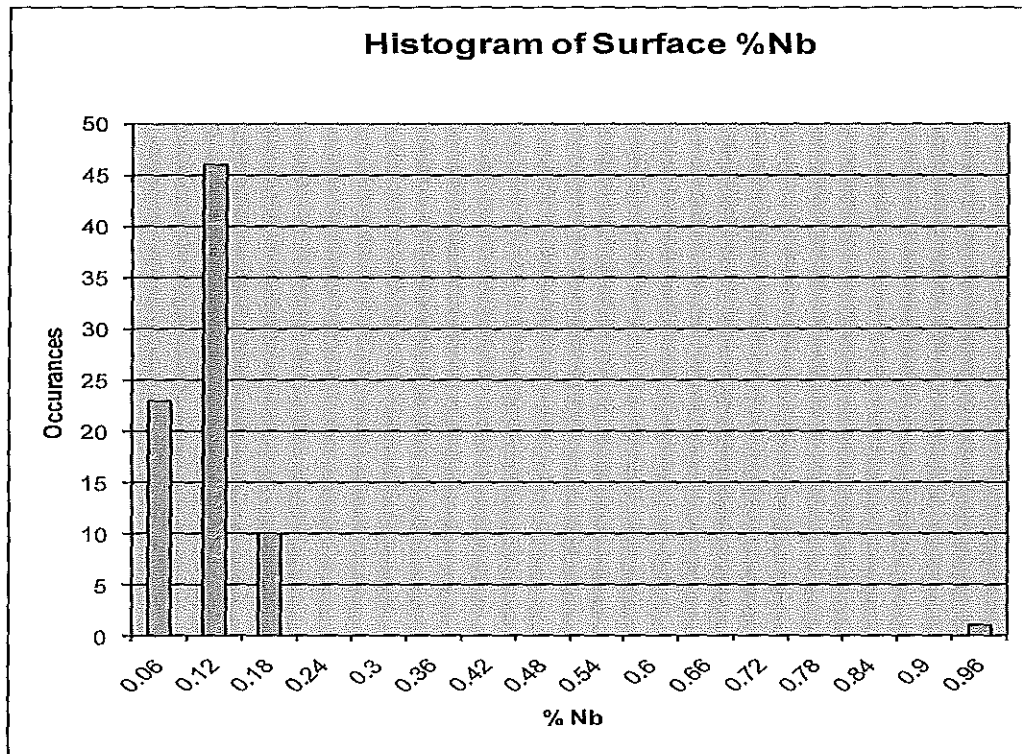
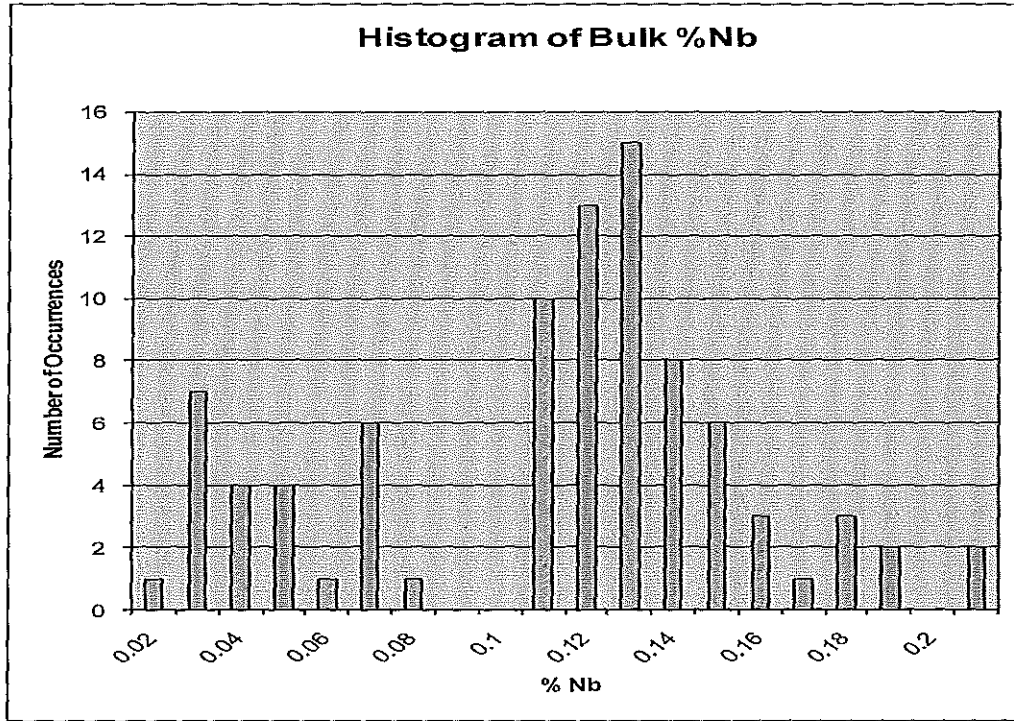


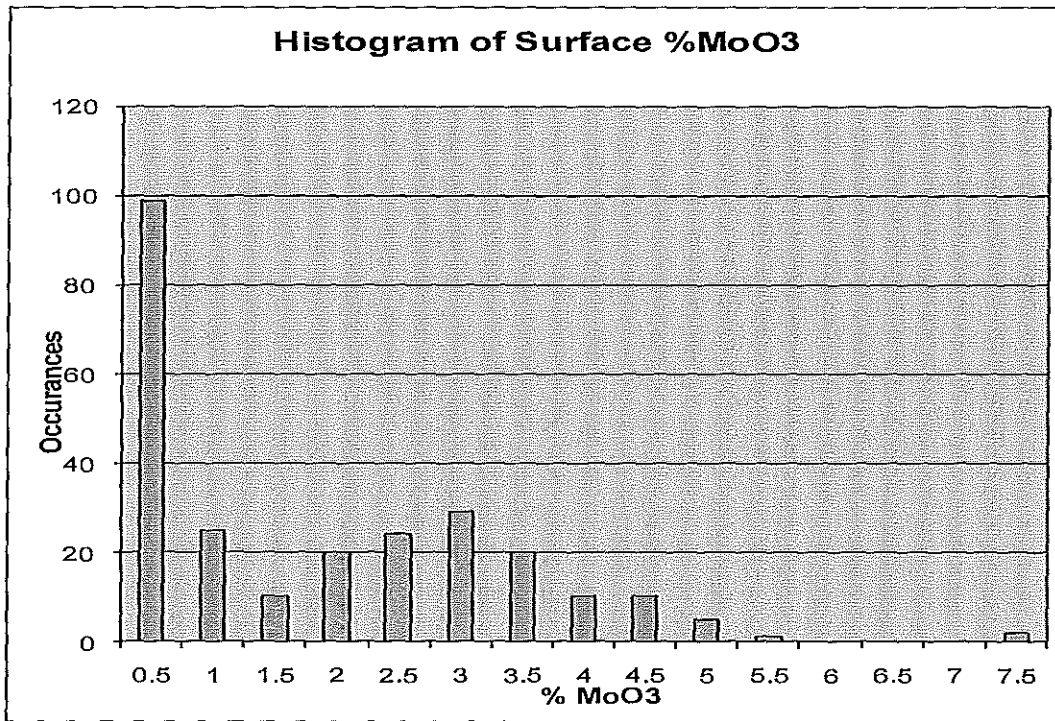
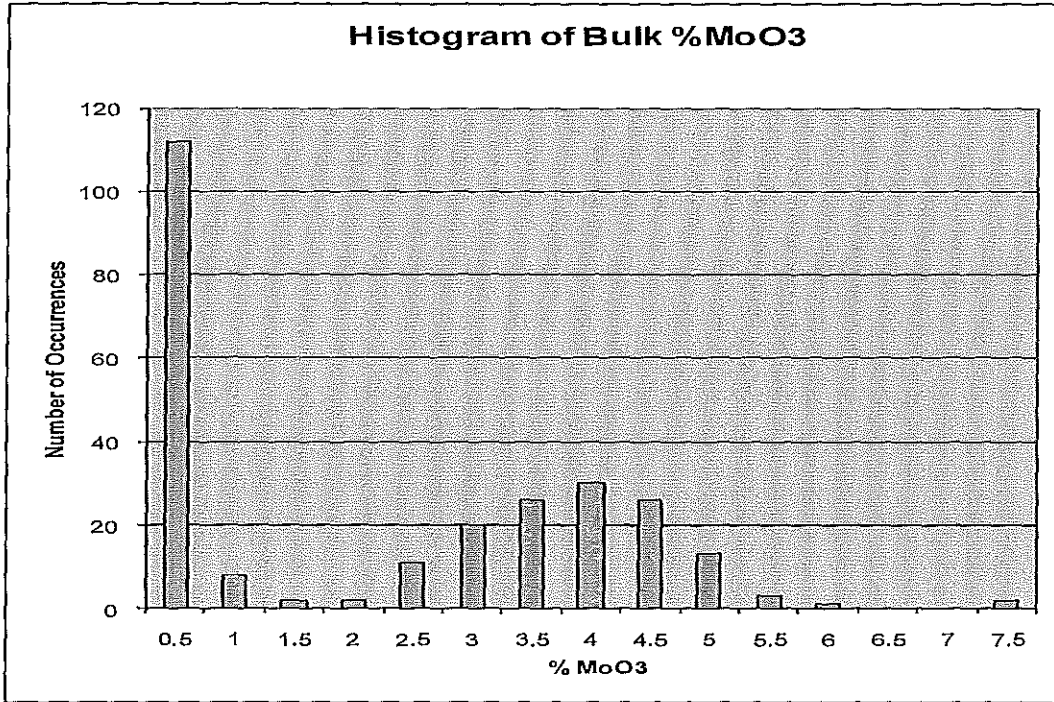




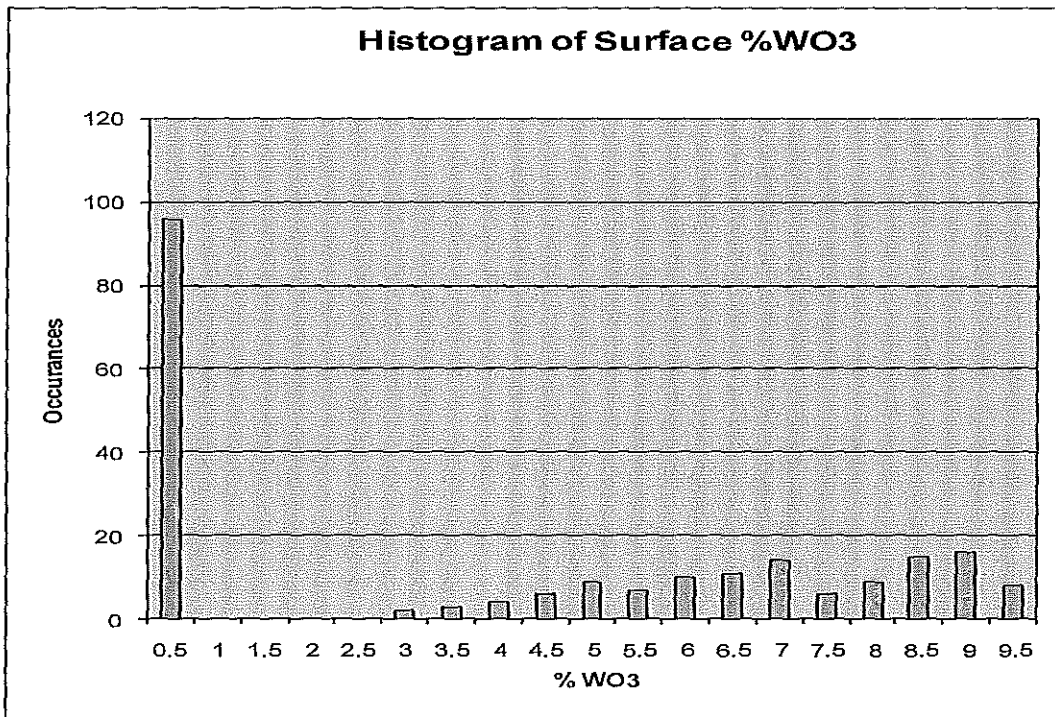
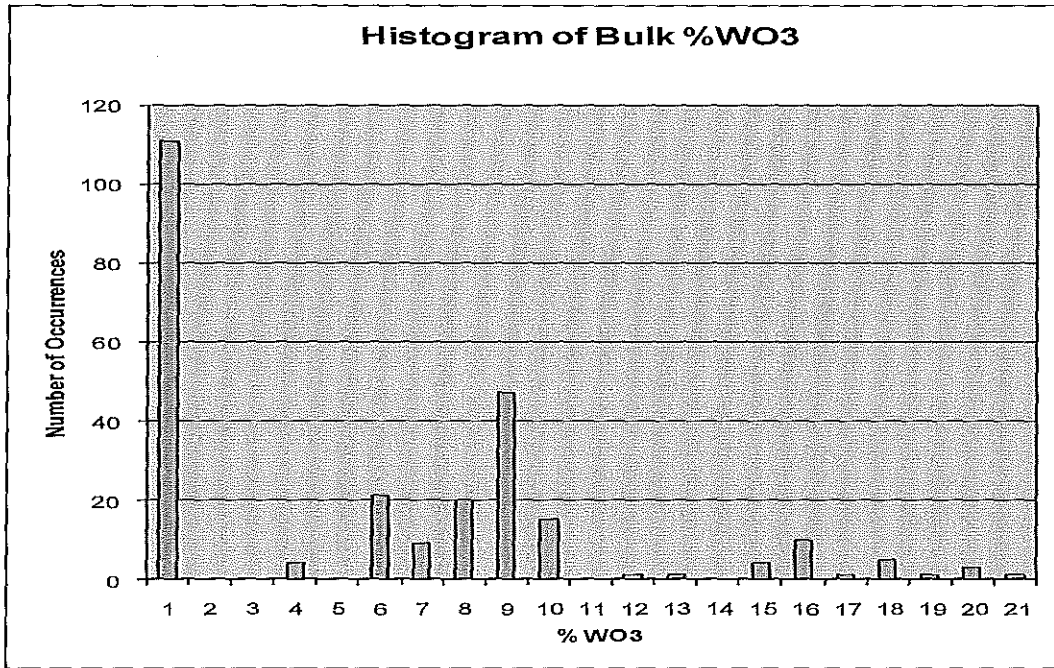


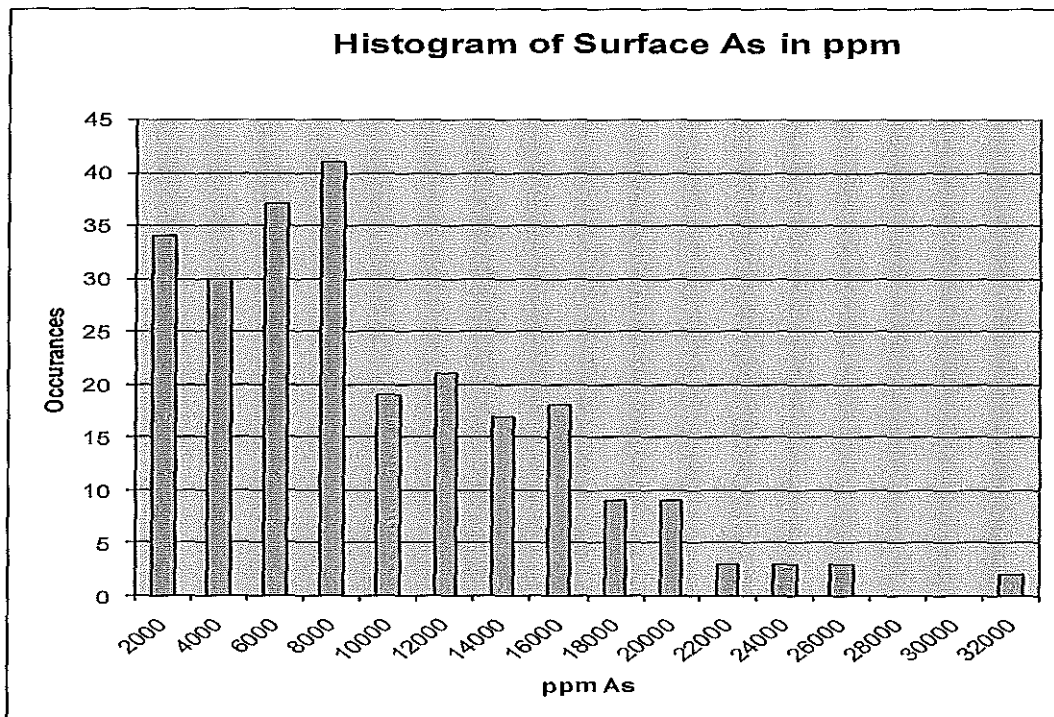
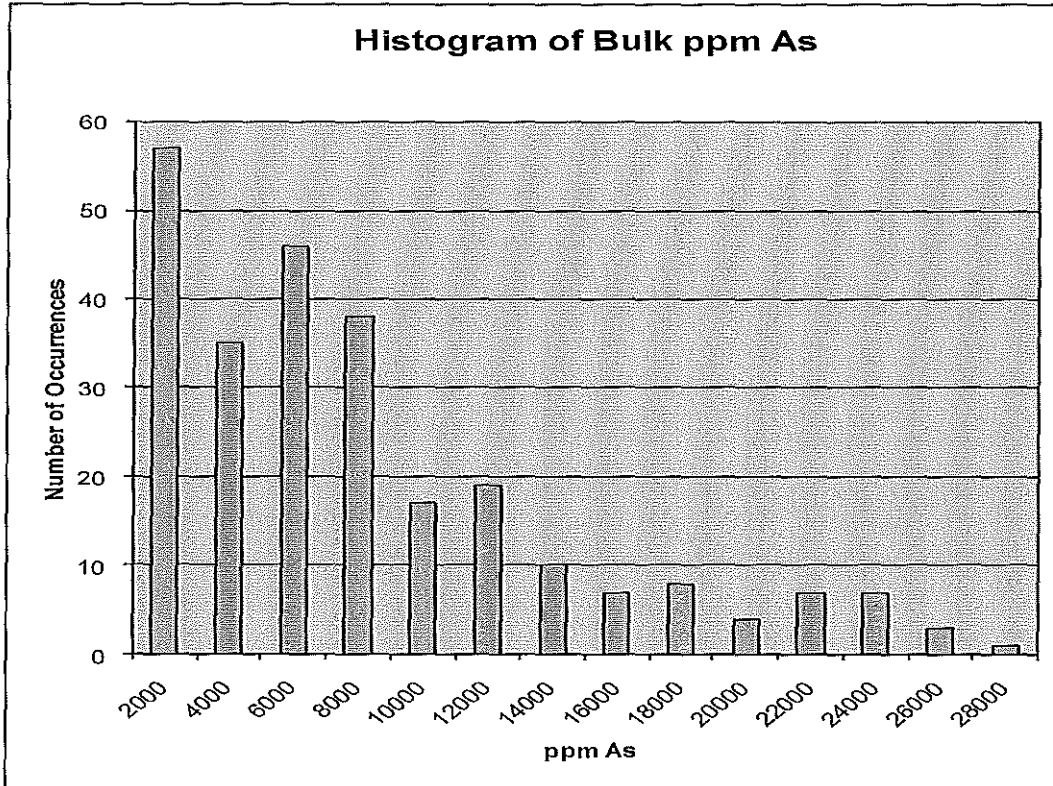


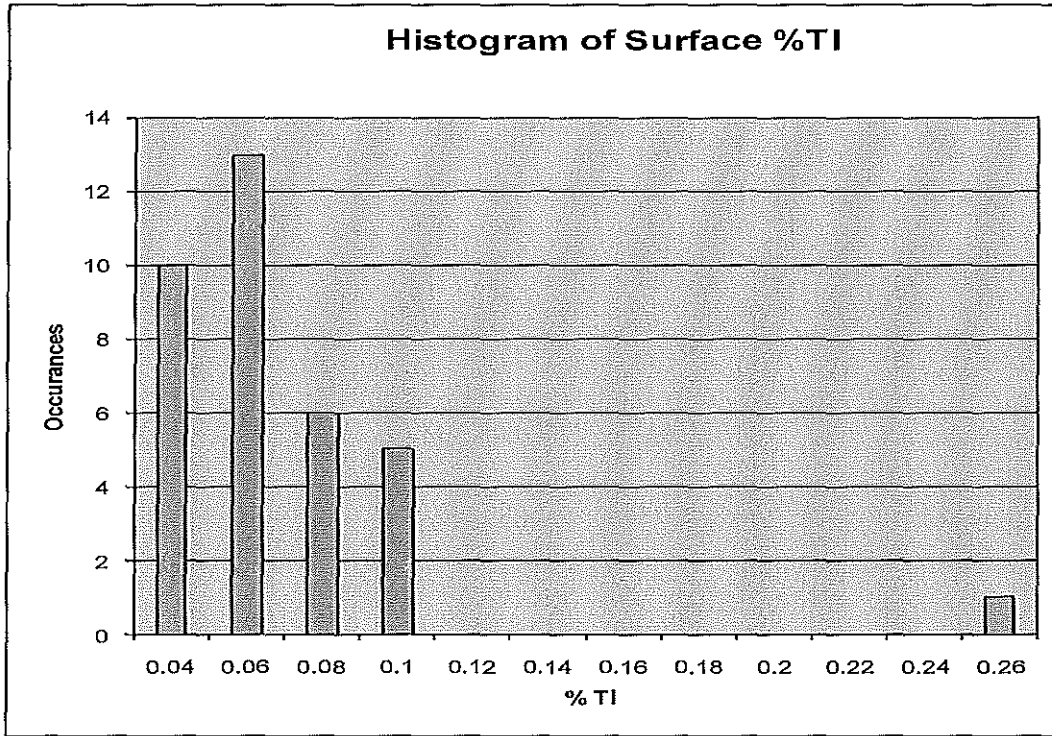
















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**Table 3-1  
Summary of Survey Data**

Parameter	Volume of Catalyst (m <sup>3</sup> )	Proportion
Total volume of catalyst in survey	6,601	
Volume washed on-site	3,090	47%
Catalyst Disposed (with or without bulk metal recovery)	3,511	53%
Disposed catalyst that disposed of modules as-is	794	23%
Disposed catalyst that included bulk metal recovery	2,717	77%
Disposed catalyst that included crushing of ceramic portion when bulk metals were recovered	2717	100%
Volume of disposed catalyst utilizing on-site landfill	989	28%
Volume of disposed catalyst utilizing off-site landfill	2,522	72%
Catalyst that deactivated due to ash fouling (controlling or major reason for action)	6,081	92%
PRB application	4,043	61%
Eastern Bituminous application	1,943	29%
Blended fuel application	6,15	9%
Honeycomb type catalyst	5,974	91%
Plate type catalyst	627	9%
Catalyst Reaching (or near) design life	4,629	70%
Weighted average age of catalyst at time of removal	13,000 hrs	
Disposal cost	\$100-125 per m <sup>3</sup>	
On-Site washing cost	\$300 per m <sup>3</sup>	
On-Site washing effectiveness	85-95% functionality recovery	

***Disposal and Recycle Activities***

The data in Table 3-1 show the disposal and recycle activities associated with 3,090 m<sup>3</sup> of catalyst. Of this volume, 23% was disposed of as-is, i.e., the entire modules were disposed of basically as removed from the reactor. Thus, the proportion of catalyst for which bulk metal recovery (module superstructure) occurred was very high, at 77%. This is an encouraging rate of recycle of the bulk metal and tends to highlight the ease with which this type of recycle can be performed. Of the catalyst for which the bulk metals were recovered, all was crushed in some manner to reduce volume. This pre-disposal activity minimizes landfill volume.

The survey responses noted that some of the module steel was re-used as-is for new catalyst modules. The proportion of catalyst module steel re-used in this manner was quite small, although the exact amount was not determined. The majority of the recovered bulk module steel was simply sold for scrap.

The survey data indicate that roughly half the catalyst disposed (28%) utilized an on-site landfill, while the remainder used off-site facilities. None of the catalyst included in the survey was deemed to be a hazardous waste, although in one instance, a hazardous waste landfill was utilized for convenience purposes only.

# 6

## PROJECT SUMMARY AND CONCLUSIONS

Overall, the project has made significant headway in evaluating potential technologies for the recycle/re-use of spent SCR catalysts. Table 6-1 summarizes the findings, and ranks the evaluated technologies in terms of maturity and perceived requirements for commercialization (with a rank of 1 being the most attractive).

Table 6-1  
Findings Summary

Rank	Process	Findings Summary
1	Cement Kiln Co-Processing	Most mature of the technologies evaluated, with limited requirements for commercialization. Inherent process characteristics very attractive for co-processing wastes, even those containing potentially hazardous components. Overall technology and handling infrastructure is in place. Industry already accepts large volumes of highly varied waste materials. Requires "tipping fee" with economics most attractive when landfill disposal costs are high.
2	Mineral Filler Applications	Initial results good, but additional development required for commercialization. Some product liability concerns, but in-house projects on case-by-case basis may help alleviate concerns and be most attractive overall. Economics are unclear, but the catalyst would not replace a high-value material, thereby limiting the economic incentive.
3	Boiler Slag Incorporation	Results to date indicate that the process is technically feasible, but significant development work would be required for full commercialization, especially as related to adverse boiler impacts. Technology has been practiced at full-scale overseas, but the configuration was significantly different from configurations utilized domestically. Economics are unclear, but potentially attractive if offset disposal costs are high.
4	Iron/Steel-Making Applications	A number of hurdles to commercialization were determined, which potentially severely impact widespread commercialization. Development requirements are likely to be extensive, and economics will not likely be improved compared to other technologies.

Cement kiln co-processing is currently the most mature and in many ways the most attractive of the technologies evaluated. Co-processing is commonly practiced with large volumes of both liquid and solid waste materials, having both hazardous and non-hazardous waste designations. The infrastructure already in place greatly streamlines the inclusion of spent SCR catalyst, and the only process "development" step necessary for any particular batch of catalyst to be processed is to evaluate the catalyst composition and determine appropriate feed rates, etc. The intrinsic characteristics of cement kilns make them very attractive for the processing of solid materials and help to prevent emissions. From an economics standpoint, a "tipping fee" would be charged by the co-processor for the recycle/re-use service, since the catalyst does not replace any of the raw material feed to the kiln, and therefore there are no direct benefits to co-processing catalyst from the co-processor's standpoint. Utilities will likely find co-processing attractive from a direct cost standpoint in cases where landfill disposal costs are relatively high, greater

## Conclusions

In general, the co-processing of wastes in cement kilns is a highly mature technology, with large volumes of waste materials being processed world-wide in this manner. Although historically spent SCR catalyst has not been co-processed, the application of this material to co-processing is relatively straightforward. In fact, of all the recycle/re-use routes evaluated to date by EPRI, it appears that co-processing is the most mature and easily implemented technology assessed. Co-processing is particularly attractive because a route for waste evaluation, handling, transport, treatment, emissions mitigation, and product quality control, is already in place. This greatly streamlines the overall process development, since spent catalyst basically represents simply an additional waste type to be included in the myriad of wastes already being processed.

From an emissions and general environmental standpoint, co-processing is attractive, since the inherent nature of the process results in highly effective environmental controls, and the process avoids the perpetual liability and public concern associated with landfilling. It offers a viable alternative to landfilling and may be especially important in a regulatory atmosphere which has become increasingly stringent on coal-fired boiler waste and by-product disposal.

Economically, it will be difficult for co-processing to compete directly with low-cost landfill disposal if consideration is not given to liability and environmental good-will, but as landfill disposal costs increase, co-processing becomes more and more attractive in a direct economic sense. This is especially true for waste catalysts that are treated as hazardous.



# 5

## UTILIZATION OF SPENT CATALYST IN IRON/STEEL-MAKING

### Introduction

Previous work identified iron/steel-making as an industry which could possibly make use of spent SCR catalyst.<sup>19</sup> The production of steel encompasses many different raw materials, processes, and products, and many processes have been developed to take advantage of various ores and by-product materials to improve productivity and to influence the characteristics of the product steel. Spent SCR catalyst may have some applicability in the steel industry as a slagging or fluxing material, and potentially as a vanadium source, since most catalyst formulations contain vanadium.

The prior work determined that no domestic process was currently being implemented which actually utilized spent SCR catalyst in steel-making. However, several processes are known which could potentially take advantage of the material, primarily based upon patent literature.<sup>20</sup> The current effort focused on discussions with various steel manufacturers and associated steel research consortiums to determine the feasibility of utilizing spent catalyst in iron/steel-related manufacturing, as well as to determine what steps would be necessary to develop the process.

### Contacted Firms

As mentioned above, several firms associated with iron and steel-making were contacted. Some of these are listed below for reference. In general, they represent the major research consortiums and heavy manufacturers of iron and steel in the U.S.

### *Primary Contact Firms*

- Association for Iron and Steel Technology
- Advanced Steel Processing and Products Research Center
- Center for Iron and Steelmaking Research
- U.S. DOE – Office of Energy Efficiency & Renewable Energy
- United States Steel Corporation
- ArcelorMittal

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<sup>19</sup> See EPRI Technical Report entitled "Selective Catalytic Reduction (SCR) Recycle, Re-Use and Disposal Options," Product ID: 1017554, 12/16/2009.

<sup>20</sup> See referenced U.S. Patents; #4,071,355, #4,274,867, and # 4,731,112, in the above referenced EPRI report.

## **Findings**

Consistent with the previous determinations, no utilization of spent SCR catalyst or similar material is currently being practiced domestically, and the discussions revealed that there would be significant hurdles related to the implementation of potential technologies that would utilize spent SCR catalyst in iron and steel-making. The major noted hurdles are listed below.

### ***Major Hurdles to Commercialization***

- Raw materials present in spent catalyst not of high value to the industry
- High technical liability present in applying the catalyst to most processes
- Limited potential supply of spent catalyst
- Large number of intermittent generators of spent catalyst
- Composition of spent catalyst variable
- Multiple contaminants present potentially leading to emissions and health and safety issues
- The industry as a whole is not generally familiar with processing non-metallic waste materials

Each of the above commercialization hurdles is discussed in some detail in the following report sections. Included in these discussions in most cases is an assessment of the severity of the hurdle and potential for overcoming the hurdle.

### ***Value of Raw Materials Present in Spent Catalyst***

As with the previously evaluated recycle/re-use technologies, the actual value of the raw materials contained in catalyst which would be useful to the industrial process of iron and steel-making is not large. Given that titania is not directly used in large quantities in iron and steel-making, and given that more valuable metal components of the catalyst, such as vanadium, are typically present in relatively small quantities, the catalyst has little intrinsic value. In addition, raw mineral resources (a portion of which would potentially be replaced by the catalyst), are generally plentiful and relatively inexpensive. This is especially true of low-grade titania ores, which the catalyst might replace. As a result, there is little incentive on the part of the iron/steel manufacturer to utilize spent SCR catalyst. Barring any extreme circumstances related to raw mineral supply, or radical changes in catalyst formulations, this hurdle is not expected to ease.

### ***Technical Liability in Utilizing Spent Catalyst***

Modern iron and steel-making processes rely on efficient and very well-controlled processes to produce materials with consistent characteristics. The maintaining of a consistent and well characterized raw feed stream is integral to this. By introducing spent catalyst into the process feed, there is a degree of technical liability involved, in that the catalyst may produce some unwanted adverse effect. This is similar to concerns for large boilers, where the potential adverse consequences of any process change must be well understood prior to undertaking the modification at full scale. Ultimately, the potential risk often outweighs the potential benefit, unless the potential process change is well vetted, and the perceived benefits are large. This represents a substantial hurdle to spent catalyst utilization, since a great deal of development work would potentially be required to insure that there were no adverse consequences associated



with implementing the re-use technology. Alleviation of this hurdle would require a substantial effort to develop and demonstrate the technology.

### ***Limited Supply of Spent Catalyst Material***

The iron and steel-making industry is characterized by large production facilities requiring substantial raw feed streams. Compared to these feed streams, even if catalyst were blended at a small ratio, the amount of spent catalyst available would likely not be sufficient to provide a continuous supply of material to a fully developed process in which the spent catalyst was a part. Alternately, intermittent processing of catalyst could be conducted, or catalyst could be used in a low-volume specialty steel manufacturing process. However, it is difficult to imagine that such a scenario would be economically or technically attractive given the low value of the raw catalyst material, and emissions and health and safety concerns (as discussed below). Processing of spent catalyst would likely become a “nuisance” activity, increasing liability, for minimal return. The supply of spent catalyst material is expected to increase over the coming years, but supply will likely be a factor in any developed recycle technology related to the iron and steel-making industry.

### ***Large Number of Intermittent Generators***

The nature of SCR installations dictates that there will be a relatively large number of facilities generating spent catalyst on an intermittent basis. This likely would be problematic for a recycle/re-use process which required a continuous supply of material. Further, the large number of individual generators of the spent catalyst would potentially complicate logistics greatly. One option might be to establish a “clearinghouse” where spent catalyst could be collected at a single location. This option might help to simplify logistics and stabilize the “outflow” of material. No such facility is in place, however, and a significant industry-wide commitment would be required to effectively pool the spent catalyst from the industry as a whole.

### ***Variable Composition of Spent Catalyst Material***

Spent SCR catalyst will vary in composition in terms of the constituents used in the original manufacture. (Variations in contaminants will also be present, as discussed in the following report section.) These constituents may represent metals that ultimately will be incorporated in the process products, or they may represent materials such as fluxing agents, that are utilized in the iron/steel-making process, but are not actually present in the product. The variability of these constituents will affect the general parameters of the parent iron/steel-making process. As a result, batches of catalyst may need to be evaluated on a case-by-case basis, further exacerbating issues related to catalyst supply and the large number of intermittent generators. Unless the parent iron-steel-making process was impervious to variability in catalyst composition, variability in general will likely represent a significant hurdle to the development of recycle/re-use processes that are globally applicable to the wide range of spent catalyst compositions that are produced by the utility industry.

### ***Catalyst Contaminants***

Contaminants in the spent catalyst may be problematic for the parent process from both a health and safety, and emissions perspective. Contaminants of concern, such as arsenic, may vary widely from catalyst to catalyst, potentially resulting in intermittent health and safety concerns associated with handling of the material, as well as emissions concerns. Unlike cement kilns (as discussed in the previous report sections), the iron/steel-making process may not have robust emissions control systems in place that are capable of handling the potential contaminants released from the catalyst. Further, the iron/steel industry, in general, has little familiarity in dealing with waste materials that are potentially hazardous. Catalyst batches would likely require evaluation on a case-by-case basis in terms of the contaminants present. A hazardous waste designation (a scenario which is most attractive in terms of finding an alternate recycle/re-use route) may be particularly problematic for the iron/steel industry, since they typically do not have hazardous waste feed materials and would be generally unfamiliar with such materials, and would lack necessary permits, etc. Thus, catalyst contamination will result in a major technical hurdle to process development under most conceivable scenarios.

### ***Industry Familiarity with Processing Waste Materials***

Unlike the cement industry where the co-processing of wastes is quite common, the iron/steel-making industry does not have a great degree of familiarity with such materials (excepting scrap metal wastes). Further, spent catalyst does not directly substitute for any materials commonly utilized in the iron/steel industry. As a result, there is no clear avenue in place for the iron/steel industry to evaluate and accept waste catalyst materials.

### **Economics**

At present it is impossible to make any firm determination as to the potential economics of utilization of spent catalyst in iron/steel-making, due to the unknown nature of the exact process which might be utilized. It is clear, however, that the value of the catalyst to the iron/steel industry is quite low, since raw mineral materials, which the catalyst might replace, tend to be relatively low-cost. Further, considering the potential process upsets and emissions issues that may result from catalyst utilization, the processing of catalyst would need to be fee-driven, similar to other recycle routes investigated, to make it attractive to the processor. These fees would then have to be compared with other recycle/re-use options and disposal via landfilling. Thus, it is not expected that the economics would be particularly attractive compared to other options.

### **Conclusions**

Given the present degree of commercialization and the significant hurdles that are present related to commercialization, it was determined that the development of a process within the iron/steel-making industry for the recycling/re-use of spent catalyst is not attractive at this time. It also appears clear given the low potential value of spent catalyst and the added potential requirements needed to utilize the material, that a "tipping fee" would need to be charged by the processor for the overall economics to become attractive. Certain iron/steel manufacturing processes (specialty processes in particular) could conceivably take advantage of spent SCR catalyst material, but the

development of such a process is likely to require significant resources. As a result, and given the greater attractiveness of other recycle/re-use processes, it is not currently recommended that iron/steel-making be actively pursued as a recycle/re-use route, at least until such time as other options are exhausted. Continuing to follow trends in the iron/steel-making industry, especially in terms of the processing of waste materials would be advisable, but the general outlook is not expected to change dramatically in the near future.



# 6

## PROJECT SUMMARY AND CONCLUSIONS

Overall, the project has made significant headway in evaluating potential technologies for the recycle/re-use of spent SCR catalysts. Table 6-1 summarizes the findings, and ranks the evaluated technologies in terms of maturity and perceived requirements for commercialization (with a rank of 1 being the most attractive).

Table 6-1  
Findings Summary

Rank	Process	Findings Summary
1	<b>Cement Kiln Co-Processing</b>	Most mature of the technologies evaluated, with limited requirements for commercialization. Inherent process characteristics very attractive for co-processing wastes, even those containing potentially hazardous components. Overall technology and handling infrastructure is in place. Industry already accepts large volumes of highly varied waste materials. Requires “tipping fee” with economics most attractive when landfill disposal costs are high.
2	<b>Mineral Filler Applications</b>	Initial results good, but additional development required for commercialization. Some product liability concerns, but in-house projects on case-by-case basis may help alleviate concerns and be most attractive overall. Economics are unclear, but the catalyst would not replace a high-value material, thereby limiting the economic incentive.
3	<b>Boiler Slag Incorporation</b>	Results to date indicate that the process is technically feasible, but significant development work would be required for full commercialization, especially as related to adverse boiler impacts. Technology has been practiced at full-scale overseas, but the configuration was significantly different from configurations utilized domestically. Economics are unclear, but potentially attractive if offset disposal costs are high.
4	<b>Iron/Steel-Making Applications</b>	A number of hurdles to commercialization were determined, which potentially severely impact widespread commercialization. Development requirements are likely to be extensive, and economics will not likely be improved compared to other technologies.

Cement kiln co-processing is currently the most mature and in many ways the most attractive of the technologies evaluated. Co-processing is commonly practiced with large volumes of both liquid and solid waste materials, having both hazardous and non-hazardous waste designations. The infrastructure already in place greatly streamlines the inclusion of spent SCR catalyst, and the only process “development” step necessary for any particular batch of catalyst to be processed is to evaluate the catalyst composition and determine appropriate feed rates, etc. The intrinsic characteristics of cement kilns make them very attractive for the processing of solid materials and help to prevent emissions. From an economics standpoint, a “tipping fee” would be charged by the co-processor for the recycle/re-use service, since the catalyst does not replace any of the raw material feed to the kiln, and therefore there are no direct benefits to co-processing catalyst from the co-processor’s standpoint. Utilities will likely find co-processing attractive from a direct cost standpoint in cases where landfill disposal costs are relatively high, greater

than roughly \$200/ton. However, additional incentives for co-processing, such as potential liability reduction and environmental good-will, add to the attractiveness of co-processing.

The data acquired to date indicate that spent catalyst may be suitable for mineral filler applications, at least in terms of basic physical parameters. As a mineral filler, the catalyst would essentially act as an inert material, replacing such materials as powdered limestone and other naturally occurring minerals in such applications as bituminous concrete, asphaltic shingles, and plastic products. Additional studies are required for specific targeted applications to fully understand all potential impacts that the catalyst may have on the final product. Specifically, such issues as leachability and durability for specific applications would need to be addressed as a next step to full commercialization. As is the case with many other proposed utilization routes, the inherent value of the catalyst as a mineral filler is not large, and therefore most of the derived value of the utilization route is a result of avoided disposal costs.

The process of incorporation of spent catalyst into wet-bottom boiler slag appears to be technically viable, at least based on the analyses performed to date. However, significant process development activities would be required at pilot and demonstration scale to fully determine the potential for adverse effects and to establish detailed cost parameters. Since the process has the potential to affect boiler operations in general, there is a technical liability in implementing the technology unless the concept is well-proven prior to full-scale implementation. Emissions may be affected, and there is some risk of balance-of-plant effects (such as installed SCR catalyst deactivation). The process is potentially economically attractive, since catalyst could be processed in-house, and in many cases with a minimum of physical equipment modifications. However, the overall economics will depend heavily on the required permitting and the ease with which catalyst can be prepared, stored, and introduced into the boiler.

Utilization of spent catalyst in various iron/steel-making processes is not currently an attractive recycle/re-use route. There is little incentive for the iron/steel industry to utilize the material, and there is a general unfamiliarity with processing waste materials similar to spent catalyst in terms of composition. Additional significant hurdles to the process development were determined, such as limited and variable catalyst supply, presence of contaminants, potential emissions control problems, and variable spent catalyst composition.

# 7

## RECOMMENDED FUTURE WORK

### Cement Kiln Co-Processing

Cement kiln co-processing was determined to be the most mature and most viable of the technologies assessed during this study. The technology is virtually commercially ready, but it is recommended that a small “trial” batch of catalyst be processed as a means of providing additional guidance for the full-scale implementation of the technology. It is envisioned that several complete catalyst modules (potentially both honeycomb and plate) be processed as a trial “demonstration.” This level of processing would provide valuable information related to contracting issues, pricing, handling and transportation requirements and costs, and processor internal procedures and technology application. At this scale, the amount of catalyst processed would not be fully representative of large-scale processing in terms of cement product quality and kiln emissions, but these parameters are relatively easily predicted and well understood. Upon completion of this trial processing, it is envisioned that the technology would be commercially ready, at which point a full-scale demonstration could take place. This full-scale demonstration could be closely tracked to further advise utilities in terms of various technology logistics and costs. The full-scale demonstration would help to further insure that no product quality or emissions issues were present.

### Mineral Filler Applications

It is recommended that trial batches of actual products be produced associated with mineral filler applications, following the general findings from the laboratory tests. These trial tests would allow for a more definitive determination of any potential adverse effects on product quality or characteristics, such as leaching behavior. These product trials would also help to determine which products/industries would be most conducive to catalyst utilization and would help to clarify the exact route that large-scale implementation might take (i.e., consumer products versus on-site utility projects, etc.).

### Wet-Bottom Boiler Slag Incorporation

The next logical step in the development of a boiler slag incorporation technology would be to perform laboratory tests which produced representative slag materials that could be evaluated for various performance characteristics, including leaching behavior, melt point temperatures, etc. These tests could then be followed by a pilot-scale demonstration where other process-related parameters were investigated. The decision to continue development would be strongly related to the utility industry’s perspective on the technology, especially as related to the perceived technical and commercial liability associated with applying the technology to a full-scale commercial boiler.

### **Iron/Steel-Making Applications**

At the present time it is not recommended that any significant resources be devoted to the continued exploration of iron/steel-making applications as a recycle/re-use route for spent catalyst. However, a continued cursory evaluation of any emerging technologies associated with the iron/steel industry would be warranted. This would insure that any emerging technology applicable to catalyst recycle/re-use was identified.





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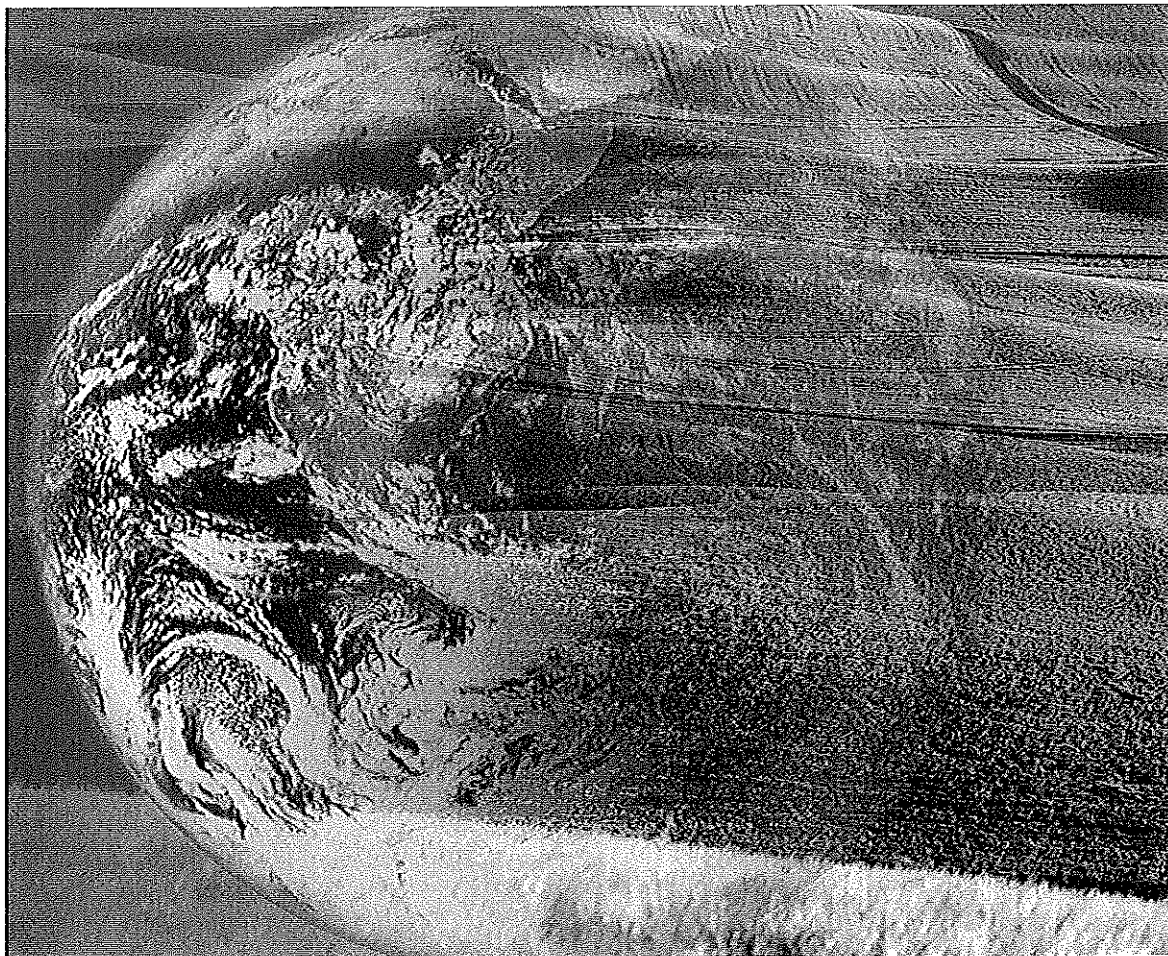
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## SCR Catalyst Disposal, Recycle, and On-Site Washing Options and Experience

1015750





# **SCR Catalyst Disposal, Recycle, and On-Site Washing Options and Experience**

1015750

Technical Update, December 2008

EPRI Project Manager

A. Jimenez

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## PRODUCT DESCRIPTION

As Selective Catalytic Reduction (SCR) technology becomes more widespread and the catalyst fleet ages, cost-effective and environmentally friendly approaches are needed to handle the increasing volumes of spent catalyst or extend its life through simple on-site processing. This report addresses various issues related to catalyst rejuvenation, cleaning, recycling, and disposal.

### Background

As Selective Catalytic Reduction (SCR) technology becomes more widespread, and as the catalyst fleet as a whole ages, options for disposal and recycle of spent catalyst are becoming more important. It has been estimated that the spent catalyst generation rate will approach 20,000 tons/year by 2010, and 30,000 tons/year by 2020 (EPRI report 1016397). These predictions indicate that the rate of spent catalyst will be significant and activities associated with spent catalyst will become increasingly burdensome. As a result, cost-effective and environmentally friendly approaches are being sought to handle spent catalyst or extend its life through simple on-site processing.

### Objectives

- To document the chemical and physical characteristics of spent catalyst
- To survey industry experience on current practices of catalyst disposal and recycling
- To evaluate options for catalyst recycling and reuse
- To investigate the technical aspects of on-site catalyst washing and gather industry experience on catalyst washing

### Approach

The project team developed a database of spent catalyst characteristics that could be used in the evaluation of disposal and recycling options and surveyed current disposal and recycling practices, including on-site catalyst washing experience. The team evaluated options for recycling or reusing spent catalyst and made a trial study of a method to recover metals from the ceramic portion of the catalyst. Finally they summarized industry experience with catalyst washing and discussed the technical aspects of catalyst washing.

### Results

The database of 274 spent catalyst samples compiled in the project contains information on both surface and bulk chemical analyses of principal trace constituents, common catalyst poisons, and ash-related components. It summarizes the remaining DeNO<sub>x</sub> activity and SO<sub>2</sub> conversion ability of the spent catalysts and includes information on the effects of fuel and other flue gas conditions on catalyst deactivation.

The survey of current industry practices with spent catalyst showed that nearly half of the catalyst was washed on site. Of the remaining portion, about 25% was disposed of 'as-is' in landfills while the remaining 75% of the material underwent bulk metal recovery. Ash fouling was a major factor in catalyst deactivation. The weighted average age of the catalyst at the time of removal from the reactor was 13,000 hours. Average disposal costs were approximately \$100-125/m<sup>3</sup>.

A process developed during this project for recovering metals from the ceramic portion of spent catalysts achieved recoveries of 75% of both vanadium and tungsten. Overall, the results of the work on recycling undertaken in this project are very encouraging from both a technical and economic standpoint.

Catalyst washing shows very good results. Spent catalyst can recover from 85 to 95% of its functionality at costs of roughly \$300/m<sup>3</sup>.

### **EPRI Perspective**

The project identified several areas where additional work would be of great benefit to the industry. In particular, further development of the process for metal recovery from the ceramic portion of spent catalyst is recommended given that the initial results are very promising and the potential benefits to the industry are significant. Further investigation into the utilization of spent SCR catalyst in cement, concrete, and flowable fill products as a recycle route for spent catalyst also appears to be warranted. Finally, since the technical level of various on-site washing processes varies greatly, it would be beneficial to provide firm guidance to utilities undertaking on-site catalyst washing and to establish basic best-practice washing procedures and standards, including water quality recommendations, cleaning solution characteristics, agitation guidelines, drying procedures, and catalyst performance testing.

### **Keywords**

Selective Catalytic Reduction (SCR)  
Recycling  
Spent  
Disposal  
Reconditioning  
Catalyst management

## ABSTRACT

Selective Catalytic Reduction (SCR) technology has been widely implemented within the fossil-fuel utility industry. The rate of spent SCR catalyst generation is increasing in proportion to the implementation of the technology and the aging of the SCR fleet. Current projections estimate that nearly 30,000 tons per year of spent catalyst will be generated by 2020. This report addresses several topics associated with spent SCR catalyst, including catalyst disposal, recycling, and on-site washing, and was prepared to help guide EPRI members in the decision-making process for the handling of spent catalyst. Report topics include: 1) spent catalyst characteristics and flue gas effects on catalyst deactivation; 2) industry experience related to catalyst disposal, recycle, and on-site washing; 3) options for catalyst recycle and re-use; and 4) on-site washing technologies and industry experience.

A database of spent catalyst characteristics was developed to aid in the evaluation of disposal and recycle options. This database of 274 spent catalyst samples contains information on both surface and bulk chemical analyses of principal trace constituents, common catalyst poisons, and ash-related components. DeNO<sub>x</sub> activity and SO<sub>2</sub> conversion data are also reported, and the effects of fuel and other flue gas conditions on catalyst deactivation are discussed.

The report documents industry experience based on a survey that assessed current practices related to spent catalyst disposal, recycle, and on-site washing. The survey covered the disposition of roughly 6,600 m<sup>3</sup> of catalyst. Nearly half of this volume was washed on-site. Of the remaining portion, about 25% was disposed of 'as-is,' with no treatment prior to disposal in landfills. The remaining roughly 75% of the material underwent bulk metal recovery, and the module metal was either sold as scrap or reused. Ash fouling was noted as a major factor in catalyst deactivation. The weighted average age of the catalyst at the time of removal from the reactor was 13,000 hours. Average disposal costs were approximately \$100-125/m<sup>3</sup>.

The report evaluates the options available for the recycling and reuse of spent catalyst. The recovery of bulk metals is discussed, along with options for the reuse of the ceramic portion of the catalyst, mainly in cement, concrete, and flowable fill applications. The bulk of the effort was devoted to the recovery of metals from the ceramic portion of the catalyst, and a recycle process was developed on a trial basis. The process achieved recoveries of approximately 75% for both vanadium and tungsten, with improvement expected with process refinement. The data to date indicate that the economics of the process are highly dependent on the available levels of vanadium, tungsten, and molybdenum. Overall, the results of this recycle work are very encouraging from both a technical and economic standpoint.

The report describes the technical aspects of on-site catalyst washing and discusses industry experience with it. Overall, catalyst washing shows very good results achieving a recovery of 85-95% of original function at costs of roughly \$300/m<sup>3</sup>.



## **ACKNOWLEDGEMENTS**

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# CONTENTS

<b>1 INTRODUCTION .....</b>	<b>1-1</b>
Project Purpose and Background .....	1-1
SCR Catalyst Composition.....	1-2
Plate Type Catalyst .....	1-3
Honeycomb Type Catalyst .....	1-4
Corrugated Type Catalyst .....	1-4
<b>2 SPENT CATALYST CHARACTERISTICS.....</b>	<b>2-1</b>
Background.....	2-1
Spent Catalyst Composition and Activity .....	2-1
Primary Catalyst Constituents.....	2-3
Catalyst Ash Constituents and Poisons .....	2-3
Catalyst deNOx and SO <sub>2</sub> Conversion Activity .....	2-5
Effects of Fuel, Flue Gas Composition, and Fouling on Catalyst Performance .....	2-6
Effect of Fuel on Catalyst Deactivation .....	2-7
Effect of Fouling on Catalyst Deactivation .....	2-10
Fuel and Flue Gas Effects on SO <sub>2</sub> Conversion and Mercury Oxidation .....	2-12
<b>3 INDUSTRY EXPERIENCE .....</b>	<b>3-1</b>
Background.....	3-1
Results .....	3-1
Disposal and Recycle Activities .....	3-2
Catalyst Type, Fuels, and Deactivation Mechanisms .....	3-3
<b>4 SPENT CATALYST RECYCLE AND RE-USE .....</b>	<b>4-1</b>
Introduction and Other Industry Experience.....	4-1
Recovery of Bulk Metals .....	4-3
Use of Ceramic Material without Chemical Processing .....	4-4
Cement/Concrete/Flowable Fill Manufacture .....	4-5
Use of Ceramic Material with Chemical Processing .....	4-7
Metals Recovery Feasibility Study .....	4-7
Re-Use of Catalyst in Alternate Applications or for New Catalyst Manufacture.....	4-13
<b>5 ON-SITE CATALYST WASHING.....</b>	<b>5-1</b>
Background.....	5-1
General Washing Process .....	5-2
Industry Experience .....	5-4
Catalyst Washing – Case #1 .....	5-4
Catalyst Washing - Case #2.....	5-11
Catalyst Washing – Case #3.....	5-15

Overall Washing Experience Summary and Recommendations .....	5-22
Highlights of Industry Experience.....	5-22
Recommendations for Washing.....	5-23
<b>6 RECOMMENDED FUTURE WORK .....</b>	<b>6-1</b>
<b>A DETAILED SURVEY RESULTS.....</b>	<b>A-1</b>
Cases A to G.....	A-2
Cases H to N.....	A-7
<b>B HISTOGRAMS OF CATALYST CONSTITUENTS.....</b>	<b>B-1</b>



## LIST OF FIGURES

Figure 1-1 Predicted Yearly Spent Catalyst Generation Rate .....	1-2
Figure 1-2 Typical Vanadium-Titanium SCR Catalysts, Various Types Before and After Reconditioning .....	1-3
Figure 2-1 Histogram of deNO <sub>x</sub> K-value (m/hr) .....	2-5
Figure 2-2 Histogram of SO <sub>2</sub> Conversion.....	2-6
Figure 2-3 Diagram of Calcium Sulfate Masking Mechanism .....	2-8
Figure 2-4 Effect of Calcium and Arsenic on Catalyst Life (General Effect) .....	2-10
Figure 4-1 Basic Catalyst Life Cycle .....	4-2
Figure 4-2 Dowex 21K XLT Loading Curve .....	4-10
Figure 4-3 Dowex 21K XLT Elution Curve .....	4-10
Figure 5-1 General Process Flow Diagram for Catalyst Washing.....	5-3
Figure 5-2 Effect of Various Washing Solutions on Open Channels.....	5-5
Figure 5-3 Effect of Washing Duration on Open Channels.....	5-5
Figure 5-4 Photograph of Catalyst Vacuuming to Remove Bulk Fouling Material .....	5-6
Figure 5-5 Catalyst Module Oscillation Processing .....	5-7
Figure 5-6 Aeration of Catalyst Module .....	5-8
Figure 5-7 Cleaned Catalyst Ready for Reactor Re-Installation .....	5-9
Figure 5-8 Effectiveness of Washing on Relative Activity.....	5-10
Figure 5-9 Effect of Washing on Arsenic Concentrations .....	5-11
Figure 5-10 Activity Test Results .....	5-14
Figure 5-11 Comparison of Wash Solutions on Relative Activity (Example).....	5-16
Figure 5-12 Vacuuming of Individual Catalyst Element .....	5-17
Figure 5-13 Catalyst Elements Being Soaked with Air Agitation .....	5-18
Figure 5-14 Detail of Air Agitation .....	5-18
Figure 5-15 Elements Before Washing, During Spray-Down, Soaking, and After Washing ...	5-19
Figure 5-16 Catalyst Elements Being Washed/Rinsed .....	5-19
Figure 5-17 Catalyst Elements Being Washed/Rinsed with Removed Ash Visible.....	5-20
Figure 5-18 Effectiveness of Washing on Relative Catalyst Activity – PRB Case .....	5-21
Figure 5-19 Washing Effect on Chemical Constituents – PRB Case.....	5-21
Figure 5-20 Washing Effect on Relative Activity – Eastern Bituminous Case.....	5-22



## LIST OF TABLES

Table 1-1 Typical SCR Catalyst Composition – Ceramic Portion .....	1-4
Table 2-1 XRF Composition Data for 274 Catalyst Samples.....	2-2
Table 2-2 Typical Ash Size Distributions Based on Coal Type.....	2-12
Table 3-1 Summary of Survey Data.....	3-2
Table 4-1 General Recycle and Re-Use Options for SCR Catalyst.....	4-3
Table 4-2 Approximate Metal/Catalyst Weight Fractions for General Catalyst Types .....	4-4
Table 4-3 Metal Recovery Results for SCR Catalyst Sample.....	4-9
Table 4-4 Catalyst Recycle – Assumptions for Economic Analysis .....	4-11
Table 4-5 Catalyst Recycle – Economic Analysis.....	4-12
Table 5-1 Boiler and SCR Background Information.....	5-12
Table 5-2 Catalyst Evaluation Tests .....	5-13



# 1

## INTRODUCTION

### Project Purpose and Background

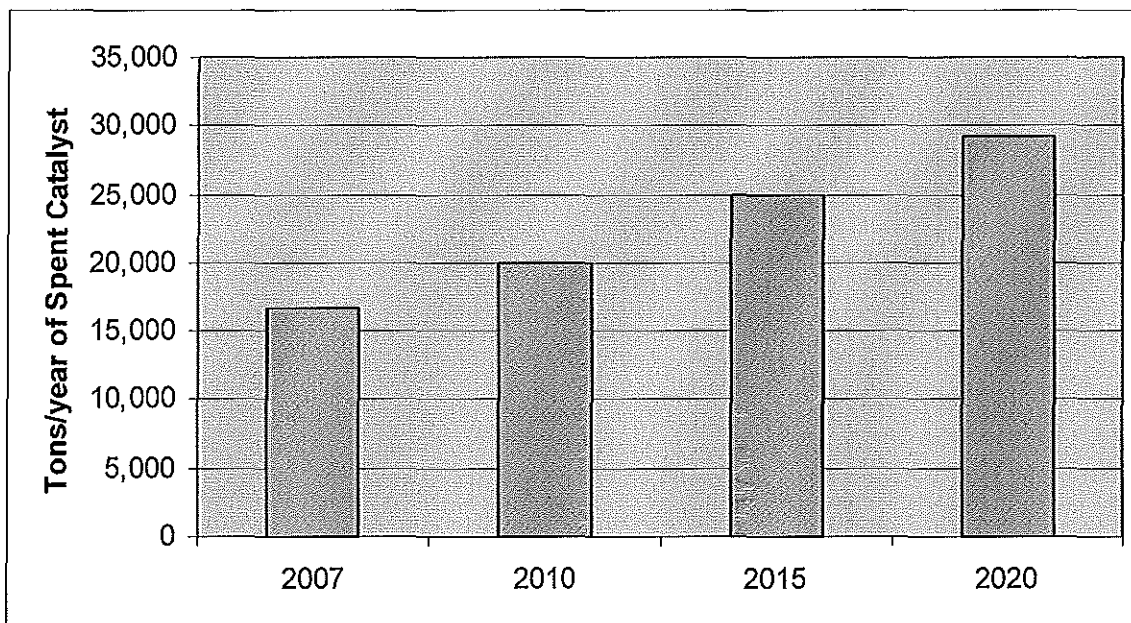
As Selective Catalytic Reduction (SCR) technology becomes more widespread, and as the catalyst fleet as a whole ages, options for disposal and recycle of spent catalyst are becoming more important. In addition, techniques to prolong catalyst life associated with on-site washing and cleaning are becoming increasingly important. Over the past several years, EPRI has addressed various issues related to catalyst regeneration, rejuvenation, cleaning, recycle, and disposal. The subject report continues these efforts and focuses on the following four primary subject areas, which have been identified as issues of particular importance.

- **Spent Catalyst Characteristics** – A database of spent catalyst characteristics was developed, which could be used to aid in the evaluation of disposal and recycle options, as well as give a nominal spent catalyst characteristics to which a specific batch of spent catalyst could be compared. Activity and SO<sub>2</sub> conversion data were also acquired.
- **Industry Experience** – An industry survey was conducted of current disposal and/or recycle practices, which included primary deactivation mechanisms associated with the spent catalyst. On-site catalyst washing experience was also included in this survey.
- **Spent Catalyst Recycle and Re-use** – This subject area included an evaluation of options for the recycle and/or re-use of spent catalyst. Included is a trial study of catalyst recycle. Also included is the identification of other potential recycle/re-use options that are, or may become, available to the industry.
- **On-Site Catalyst Washing** – The technical aspects of on-site washing were investigated. Detailed industry experience was acquired based on information associated with several washing projects. A future task (not reportable at this time) will include a case study of on-site washing, where a full-scale washing process will be followed step-by-step to document the process in detail.

Previous work estimated that the spent catalyst generation rate would approach 20,000 tons/year by 2010, and 30,000 tons/year by 2020, as shown in Figure 1-1.<sup>1</sup> These predictions indicate that the rate of spent catalyst will be significant and activities associated with spent catalyst will become increasingly burdensome. As a result, cost-effective and environmentally friendly approaches are being sought to handle spent catalyst or extend its life through simple on-site processing.

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<sup>1</sup> See EPRI Report 1016397, "SCR Catalyst Disposal, Recycle, and On-Site Washing/Rejuvenation Options, March 2008.

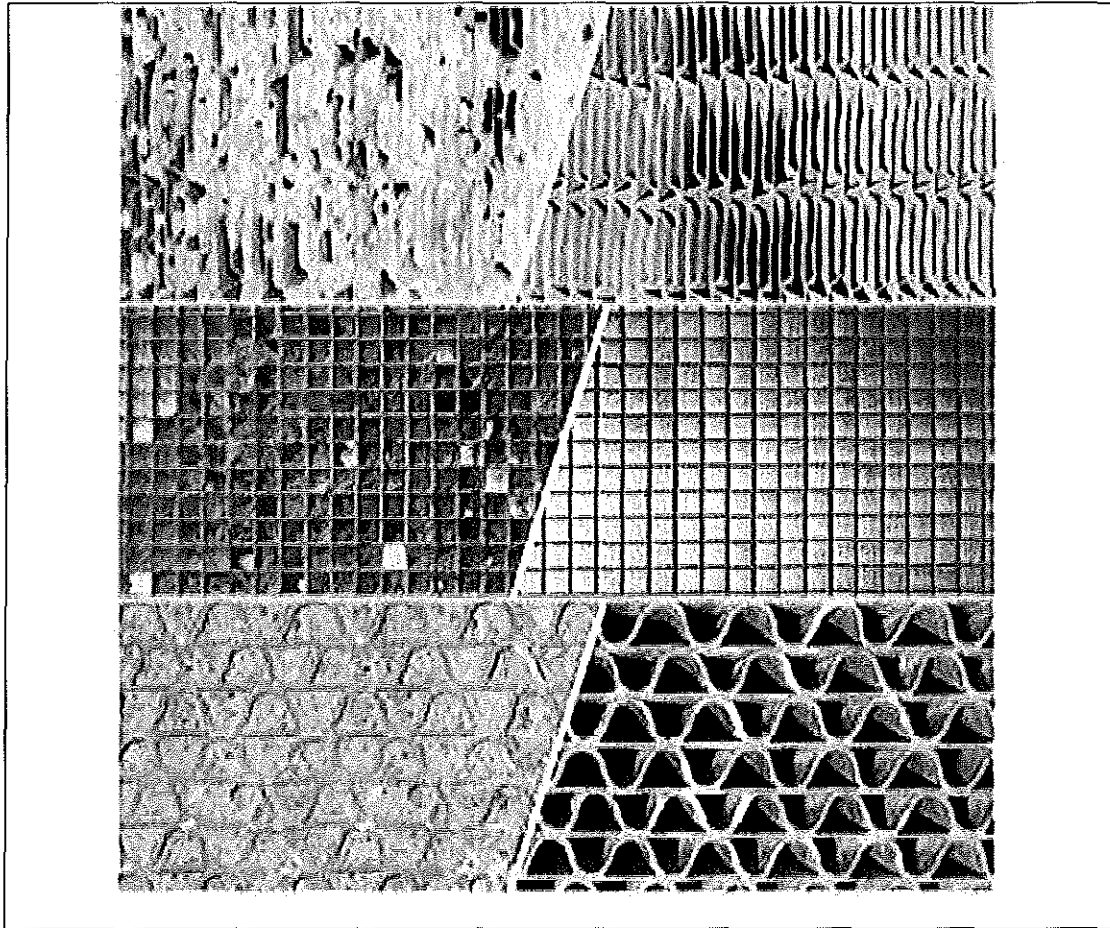


**Figure 1-1**  
**Predicted Yearly Spent Catalyst Generation Rate**

### **SCR Catalyst Composition**

SCR catalysts are composed principally of a ceramic-like material which provides the necessary physical pore structure and chemical foundation for the active catalytic components of the catalysts. The ceramic-like material is made up primarily of titania (titanium dioxide,  $TiO_2$ ), but will include a number of additional components. In the catalyst industry, this ceramic-like material is typically called the catalyst “support.” This term should not be confused, however, with gross support materials, such as metal screens and basket materials, which provide a global physical support structure to the catalyst. In addition to the screens, physical support materials such as glass fibers may be utilized.

Catalytically active components of the catalyst include vanadium, molybdenum, tungsten, and various other constituents based on the particular formulation and catalyst manufacturer. SCR catalyst is found in three general types: plate, honeycomb, and hybrid/corrugated. These terms refer to the general, physical configuration of the catalyst geometry. Even though the catalysts appear to be quite different from a geometric standpoint, the underlying ceramic portions of the catalysts are quite similar from a bulk composition standpoint. Figure 1-2 shows fouled and clean versions of these three catalyst types from top to bottom, respectively.



**Figure 1-2**  
**Typical Vanadium-Titanium SCR Catalysts, Various Types<sup>2</sup> Before and After Reconditioning**

### ***Plate Type Catalyst***

For plate-type catalysts, the ceramic material is placed on a metal screen. This screen provides structural support to the plate, while the ceramic material provides the needed catalyst porosity and active catalytic component support. Due to the presence of the screen support, plate catalysts have a much larger proportion of recyclable bulk metals per unit catalyst mass than do honeycomb or corrugated catalysts. Plate catalysts will typically be heavier on a unit volume basis than their honeycomb and corrugated counterparts. Plate catalysts are manufactured by pressing the malleable, pre-fired, and clay-like ceramic onto the support screen, with subsequent firing/calcining processes used to harden the ceramic. Plate catalysts are characterized by having individual plates of catalyst which are assembled into catalyst modules. The plates are held together by compression and can be removed individually. Glass-like fibers may be added to the ceramic portion of the catalyst and used to help add strength and improve adherence to the screen materials.

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<sup>2</sup> Reproduced with permission; VGB, 29. Meeting of WP "PGMON" on 30.9. / 1.10. 2004 in Arnhem.

### ***Honeycomb Type Catalyst***

Most honeycomb catalysts are considered homogeneous, since the ceramic material provides the gross physical support for the catalyst in addition to providing the needed pore structure and active catalytically component support. For most honeycomb catalysts, the chemical composition of the freshly manufactured material will be constant throughout the ceramic material.

Honeycomb catalysts are typically manufactured by extruding the clay-like ceramic through a die, forming the honeycomb structure. The “logs” or “elements” of catalyst are then heat-treated, similar to other catalysts.

### ***Corrugated Type Catalyst***

Hybrid/corrugated catalysts are formed by using a mat-like fibrous material as physical support. The ceramic material is then applied on and within this mat. Monolithic blocks having a corrugated configuration are then produced, with their physical strength being provided by a combination of both the ceramic material and the fibrous support material. These catalysts are sometimes termed “hybrid” since they have characteristics of both plate and honeycomb catalysts. Unlike true plate catalysts, however, the final bulk catalyst is not composed of individual separate plates, since in the manufacturing process a monolith is formed. This resulting monolithic structure, as well as the absence of a clearly distinguishable support screen, has similarities to honeycomb catalysts, but results in a physical appearance similar to plate.

Table 1-1 shows the typical ranges of components in the ceramic portion of SCR catalysts. As discussed, depending on the catalyst type, additional gross support material may also be present, such as metals from plate catalyst screen support. Each catalyst supplier will have a number of catalyst formulations designed for different flue gas applications, especially as related to the SO<sub>2</sub> conversion requirements for the particular application. Thus, the components present in any particular spent catalyst will vary greatly depending on application, catalyst manufacturer, and specific formulation. Spent catalyst will also contain a large number of trace constituents derived from contact with the flue gas, especially in coal-fired applications. In particular, low levels of arsenic, potassium, sodium, and other metals may be present on spent catalyst associated with coal firing. Fly ash particles will also adhere to the catalyst, adding to the large number of trace components present.

**Table 1-1  
Typical SCR Catalyst Composition – Ceramic Portion**

Component (as oxide)	Concentration (wt%)
Titanium	50-100%
Vanadium	0-10%
Tungsten	0-10%
Molybdenum	0-5%
Silica	0-20%
Other Components	0-20%



# 2

## SPENT CATALYST CHARACTERISTICS

### Background

The primary goal of this effort was to establish a database of spent catalyst characteristics using industry information which included such parameters as catalyst composition, activity, mechanism of deactivation, effects of fuel, and effects of fouling. In particular, one of the objectives was to provide guidance as to the general characteristics of spent catalyst, primarily in terms of chemical composition to aid in the determination of appropriate disposal routes and potential methods of recycle. For recycle where metal recovery was contemplated, the available metals and their concentrations were of course of primary interest. Also of interest were the effects of parameters such as fuel, flue gas and operating conditions, large-particle-ash (LPA) fouling, and ash blinding/masking on catalyst deactivation. The effort was based upon the evaluation of industry data and experience; thus, no fundamental/theoretical analyses were undertaken.

Domestic SCR catalyst users were canvassed in an attempt to gather data related to spent catalyst. As one would expect, much of this data is considered proprietary, and little, if any, specific data was made available which linked catalyst type and chemical composition to activity, SO<sub>2</sub> conversion, catalyst age, etc. This severely limited the ability to directly correlate parameters such as fuel, catalyst composition, and operating conditions to the rate of catalyst deactivation or other performance parameters, such as SO<sub>2</sub> conversion or mercury oxidation.

### Spent Catalyst Composition and Activity

Table 2-1 shows X-ray fluorescence (XRF) data (both bulk and surface) for 274 catalyst samples, representing a range of catalyst manufacturers, catalyst formulations, fuels, boiler types, ages, etc. These data were acquired from a firm experienced in catalyst testing; thus, a relatively large database was available. Due to the proprietary nature of the chemical composition related to particular catalyst formulations, the data are necessarily presented in a summary or composite form. However, even on a composite basis, these data provide valuable information about catalyst composition for the SCR fleet as a whole and offer a basis to which any particular catalyst can be compared. One important parameter to consider is catalyst age. The data are based upon multiple samples of various ages, not necessarily samples acquired at the end of catalyst life. Thus, a significantly aged catalyst may, on average, have levels of poisons higher than those indicated by the average values in the table. Consequently, one might reasonably expect that the maximum arsenic level indicated, for example, would correspond to an aged/spent catalyst that was applied to a high-arsenic fuel. The age parameter applies primarily to catalyst poisons, since most primary catalyst components, as present at the time of manufacturing, will not change significantly with catalyst exposure. Also note that for niobium (Nb), thallium (Tl), and barium (as BaO), the sample set is considerably smaller than 274 samples – these analytes were not always quantified. (Appendix B contains histograms of the various analytes, presenting the number of samples within the data set having a specific analyte concentration.)

**Table 2-1**  
**XRF Composition Data for 274<sup>3</sup> Catalyst Samples**

Species	Sample Type	Average (%)	Standard Deviation	Maximum (%)	Minimum (%)
Titanium (TiO <sub>2</sub> )	Bulk	73.9	7.75	87.3	54.1
	Surface	64.8	13.3	89.8	24.9
Vanadium (V <sub>2</sub> O <sub>5</sub> )	Bulk	0.87	0.52	3.5	0.1
	Surface	0.85	0.55	4.3	0.22
Tungsten (WO <sub>3</sub> )	Bulk	5.26	5.39	21.0	0
	Surface	4.85	4.82	20.7	0
Molybdenum (MoO <sub>3</sub> )	Bulk	2.02	1.90	7.5	0.03
	Surface	1.61	1.52	7.3	0.03
Iron (Fe <sub>2</sub> O <sub>3</sub> )	Bulk	0.65	0.74	6.0	0.03
	Surface	1.20	1.04	5.9	0.17
Silicon (SiO <sub>2</sub> )	Bulk	10.39	4.36	26	3.7
	Surface	13.86	7.47	49.4	1.85
Aluminum (Al <sub>2</sub> O <sub>3</sub> )	Bulk	2.63	1.75	9.1	0.6
	Surface	4.02	2.53	13.2	0.42
Calcium (CaO)	Bulk	1.22	0.81	3.4	0.03
	Surface	1.76	1.3	11.5	0.03
Magnesium (MgO)	Bulk	0.28	0.17	0.72	0.03
	Surface	0.34	0.26	1.76	0.03
Barium (BaO)	Bulk	0.36	0.92	3.6	0
	Surface	0.76	1.17	3.2	0
Sodium (Na <sub>2</sub> O)	Bulk	0.19	0.22	1.64	0.01
	Surface	0.30	0.26	1.69	0.03
Potassium (K <sub>2</sub> O)	Bulk	0.17	0.16	1.57	0.03
	Surface	0.26	0.26	2.0	0.03
Sulfur (SO <sub>2</sub> )	Bulk	1.66	0.85	5.6	0.11
	Surface	5.2	4.3	32.8	0.11
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	Bulk	0.12	0.17	1.36	0.03
	Surface	0.39	0.49	2.7	0.03
Niobium (Nb)	Bulk	0.11	0.05	0.21	0.02
	Surface	0.10	0.10	0.95	0.04
Thallium (Tl)	Bulk	0.06	0.04	0.25	0.03
	Surface (not available)	NA	NA	NA	NA
Arsenic (As)	Bulk	7,186	6,384	26,470	10
	Surface	8,352	6,217	31,085	50

<sup>3</sup> Except for Nb, Tl, and Ba.

### ***Primary Catalyst Constituents***

Certain analytes are considered primary catalyst constituents. These include the oxides of titanium, vanadium, tungsten, and molybdenum. These constituents are associated with the manufacture of the catalyst itself and are not expected to change appreciably with time. In addition, given the homogeneous nature of most SCR catalysts currently being manufactured, these constituents are expected to have relatively constant concentrations when comparing bulk and surface levels, at least when only catalyst material is considered in the analysis. For most catalyst poisons and ash constituents, surface levels will be higher than bulk levels. Thus, primary catalyst constituents may actually exhibit a slightly lower surface concentration due to the presence of ash and poisons, in effect “diluting” the concentrations of the primary catalyst constituents due to the presence of the extraneous material. In fact, all four of the primary catalyst constituents do demonstrate a slight lowering of their concentrations between the bulk and surface due to this “dilution” effect.

As expected, the catalysts are composed primarily of titania, at an average of roughly 75% by weight. The vast majority of samples contained between 75 and 85% titanium, although roughly 70 samples contained lower levels of titanium ranging from 56% to 75%, based upon the histogram data.

Vanadium levels ranged rather broadly, from virtually no vanadium to levels as high 3.5% in the bulk. This large range in vanadium is consistent with the variations in catalyst formulation utilized for different applications. For instance, very high operating temperature catalyst designs requiring low SO<sub>2</sub> conversion may utilize very little vanadium to accomplish the deNO<sub>x</sub> reaction, relying on the activity of titania and other catalytic promoters to accomplish the task. In lower temperature applications or where SO<sub>2</sub> conversion is not an issue (such as with PRB coals, very low sulfur coals, and natural gas), vanadium content may be quite high to maximize deNO<sub>x</sub> with a minimum of catalyst volume. In any event, the vast majority of samples had vanadium levels ranging from 0.5 to 1.5%, with 1% vanadium being the rough average.

Both molybdenum and tungsten ranged widely in their concentration levels. This is consistent with common catalyst manufacture where these components are utilized on a discretionary basis according to the specific catalyst formulation and intended application. Tungsten levels could range as high as 20%, but roughly one third of the samples had virtually no tungsten. Molybdenum ranged as high as 7.5%, but with nearly half of the samples containing virtually no molybdenum.

In terms of concerns over catalyst disposal or the potential for recovery of metals, these data show that individual catalyst formulations will vary widely in their constituents and may need to be evaluated on a case-by-case basis. As will be discussed in more detail in subsequent report sections, the levels of vanadium and tungsten, in particular, may dictate to a large degree the profitability of recycle for metal recovery from the ceramic portion of the catalyst. Thus, these data are extremely valuable in scoping potential recycle processes.

### ***Catalyst Ash Constituents and Poisons***

The majority of analytes found on exposed catalyst samples (in coal fired applications) are due to materials deposited from the flue gas. These include constituents associated with the fly ash, including fly ash particles themselves. Obviously, primary ash constituents such as iron, silicon, aluminum, and calcium (in the case of PRB fuels) will collect to some degree on the catalyst.

These constituents will typically exhibit surface enrichment, since they are associated with fly ash particles that typically do not migrate very far into the catalyst material bulk. In fact, all of the analytes shown in Table 2-1 with the exception of the primary catalyst constituents (excluding Niobium and Thallium, for which the data is limited) exhibited this surface enrichment.

#### Ash Constituents

Silicon and aluminum had the highest concentrations of all analytes (excluding the primary catalyst constituents) and demonstrated considerable surface enrichment. (Note that some catalyst formulations may include silica; thus, the levels noted may not be due solely to ash deposition.) Iron and calcium, two additional ash components, were also strongly represented. The concentrations of all of these primary ash constituents ranged broadly for the catalyst samples, likely the result of the various catalyst sample ages, reactor locations, applications, and levels of fouling. Of special interest was iron, due to its ability to affect SO<sub>2</sub> conversion especially associated with catalyst rejuvenation/regeneration and washing activities, and due to its potential adverse impact on some recycling processes that include metal recovery from the ceramic portion of the catalyst. Iron levels ranged widely, up to 6%, but most samples had iron levels of 1.25% or less. The wide range of iron levels highlights the need to evaluate catalyst iron content on a case-by-case basis if catalyst processing is being considered for which iron will have an impact.

#### Catalyst Poisons

The common catalyst poisons of sodium, potassium, magnesium, and phosphorus all showed surface enrichment, as would be expected. The levels of these constituents ranged widely, again partially as a result of the various catalyst sample ages, applications, reactor locations, and formulations. Calcium, a primary ash constituent for PRB applications and also considered a poison in these applications, ranged to above 10% on the surface, presumably as a result of application to PRB fuel. The average calcium level was quite low, however, at about 1%, reflecting the high proportion of the samples being applied to eastern bituminous fuels. Calcium level may impact catalyst recycle operations, and thus the broad range in calcium level is a consideration for recycling processes, again demonstrating the need for evaluation on a case-by-case basis.

Arsenic, of course, is of primary interest as a catalyst poison. Arsenic poisoning is the primary mode of catalyst deactivation for eastern bituminous coal applications. The data on the full suite of samples show a broad range in arsenic levels, as would be expected. The histogram shows a roughly linear decline in the number of samples having very low arsenic to samples having very high arsenic levels (up to about 26,000 ppm arsenic). The high proportion of samples having low arsenic reflects the large number of samples that were included in the analysis which had relatively short exposure times. These low-arsenic samples would not be consistent with catalyst that had been exposed to flue gas for a long period of time. This fact must be considered when evaluating the data. The range of arsenic levels is notable, with the upper limit of 26,000 ppm arsenic being extremely high. Surface enrichment of arsenic is present, but not to an extreme degree, likely denoting the ability of the gaseous arsenic to diffuse into the entire catalyst matrix.

**Catalyst deNOx and SO<sub>2</sub> Conversion Activity**

K-values for both deNOx and SO<sub>2</sub> conversion were reported for the sample set as a whole (note that data for the full 274 samples was not available). The data in Figure 2-1 shows the range of deNOx K-values. The average K-value is roughly 35 m/hr, but the range is quite broad. This range reflects not only the intrinsic K-value range of the catalyst as manufactured, but also various sample ages and test conditions. It is important to note that evaluating specific catalyst offerings on a K-value basis alone is not a valid evaluation basis, since catalyst volume, pitch, geometric configuration, etc., all play fundamental roles in the catalyst performance. The data, as presented, simply offer a basis for examining the range of K-values that may be encountered. These data can be used to determine where a specific catalyst sample's K-value lies within the range of industry experience. In practical applications, the relative K-value (K/K<sub>0</sub>) is of most interest, since it reveals the decline in activity for the application of interest, and thus the decrease in deNOx potential of the catalyst compared to that of new can be determined.

Figure 2-2 shows the histogram for SO<sub>2</sub> conversion. These data indicate that the vast majority of samples had an SO<sub>2</sub> conversion of less than 1%, as would be expected for coal fired applications. Approximately one third of the samples had SO<sub>2</sub> conversions of 0.4% or less, denoting the industry trend toward lowered SO<sub>2</sub> conversions. A few samples showed unusually high SO<sub>2</sub> conversions – these are likely catalyst applied to low-sulfur fuel oils or gas, where SO<sub>2</sub> conversion is not an issue.

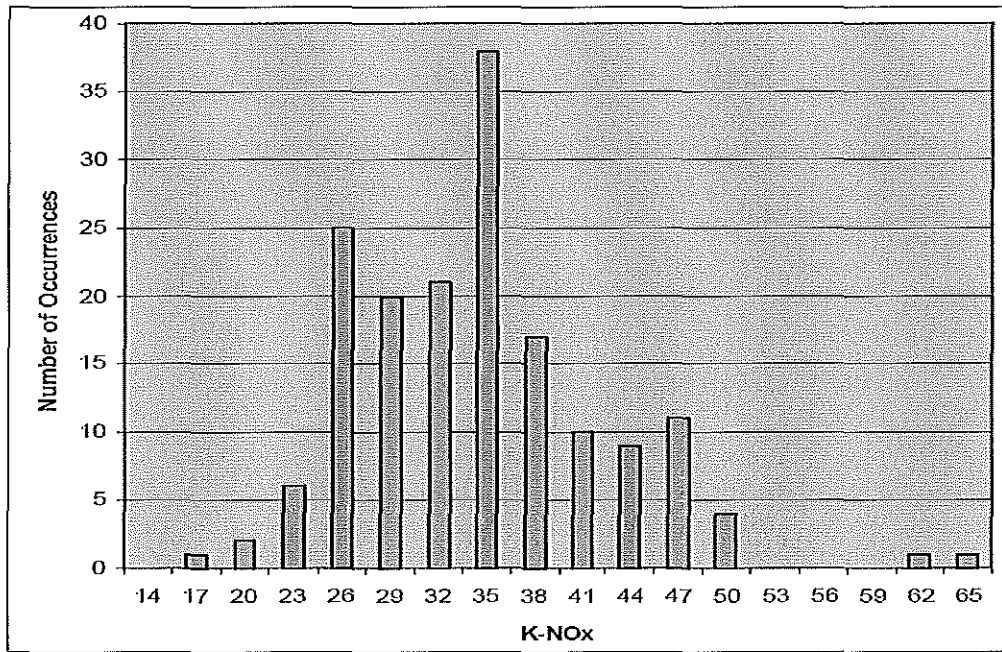


Figure 2-1  
 Histogram of deNOx K-value (m/hr)

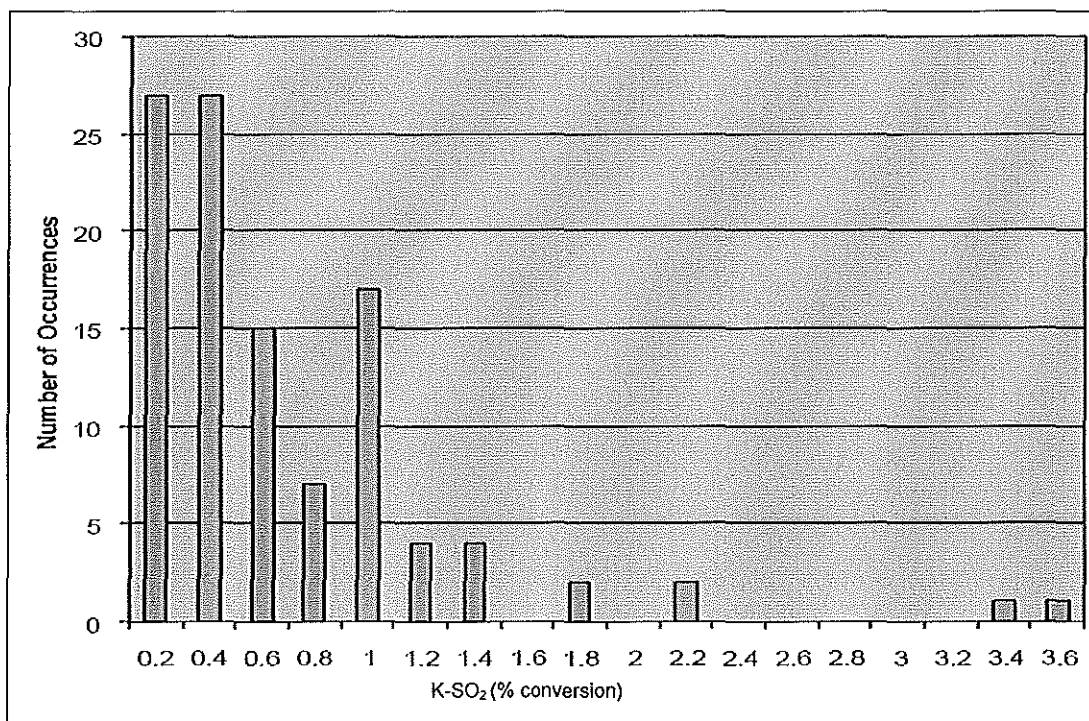


Figure 2-2  
Histogram of SO<sub>2</sub> Conversion

### Effects of Fuel, Flue Gas Composition, and Fouling on Catalyst Performance

The theoretical effect of various parameters such as fuel, flue gas composition, ash composition, fouling rate, etc. on SCR catalyst deactivation and general performance are well known and have been the subject of numerous studies over the years. The current work hoped to add some insight into the current industry experience with respect to these parameters based upon directly reported industry experience. However, given the proprietary nature of specific catalyst parameters such as chemical composition, activity, etc., very little information directly relating various parameters to catalyst specifics was available. It did become clear from the analysis that the rate of deactivation of any particular catalyst, as well as problems associated with ash fouling, etc., was strongly a function of the fuel and operating parameters of the SCR and was less a function of the catalyst composition and type. In any event, the following discussions relate some of the general industry knowledge from years of experience with respect to the effect of fuel on catalyst deactivation, and deactivation effects related to LPA and routine ash fouling, masking, and blinding. In addition, some brief discussions are given with respect to fuel and flue gas parameters on SO<sub>2</sub> conversion and mercury oxidation.

### ***Effect of Fuel on Catalyst Deactivation***

The fuel associated with any particular SCR application will govern, to a large degree, the design of the catalyst. The fuel will of course determine the primary deactivation mechanism, the ash loading and characteristics, the flue gas composition, and, to a significant degree, the potential for fouling. As such, fuel is probably the most important global design parameter that must be addressed with any specific catalyst design.

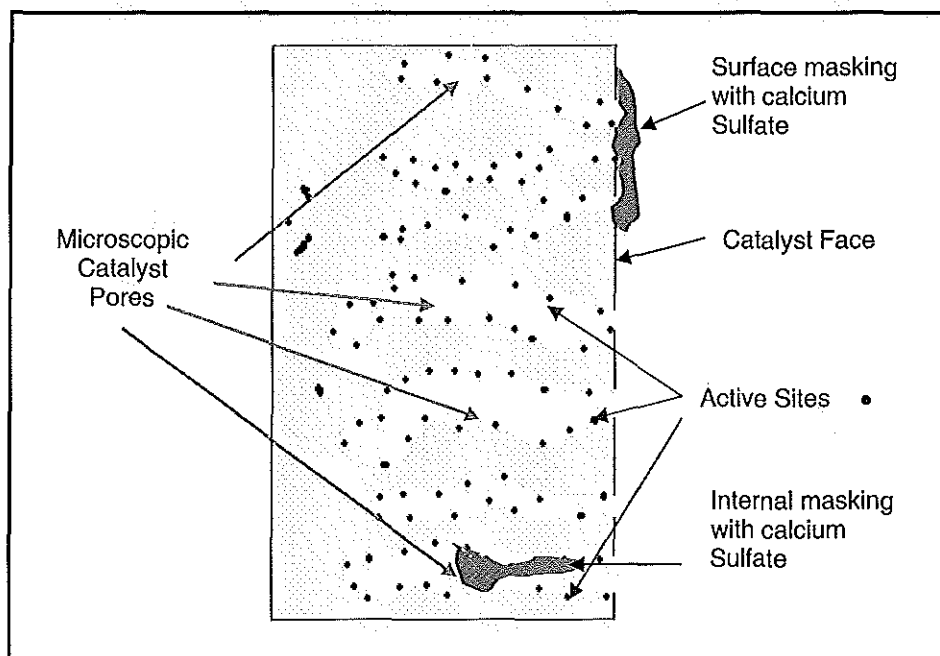
Typically, fuels are divided into two primary classes, based upon their primary mode of deactivation of SCR catalysts. These are: 1) PRB coals, where deactivation is primarily a function of calcium sulfate masking/poisoning and 2) eastern bituminous coals, where deactivation is typically a function of arsenic poisoning. In both cases, physical fouling issues may override issues associated with classic calcium sulfate or arsenic poisoning. These physical issues include phenomenon such as LPA fouling, which can produce severe loss of functionality of the catalyst very quickly. Thus, for any particular installation, the deactivation mechanisms that actually govern will be highly site specific.

#### **PRB Coal – Calcium Sulfate Poisoning**

In the absence of severe fouling or operational issues, the long-term deactivation mechanism for catalysts applied to PRB-fired units is by calcium sulfate poisoning, sometime termed “PRB poisoning” or simply “calcium poisoning.” The deactivation mechanism follows a pathway where CaO attaches to the catalyst surface. The attachment is dependent on the availability and the adhesion level of the CaO. Once attached, SO<sub>3</sub> in the flue gas reacts with the CaO forming calcium sulfate (CaSO<sub>4</sub>). The continued formation of calcium sulfate results in the blocking of catalyst surfaces and pores, which limits the ability of NO<sub>x</sub> and NH<sub>3</sub> to diffuse into the catalyst and reach active sites, thereby limiting NO<sub>x</sub> reduction.<sup>4</sup> The term often used for calcium sulfate deposits that prevent diffusion is “masking.” However, it should be noted that this masking not only may occur as a macro-fouling layer, but also as a microscopically thin masking layer deep within the pores of the catalyst. A schematic of this deactivation mechanism is shown below in Figure 2-3.

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<sup>4</sup> Calcium sulfate also expands upon formation which exacerbates the blockage of pores.



**Figure 2-3**  
**Diagram of Calcium Sulfate Masking Mechanism**

Many factors affect the rate of deactivation associated with PRB coals, and an evaluation of the expected deactivation rate for any specific installation must include such parameters as: specific catalyst formulation, physical design, and volume; fuel characteristics; unit operational parameters; sootblowing; etc. Generally though, the higher the CaO level in the ash/fuel, the higher the rate of deactivation. (This holds only for units firing a high proportion of PRB coal – as discussed below, increased CaO levels, up to a point, may be beneficial with eastern bituminous fuels.)

#### Eastern Bituminous Fuels – Arsenic Poisoning

In the absence of severe fouling or operational issues, arsenic poisoning is the primary deactivation mechanism for eastern bituminous fuels. Gaseous arsenic in the flue gas chemically attacks active vanadium sites, forming a bond which renders the active vanadium site incapable of promoting the deNO<sub>x</sub> reaction. This deactivation mechanism differs from calcium sulfate masking because there is no aspect of diffusion limitation; the active sites are simply rendered inactive. Thus, a catalyst that has become poisoned with arsenic may exhibit physical characteristics very close to that of the fresh, but have a severely limited ability to promote the deNO<sub>x</sub> reaction. The absolute level of arsenic in the fuel is often considered the controlling factor in the rate of arsenic poisoning (for a given catalyst and installation design), but a more applicable parameter is the arsenic-calcium ratio. This is due to the fact that CaO acts as a scavenger for free arsenic. This scavenging effect by calcium helps to reduce the reactive arsenic in the flue gas that would otherwise be available to poison the catalyst. Thus, eastern bituminous



fuels with both high arsenic and calcium will not deactivate catalyst as fast as fuel counterparts which have high arsenic, but lower levels of calcium. The addition of limestone, to artificially boost fuel calcium levels, has of course been used to mitigate arsenic poisoning in fuels having excessive levels of arsenic. This scheme capitalizes on the ability of the CaO to scavenge the arsenic.

Figure 2-4 shows the effect of calcium and arsenic in the fuel on catalyst life (deactivation rate). The plot has regimes that cover cases consistent with eastern bituminous fuels, where arsenic poisoning governs deactivation, as well as cases consistent with PRB fuels, where calcium sulfate masking governs deactivation. (It is cautioned that this is an example plot for demonstration purposes as to the general effects of calcium and arsenic. The exact nature of similar plots for a particular installation will be site specific.) Looking at the lower half of the plot, one can see that for a given level of arsenic, higher calcium levels improve the life of the catalyst. This occurs roughly up to a value of 0.6% CaO in the fuel and reflects the scavenging effect of CaO on arsenic. As CaO in the fuel continues to increase (in roughly the upper half of the plot), catalyst life begins to decline due to the predominance of deactivation associated with calcium sulfate masking, consistent with a PRB fuel. The plot clearly demonstrates that there is an optimal ratio of calcium to arsenic, which results in maximum catalyst life. Interestingly, if the calcium level is held constant, increases in arsenic always lead to diminished catalyst life, irrespective of which regime the catalyst is actually operating in. This is somewhat academic though, as most PRB coals have such a high level of calcium as to make the contribution from arsenic poisoning almost negligible. The expected life of any catalyst installation is strongly case specific, and thus life evaluations must be made with specific installation parameters in mind, including catalyst formulation and operating conditions. Catalyst suppliers are adept at determining these expected life calculations and are the best source for accurately determining the effects that a particular fuel will have on catalyst life.

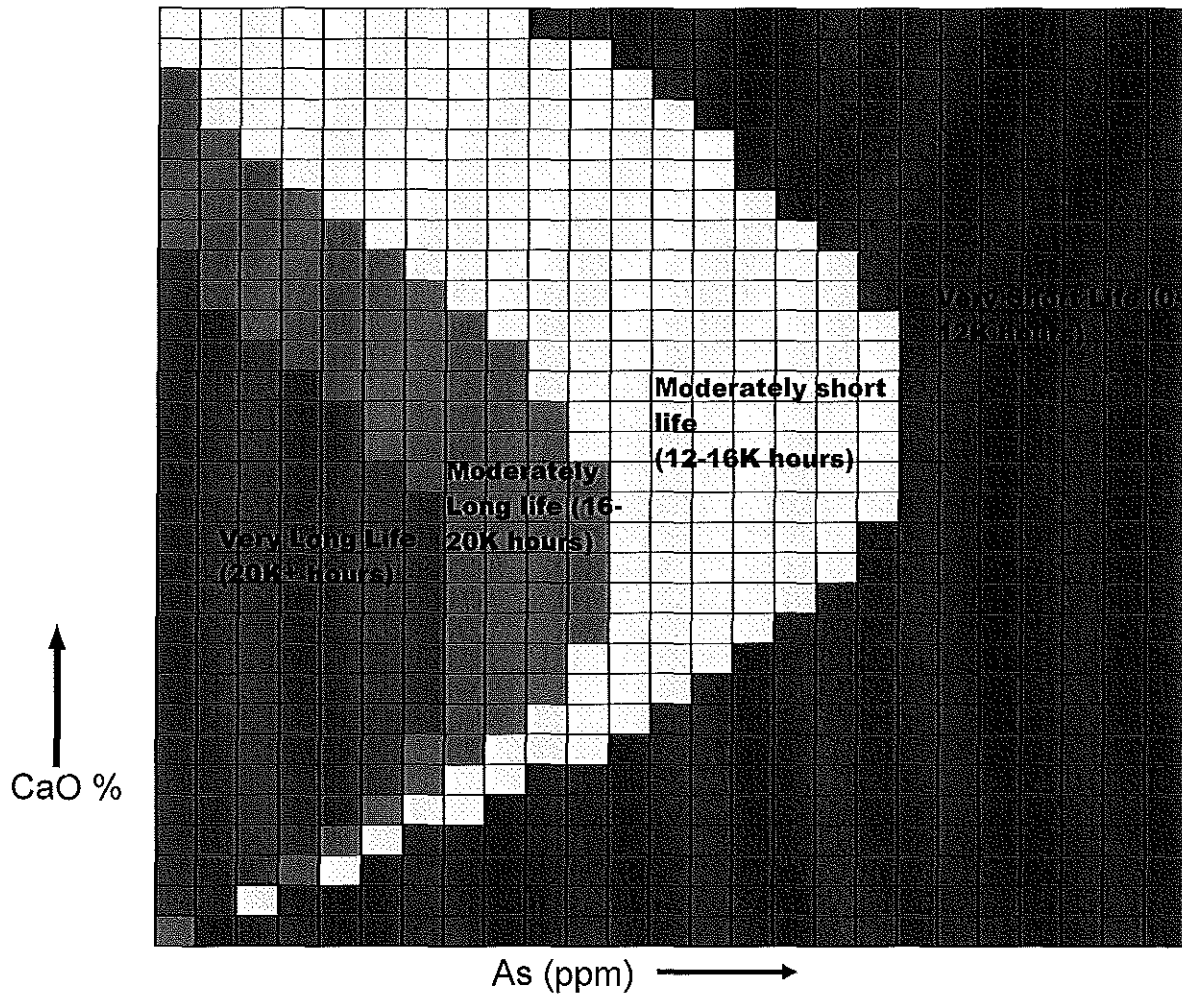


Figure 2-4  
 Effect of Calcium and Arsenic on Catalyst Life (General Effect)

**Effect of Fouling on Catalyst Deactivation**

Based upon the current industry experience, especially as related to information obtained directly from EPRI members in association with this report, catalyst fouling appears to be a major source of catalyst deactivation, second only to the classic deactivation mechanisms of arsenic poisoning and calcium sulfate masking. As will be discussed in more detail in subsequent sections, fouling was a controlling or major factor in catalyst deactivation associated with many of the catalyst disposal and washing activities reported. No data were available linking specific catalyst designs, formulations, etc. to fouling behavior, so the following discussions are necessarily general in nature.

**Large-Particle-Ash Fouling**

Fouling with LPA produced some cases where loss of catalyst functionality was catastrophic and rapid. These severe cases required immediate attention to allow the catalyst to operate, at least on a marginal basis, until more permanent corrections could be made. LPA fouling occurs due to

very large “popcorn” or agglomerated ash particles being formed in the boiler or upstream of the SCR. These particles are much too large to pass through the catalyst channels, and as a result, completely mask the face of the catalyst, or the protective screens above the catalyst beds. This results in severe loss of flow through areas of the catalysts. Areas that are clear will see much higher velocities, and erosion may be a problem over extended operational periods. LPA fouling may be temporarily corrected to some degree by mechanically cleaning the catalyst in-situ with dry cleaning methods. Ex-situ washing (as reported in subsequent sections) provides a more thorough treatment of the catalyst, often restoring the catalyst to near new condition. However, these activities do not address the fundamental problem of LPA reaching the reactor. To address LPA reaching the reactor, most utilities have opted for a “screen” installation which can capture and remove LPA from the flue gas path prior to it reaching the reactor. Various schemes have been utilized to continuously remove the LPA that is captured, with varying degrees of success. Overall within the industry, LPA fouling has been a major, but manageable, issue. Additional information on LPA mitigation methods can be found in EPRI Report 1014253.

All catalyst types and physical configurations have the potential to be adversely affected by LPA. Very large ash particles would be unable to pass through the catalyst channels, no matter their size, and thus LPA is an issue with catalysts across the board. For any given installation with LPA ash problems, different catalysts may behave somewhat differently, especially as a function of their catalyst pitch. However, these differences are highly case specific and no global guidelines can be given as to particular catalyst designs and physical configurations that would offer firm guidance. Intuitively, one might conclude that larger pitched catalysts are necessarily better than smaller pitched counterparts for a given installation with LPA problems. This may not be the case, however, since as pitch increases there may be more opportunity for LPA to enter the channels causing internal fouling than smaller pitched catalysts where the LPA simply blocks the channel face. In this case, the smaller pitched catalyst may respond to simple dry cleaning, while the larger pitched catalyst would require more aggressive treatment to clear the internal blockages. This is only one hypothetical example, but it demonstrates the potential complexity of the issue. One lesson learned from the industry experience is that if the LPA problem is detected prior to reactor, ductwork, and catalyst design, the issue can be addressed up-front, limiting operational difficulties and costs.

### Long-Term Ash Fouling

Even in the absence of LPA, ash build-up is of course a primary concern in the design of catalysts, reactors, ductwork, and sootblowing/sonic horn systems. This has been a long-standing design issue for SCR technology in general, and the industry has made great headway in mitigating adverse effects due to general ash fouling. Even so, it is not uncommon for particular areas of catalyst associated with specific SCR installations to have fouling issues. As in the case of LPA, these general fouling issues are highly case specific and no general guidance can be given over the standard industry practices currently in place.

The behavior of the fly ash, primarily as a function of fuel type, will play a major role in the tendency for fouling to occur. Ash characteristics differ in particular between PRB and eastern bituminous coal, with PRB ash often being thought of as “sticky” due to its propensity to bridge, etc. Table 2-2 shows some of the differences between PRB and eastern bituminous coal ash in terms of ash particle size. Note the high proportion of particles under 10 microns in the PRB ash. As a result of the differences in eastern bituminous and PRB coal ash, the catalyst and sootblowing/sonic horn systems will be designed for the expected fuel type.

**Table 2-2**  
**Typical Ash Size Distributions Based on Coal Type<sup>5</sup>**

Ash Size	Typical PRB Coal	Typical Blt. Coal
> 38 $\mu\text{m}$	15%	10%
10 – 38 $\mu\text{m}$	30%	80%
< 10 $\mu\text{m}$	55%	10%

The actual mechanism of deactivation of fouling with fly ash differs between individual installations, but in all cases the mechanism is considered physical. Macro-fouling may be experienced, which is typified by large “mounds” of ash being present, especially at the front side or entrance to the first catalyst layer. The ash may simply bridge over the catalyst face, thereby blocking the channels only at their entrances, or the ash may deposit deep within the channels making cleaning much more difficult.

Random blockage of channels may occur due to bridging of individual channels with fine fly ash, or due to larger particles becoming wedged in the channel, resulting in the channel filling with ash above the obstruction. This type of fouling may be localized at the catalyst surface, or it may occur deep within the channels. Thus the ease with which it can be removed will vary greatly. This type of random blockage may be due to higher than expected ash loadings due to the firing of high-ash fuels outside of the original design criteria.

In most cases, increasing catalyst pitch will help with long-term fouling, especially random fouling of channels. However, in cases where severe maldistributions are causing entire sections of the catalyst face to foul, increased catalyst pitch does not necessarily solve the issue.

***Fuel and Flue Gas Effects on SO<sub>2</sub> Conversion and Mercury Oxidation***

The SO<sub>2</sub> conversion for any particular catalyst formulation is strongly a function of the detailed design of the catalyst, including chemical composition. Catalyst manufacturers must strike a balance between adequate deNOx activity and acceptable SO<sub>2</sub> conversion. Without the restrictions on SO<sub>2</sub> conversion, catalysts can be designed with extremely high deNOx activity. Parameters affecting the relationship of SO<sub>2</sub> conversion and deNOx activity include commonly recognized parameters such as vanadium content. However, the actual behavior of the catalyst with respect to SO<sub>2</sub> conversion and deNOx is an extremely complicated blend of effects including, porosity, surface area, pore size distribution, catalyst tortuosity, dispersion of active catalytic species, and catalyst geometry. Thus, attempting to correlate any one catalyst parameter to SO<sub>2</sub> conversion will not typically produce meaningful results.

Unlike deNOx activity, where significant deactivation occurs over time, SO<sub>2</sub> conversion is relatively constant over any particular catalyst’s life. In addition, the percentage of SO<sub>2</sub> converted for any particular catalyst installation is relatively constant with respect to flue gas conditions. Oxygen and moisture levels can theoretically affect SO<sub>2</sub> conversion, but this rarely occurs under

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<sup>5</sup> Based upon data given in: Morita, I., and Franklin, H., “Recent Experience with Selective Catalytic Reduction on Powder River Basin Coal and Petroleum Coke,” paper, Electric Power 2002 Conference, March 19-21, 2002, Hitachi America, Ltd., Tarrytown, NY.

normal boiler operating conditions to any significant degree. One notable exception to the previous statements is the case of fuels having high vanadium content. Some fuels, such as residual fuel oil or petroleum coke, may have appreciable vanadium levels. The resulting vanadium in the flue gas can deposit on the catalyst over time, resulting in an increase in SO<sub>2</sub> conversion. Interestingly, a commensurate improvement in deNO<sub>x</sub> capability is not typically noted. SO<sub>2</sub> conversion varies almost directly proportional to reactor flow rate. With respect to temperature, however, SO<sub>2</sub> conversion is quite sensitive and under some temperature ranges, SO<sub>2</sub> conversion may behave with exponential increases to increasing temperature. Catalyst manufacturers will typically provide the end-user with performance curves showing the relationship of SO<sub>2</sub> conversion to parameters such as flow rate and temperature. These curves are specific to the installation.

SO<sub>2</sub> conversion is known to be potentially affected by catalyst washing. This is due primarily to the relationship of iron and SO<sub>2</sub> conversion. Iron oxide is a relatively strong catalytic species for SO<sub>2</sub> conversion. During washing, iron species may be solubilized and mobilized. If the washing is not conducted properly, the solubilized iron will remain on the internal surface area of the catalyst and may be available for the conversion of SO<sub>2</sub>. As a result, an improperly washed catalyst may exhibit much higher SO<sub>2</sub> conversion characteristics than its fresh counterpart. It is also important to note that washed catalyst may exhibit a quite large variability from sample to sample with respect to SO<sub>2</sub> conversion as a result of the washing procedures or the exposure conditions of particular sections of catalyst. Consequently, it is cautioned that for washed catalyst, a number of samples should be utilized to establish the SO<sub>2</sub> oxidation characteristics of the final product.

Mercury oxidation, as opposed to SO<sub>2</sub> conversion, is strongly affected by flue gas and fuel characteristics. The exact catalyst mechanism of mercury oxidation is not well understood, and catalyst manufacturers are in the process of elucidating the relationship of mercury oxidation, deNO<sub>x</sub> activity, and SO<sub>2</sub> conversion, with respect to catalyst design. Increasing temperature has an adverse affect on mercury oxidation, but the exact nature of this effect will be site specific. Similarly, increased flow rate reduces mercury oxidation, again with the exact effects being site specific. Perhaps the most important parameters affecting mercury oxidation are flue gas halogens. Chlorine and bromine, in particular, are known to strongly affect mercury oxidation. These effects are the subject of numerous completed and on-going studies. The exact relationship between halogen level and mercury oxidation is site specific, but in general high halogen levels improve mercury oxidation dramatically (up to some maximum level), compared with conditions of very low halogen level. This has important implications for low halogen fuels, such as PRB coal. An ongoing EPRI project is evaluating the effects of flue gas parameters on different catalyst types. The project is being conducted at Gulf Power's Mercury Research Center, a 5 MW equivalent pilot plant. Results can be found in EPRI report 1018072.



# 3

## INDUSTRY EXPERIENCE

### Background

One of the goals of the subject effort was to perform an evaluation of the current industry common practices and experience associated with the disposal, recycle, and on-site washing of spent SCR catalysts. This effort utilized an industry survey to establish the experience base and included such items as catalyst volume, application, mode of deactivation, catalyst age, etc. (Note that a subsequent report section reports the on-site washing procedures, effectiveness, etc., in detail.) The survey data were acquired by posing a questionnaire to EPRI participating utility members. Also included in this survey were requests for catalyst chemical data, although very little information was obtained directly related to catalyst composition due to proprietary concerns.

### Results

Table 3-1 shows a summary of the survey results. Activities associated with roughly 6,600 m<sup>3</sup> of catalyst are reported.<sup>6</sup> The table shows the proportion of catalyst subject to certain parameters, but it should be cautioned that the proportions do not necessarily apply to the entire domestic experience base as a whole – they are necessarily limited to the survey respondents, and thus may be skewed. In particular, roughly half of the reported experience in terms of catalyst volume was associated with on-site washing, which is likely a non-representatively large proportion of the industry experience as a whole. In other words, the data are thought to be heavily skewed toward on-site washing, and one should not assume that on-site washing is as widespread as the data might indicate. In any event, the data do offer a good assessment of the activities that are common in the industry associated with spent catalysts. The survey details on a project by project basis are shown in Appendix A.

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<sup>6</sup> Not included in the reported data is 1,053 m<sup>3</sup> of catalyst which was sold to an off-site regeneration firm for subsequent regeneration and sale. Also note that the survey was limited to disposal, recycle, and on-site washing activities – off-site regeneration was not included in this study, although some experience was reported.

**Table 3-1  
Summary of Survey Data**

Parameter	Volume of Catalyst (m <sup>3</sup> )	Proportion
Total volume of catalyst in survey	6,601	
Volume washed on-site	3,090	47%
Catalyst Disposed (with or without bulk metal recovery)	3,511	53%
Disposed catalyst that disposed of modules as-is	794	23%
Disposed catalyst that included bulk metal recovery	2,717	77%
Disposed catalyst that included crushing of ceramic portion when bulk metals were recovered	2717	100%
Volume of disposed catalyst utilizing on-site landfill	989	28%
Volume of disposed catalyst utilizing off-site landfill	2,522	72%
Catalyst that deactivated due to ash fouling (controlling or major reason for action)	6,081	92%
PRB application	4,043	61%
Eastern Bituminous application	1,943	29%
Blended fuel application	6,15	9%
Honeycomb type catalyst	5,974	91%
Plate type catalyst	627	9%
Catalyst Reaching (or near) design life	4,629	70%
Weighted average age of catalyst at time of removal	13,000 hrs	
Disposal cost	\$100-125 per m <sup>3</sup>	
On-Site washing cost	\$300 per m <sup>3</sup>	
On-Site washing effectiveness	85-95% functionality recovery	

***Disposal and Recycle Activities***

The data in Table 3-1 show the disposal and recycle activities associated with 3,090 m<sup>3</sup> of catalyst. Of this volume, 23% was disposed of as-is, i.e., the entire modules were disposed of basically as removed from the reactor. Thus, the proportion of catalyst for which bulk metal recovery (module superstructure) occurred was very high, at 77%. This is an encouraging rate of recycle of the bulk metal and tends to highlight the ease with which this type of recycle can be performed. Of the catalyst for which the bulk metals were recovered, all was crushed in some manner to reduce volume. This pre-disposal activity minimizes landfill volume.

The survey responses noted that some of the module steel was re-used as-is for new catalyst modules. The proportion of catalyst module steel re-used in this manner was quite small, although the exact amount was not determined. The majority of the recovered bulk module steel was simply sold for scrap.

The survey data indicate that roughly half the catalyst disposed (28%) utilized an on-site landfill, while the remainder used off-site facilities. None of the catalyst included in the survey was deemed to be a hazardous waste, although in one instance, a hazardous waste landfill was utilized for convenience purposes only.



In no case was the ceramic portion of the catalyst recycled. The recycle of this ceramic portion is one of the focuses of the current study and will be discussed in detail in a subsequent report section. The survey results highlight the limited availability of recycling scenarios for the ceramic portion and demonstrate that in all cases, some sort of disposal was included regardless of what recycle activities took place.

### ***Catalyst Type, Fuels, and Deactivation Mechanisms***

Honeycomb type catalyst was overwhelmingly represented in the survey (91%). It is unclear if this proportion is a skewed value, as a result of a non-representative survey reporting, or if this accurately reflects the industry experience as a whole. Although, given the wide-spread application of both plate and honeycomb materials, one might intuitively conclude plate catalyst disposal is poorly represented in the survey. Given the very small proportion of plate catalyst included in the survey, the reader is cautioned against applying the reported experience conclusively to plate catalysts, since decisions on operations such as bulk metal recovery, catalyst crushing, etc., may have different drivers.

PRB coal applications constituted roughly two-thirds (61%) of the experience base in terms of catalyst volume, while blended fuel (PRB and eastern bituminous) accounted for 9%. The remainder (29%) was associated with the firing of eastern bituminous fuel. These data include a relatively large portion of catalyst which was washed on site (47%) – roughly 75% of this washed catalyst was associated with PRB applications. If the washed catalyst is excluded from the calculation, leaving only catalyst that was disposed/recycled, then only 50% of the disposed/recycled catalyst was applied to PRB applications, 18% to blended fuel, and 33% to eastern bituminous fuel.

Severe fouling, often with LPA was a primary deactivation mechanism. In fact, fouling was either the primary reason, or a major contributor, to the decision to take action in almost all of the catalyst (92%) included in the survey. This reflects the bout of difficulties the industry has experienced with LPA ash. It is unclear if this deactivation proportion is representative of the industry as whole, but in any event, catalyst being retired due to catastrophic fouling is expected to decrease as problematic units are identified and mitigation steps are taken. Fouling was listed as a primary or major contributor to deactivation in all of the PRB and blended coal units. For the eastern bituminous units, fouling was a controlling or major contributor in 80% of the catalyst included in the survey, by volume.

A catalyst life guarantee of 16,000 hours appears to be quite standard with 80% of the catalyst in the survey being designed for this life. The remaining 20% of catalyst had a life design of 24,000 hours. Interestingly, although fouling was a major factor in almost all cases, two thirds of the catalyst (70%) nearly reached, reached, or exceeded its design life. The average age of the catalyst at the time of removal from the reactor was roughly 13,000 hours (weighted for volume).

Overall, the survey produced some interesting findings – some of the more important points are highlighted below.

- Roughly one half of catalyst in survey was washed on site. The proportion of catalyst washed on-site for the industry as a whole is not expected to be that high, thus the data is thought to be skewed in this respect. All washed catalyst was honeycomb type deactivated on PRB fuel.

- The majority of catalyst (77%) disposed of included bulk metal recovery to utilize the basket material as scrap or re-use the baskets for new catalyst.
- All catalyst in the survey was crushed if bulk metal was recovered.
- Fouling was a controlling or major factor in catalyst deactivation in the vast majority of cases, although much of the catalyst reached its intended life.
- Slightly over half of the catalyst was applied to PRB coals (61%), with the remaining applied to eastern bituminous or blended coals.
- The vast majority of catalyst was honeycomb.
- No actual recycling of ceramic portion of catalyst occurred.
- All catalyst was disposed of as non-hazardous waste, although a hazardous waste landfill was utilized for convenience in some cases.
- Both off-site and on-site landfills were utilized, although most catalyst was sent off-site.

# 4

## SPENT CATALYST RECYCLE AND RE-USE

### Introduction and Other Industry Experience

As more and more spent SCR catalyst is being generated, the industry has become increasingly interested in options for recycling or re-using this spent catalyst. As discussed previously, the spent catalyst generation rate is expected to reach 20,000 tons/year by 2010, and options which minimize both the economic and environmental impact of this spent catalyst are of interest. In terms of total volume/mass of material, spent SCR catalyst is quite small compared to other industry waste streams such as bottom ash, fly ash, and scrubber waste. In addition, the SCR catalyst waste stream is small compared to other U.S. industrial catalyst wastes, such as refining and petrochemical catalyst wastes, which are orders of magnitude larger. For instance, worldwide basic crude oil refining catalyst waste production is on the order of 2 million tons/year.<sup>7</sup> These comparative volume figures are not presented to minimize the impact related to spent SCR catalyst, but are offered as a perspective to other industries dealing with similar issues. In some ways, the approaches and lessons learned by other industries generating catalyst wastes can be used as a guideline/roadmap for the development of methods to handle spent SCR catalyst.

In general, all spent solid catalyst, including SCR catalysts, have the same potential life cycle as shown in Figure 4-1. Disposal would typically occur only after options for regeneration/rejuvenation, washing, re-use as-is in another application, or recycle have been examined. One unusual aspect of SCR catalyst is the presence of a bulk metal superstructure associated with the catalyst modules. The presence of this bulk metal differs from most other industrial catalysts, and adds to the number of recycle options, since bulk metal may be recovered or re-used leaving the catalyst itself as a separate waste stream. This produces the possibility of “hybrid” recycle/disposal scenario where a portion of the bulk catalyst is recycled (the module superstructure), and a portion is disposed.

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<sup>7</sup> Based upon data from Gavrilă, Lucan, “Recovery of Metals from Spent Catalysts, 1. Catalyst Management and Spent Catalysts Sources,” MOCM 12 – Volume 1 – Romanian Sciences Academy, 2006.

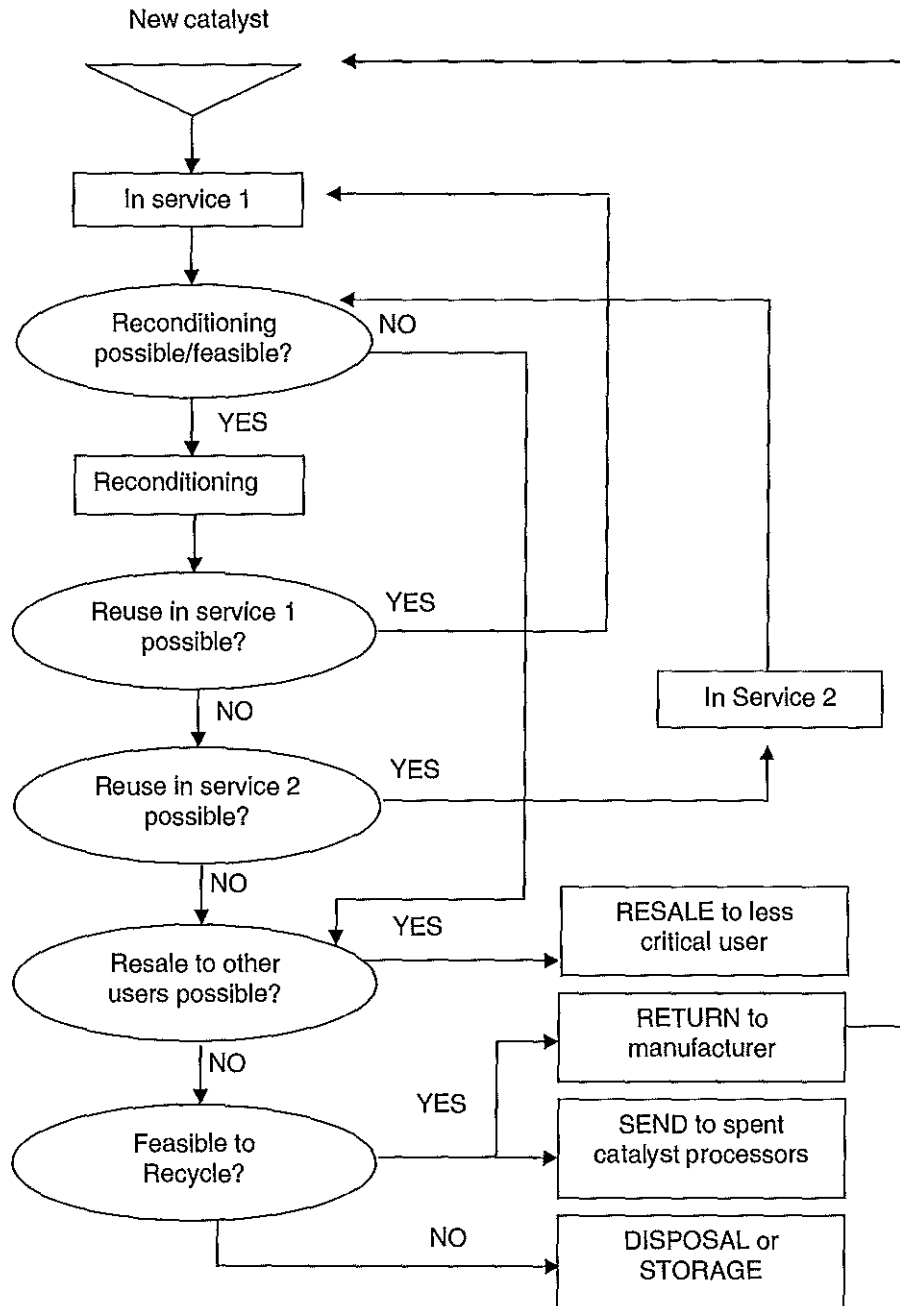


Figure 4-1  
Basic Catalyst Life Cycle

Catalyst recycle and re-use can be divided into a number of general categories. The assignment of various activities to either “recycle” or “re-use” is somewhat arbitrary, but as presented in Table 4-1, the assignments as they are utilized in this report. The options are discussed in detail, below.

**Table 4-1  
General Recycle and Re-Use Options for SCR Catalyst**

Recycle	Re-Use
Recovery of Bulk Metals for Scrap	Re-use of module frame for new catalyst
Use of ceramic portion without chemical processing (concrete/cement applications, aggregate, filler, etc.)	Use of catalyst as-is in another SCR application
Use of ceramic portion with chemical processing – metals recovery	Raw material feed for new catalyst manufacture

### Recovery of Bulk Metals

As evidenced by the survey results, the recovery of bulk metal module materials is common. The survey showed that the metal module superstructure was recovered in some manner in 77% of the catalyst volume, prior to the disposal of the ceramic portion of the catalysts. The primary utilization routes of the recovered bulk metal were either the sale of the metal for scrap, or the re-use of the module superstructure for new catalysts. Note that the modules could be used by the utility that originally produced the spent catalyst, or the catalyst supplier could re-use the modules for an alternate customer. It appears that re-use of the modules for catalyst being prepared for the utility originally producing the spent catalyst is most common. Also note that due to differences in module construction and specifications, modules would typically be re-used only by the manufacturer that produced them originally.

The recovery of bulk metals is a straightforward process and can typically be performed by general site contractors with no special expertise. In the case of recovery for scrap, the module superstructure can be cut as needed to facilitate disassembly. If the module is being preserved for replacement with fresh catalyst, more care is necessary to insure that the module integrity is maintained. In any event, the processing can be done in a lay-down area or warehouse, and modules are often placed on their side for easy access. Routine catalyst handling procedures are typically followed when handling the spent catalyst.

In the case of plate catalyst, two additional sources of bulk metal are available: 1) the sheet-metal sheathing associated with the individual catalyst “blocks” and 2) the metallic support screens associated with the individual catalyst plates. Plate-type catalyst modules are typically constructed using two layers of catalyst blocks. The blocks are usually roughly 18” square, with a typical catalyst module (1m x 2m) containing two layers of these blocks, with 8 blocks per layer for a total of 16 blocks. The catalyst blocks are sheathed in carbon steel, which can be sold as scrap, if recovered. In most cases the individual catalyst plates within the catalyst blocks are constructed with stainless steel mesh/screen to which the actual ceramic catalyst material is

adhered. This stainless screen may have significant value, but the process to recover this metal is more complicated than is the recovery of the bulk module steel. To recover the screen steel, the entire catalyst module must be disassembled, such that individual catalyst plates can be obtained. These plates are then crushed or ground to physically remove the adhered ceramic. The recovered screens can then be sold as stainless scrap, and the catalyst itself would be handled similar to crushed honeycomb logs, since they now contain only ceramic catalyst material. Note that this screen recovery process results in significant volume reduction compared to the original catalyst block, and may therefore produce advantages in transport and disposal. Note that if the catalyst screens are being recovered, then the catalyst block sheathing material will be recovered as a matter of course. In cases where screen recovery is not contemplated, the dismantling of the blocks simply to recover the sheathing metal would not likely be cost effective.

Table 4-2 gives a general guideline as to the ceramic and metal proportions of various catalyst types. This table should only be used as a general guideline – the catalyst manufacturer can give more definitive information for specific catalyst formulations and module designs.

**Table 4-2**  
**Approximate Metal/Catalyst Weight Fractions for General Catalyst Types**

Catalyst Type	Bulk Module Metal Fraction	Screen/Support Metal Fraction (SST)	Ceramic Catalyst Fraction
Honeycomb	40%	NA	60%
Hybrid/Corrugated	10%	NA	90%
Plate	33%	33%	33%

### **Use of Ceramic Material without Chemical Processing**

One option for avoiding catalyst disposal is to utilize the ceramic portion of the catalyst in some commercial or industrial application. This option assumes that bulk metals have been removed from the catalyst, leaving only ceramic material. The utilization of the catalyst in this option focuses on the use of the ceramic virtually as-is, with no chemical processing, etc., although physical preparation such as grinding/pulverizing may be required, depending on the utilizing process.

Spent alumina-based catalyst (common to petroleum refining and chemical production) has been utilized in a number of applications with variable success. These potential uses include cement replacement/augmentation, flowable fill and concrete applications, use as synthetic aggregate, glass-ceramic material production, and refractory production. All of these utilization options are potentially applicable to titania-based SCR catalysts. However, two overriding factors must be considered. First, the actual value of the spent catalyst material utilized in these ways is not great. In other words, the raw materials typically used for these applications are not high-value materials, thus the offsetting costs associated with utilizing spent catalyst to replace these materials is not particularly large. Second, there is a perceived liability, both technically and environmentally, in using spent SCR catalyst for the proposed applications without fully understanding the behavior and impacts that the spent catalyst will have on the utilizing process and the final products. Specifically, spent SCR catalyst contains many contaminants associated with the flue gas, arsenic in particular. These components may have adverse impacts on the

production and utilization of products. Given the relatively small economic incentive for using spent catalyst, the liabilities and process implementation costs may outweigh the benefits.

Notwithstanding the above concerns, it appears that the utilization of spent SCR catalyst in cement/concrete applications (including flowable fill) is relatively attractive. There are several reasons for this. First, if no high-temperature processing is involved which could potentially volatilize contaminants, this would minimize adverse impacts. For instance, if the spent catalyst was used as a direct replacement for cement or aggregate, then most common concrete applications would not involve temperatures that would promote volatilization. This of course precludes the use of the catalyst during the initial manufacture of the cement itself, where raw materials are fired at high temperatures in cement kilns. In addition, refractory applications would also be precluded, since by nature they are high-temperature applications and may involve high-temperature processing; thus volatilization of contaminants may occur. Second, the utility industry has a close working relationship, and in many cases intimate knowledge of, the cement/concrete industry, since fly ash is already utilized in a similar manner. This familiarity between the two industries would likely be helpful in implementing a cement/concrete utilization route for the spent SCR catalyst. And third, the cement/concrete industry is a large and widespread industry. Thus the volume of spent SCR catalyst produced is minute compared to the volume of cement/concrete that is produced in the U.S. Even if spent catalyst was included in a small portion of the cement/concrete produced, even at a very small proportion to the other materials used, this utilization route could easily handle the expected volumes of spent SCR catalyst generated by the utility industry. For these reasons, cement/concrete manufacture is the focus of subsequent discussions associated with the utilization of spent SCR catalysts when chemical processing is not contemplated.

### ***Cement/Concrete/Flowable Fill Manufacture***

A number of research projects have investigated the use of spent industrial catalyst in conjunction with the manufacture of cement/concrete. These studies have focused on industrial catalysts which are comprised primarily of alumina and silica, and thus the results may not be directly applicable to titania SCR catalyst. In any event, the studies have shown the basic feasibility of using these spent industrial catalysts for cement/concrete applications. Environmentally related parameters, such as metal leaching, also appear to be acceptable with these applications, based upon the bulk of the data. Although these results are encouraging, one must be cautious in applying these results too strictly to spent SCR catalysts. In particular, titania may have a very different behavior compared to alumina and silica, especially where pozzolanic activity is concerned. Also, the presence of alternate contaminants such as arsenic, may impact greatly the feasibility of the processes.

Although the bulk of the work on spent catalyst has involved alumina and silica materials, some efforts have been conducted looking at the use of titania-based materials in cement/concrete manufacture. One such study<sup>8</sup> examined the use of a titanium dioxide producer's waste material in Portland cement clinker. However, this utilization route included the titania material as part of the feed to the cement kiln. As discussed above, the presence of toxic contaminants on spent SCR catalyst, such as arsenic, would be a concern in this type of high-temperature application. Although the study showed the feasibility of such a utilization for the materials studied, this

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<sup>8</sup> Potgieter, J.H., et. Al, "An Evaluation of the Incorporation of a Titanium Dioxide Producer's Waste Material in Portland Cement Clinker," *Materials Letters* 57 (2002) 157-163, Elsevier Science, B.V., November, 2002.

work is not considered as applicable to spent SCR catalysts as would be processes which used the catalyst as directly in the cement/concrete mix. Other technologies utilize titania, basically in a more pure form than spent SCR catalyst, to improve the color and brilliance of special concretes, or to capitalize on photocatalytic properties of these relatively pure titania materials. As a result, there is some industrial familiarity with the use of titania in concrete products.

Interesting information, at least partly applicable to spent SCR catalyst, is revealed in a World Patent<sup>9</sup> where the use of finely ground titania had the ability to increase the early strength of concretes. In this work, the preferred titania surface area<sup>10</sup> was 40 to 120 m<sup>2</sup>/g, which is consistent with common SCR catalyst surface areas. This work showed that high early strength concrete could be obtained by using 0.25 to 5% by weight of titania relative to the cement portion of the concrete. Although the source of the titania was not spent catalyst, the titania requirements would appear to match, at least in a very basic way, the characteristics of spent catalyst, assuming that the catalyst was very finely pulverized. In the patent, examples indicated that mortars could be prepared by using titania, which increased the early strength (24 hours) by as much as 50%. These high early strengths were only obtained by carefully controlling the titania particle size, but in any event, the utilization of titania did not appear to adversely affect the materials prepared. The results of this work offer some assurance that the presence of titania would not drastically affect the properties of the concrete, at least in terms of strength.

The use of spent SCR catalyst in flowable fills is perhaps even more attractive than traditional performance concrete applications. The specifications for flowable fill materials are generally not as stringent as for most concrete applications, and thus utilization of spent SCR catalyst in flowable fill may be more attractive due to a reduced risk in adversely impacting the final product. However, depending on the exact utilization of the flowable fill, a number of specifications may be required, including compressive strength, unit weight, flowability, permeability, settlement, insulation properties, and excavatability. Thus an evaluation of the effects of utilizing spent SCR catalyst in flowable fill applications would still be necessary prior to implementation.

The leaching characteristics of concrete/fill products utilizing spent SCR catalyst would likely be of particular interest. This is due to the large array of contaminants present on the catalyst which are associated with fly ash deposits and flue gas components. Thus an important part of developing any concrete/fill utilization route will likely be the determination of the leaching characteristics.

Given the very limited information available on utilizing spent SCR in cement/concrete applications, further work would be necessary to firmly establish the feasibility of such a utilization. Thus, this has been identified as a prospective area for future work. In any event, based upon the current data, it appears that this utilization route is potentially attractive.

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<sup>9</sup> Tontrup, C., et. Al., "Use of a Pulverulent Composition Comprising Titania and an Inorganic Binder to Increase Early Strength," WO/2007/128630.

<sup>10</sup> As measured by the BET (Brunauer Emmitt Teller) method.



**Crescente, Angela**

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**From:** Wiseman, Sara  
**Sent:** Monday, October 03, 2011 6:40 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** Journal Entries for September 2011 Revaluation.xlsx



Journal Entries for  
September ...

Shannon: Here are the ARO entries Angela will be posting for this month.

(In Thousands)

TC Settlement - LGE

Account	Debit	Credit
101		7,255
108	230	
182		564
230	7,589	

TC New - LGE

Account	Debit	Credit
101	3,969	
108		114
182	267	
230		4,122

TC New - KU

Account	Debit	Credit
101	3,664	
108		105
182	247	
230		3,806

TC - LKE

Account	Debit	Credit
101	378	
108	11	
182		50
230		339

(In Thousands)

Gas Transmission Mains

Account	Debit	Credit
101	3,942	
108		9
182	9	
230		3,942

Cane Run Landfill

Account	Debit	Credit
101	876	
230		876

Mill Creek Landfill

Account	Debit	Credit
101	1,797	
230		1,797

**Crescente, Angela**

---

**From:** Harder, Tim  
**Sent:** Friday, September 30, 2011 12:22 PM  
**To:** Crescente, Angela  
**Subject:** RE: Project number 117136

Okay will do.

---

**From:** Crescente, Angela  
**Sent:** Friday, September 30, 2011 12:22 PM  
**To:** Harder, Tim  
**Subject:** RE: Project number 117136

Thanks Tim! Please include any charges for the drainage ditches that are required for closing as well.

---

**From:** Harder, Tim  
**Sent:** Friday, September 30, 2011 11:25 AM  
**To:** Crescente, Angela  
**Subject:** RE: Project number 117136  
**Importance:** High

Thanks Angel. I actually received Charah's est. percentage completion for cover soil for September from Kevin. Unless I hear from you, I will use this ARO task to accrue in September.

---

**From:** Crescente, Angela  
**Sent:** Friday, September 30, 2011 10:52 AM  
**To:** Harder, Tim  
**Subject:** Project number 117136

Tim,

I went ahead and changed the task name to CP ARO 2011 since we will probably have one for every year.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Harder, Tim  
**Sent:** Friday, September 30, 2011 11:25 AM  
**To:** Crescente, Angela  
**Subject:** RE: Project number 117136

**Importance:** High

Thanks Angel. I actually received Charah's est. percentage completion for cover soil for September from Kevin. Unless I hear from you, I will use this ARO task to accrue in September.

---

**From:** Crescente, Angela  
**Sent:** Friday, September 30, 2011 10:52 AM  
**To:** Harder, Tim  
**Subject:** Project number 117136

Tim,

I went ahead and changed the task name to CP ARO 2011 since we will probably have one for every year.

Thanks,  
Angela

**Crescente, Angela**

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**From:** Bush, Tom  
**Sent:** Tuesday, September 27, 2011 2:38 PM  
**To:** Crescente, Angela; Aemmer, Bob; Amlung, Kim; Bell, Derek; Bland, John; Bloat, Sharon; Burnett, Elender; Chapman, Laura; Clements, Chad; Conrad, Teresa; Dave Smith; Erskine, Greg; Fackler, Andrea; Faske, Lisa; Harrington, Anne; Heitzmann, Ashley; Hickman, James; Jackson, Carolyn; Keemer, Gabriela; Kinder, Debra; Marshall, Steve; Mazza, Frank; McCammon, Virginia; McRae, Callie; Metts, Heather; Pienaar, Lesley; Raible, Eric; Raque, Bruce; Root, Stephanie; Scott Cole; Sheets, Toni; Shultz, Cathy; Skaggs, Jennifer; Smith, Helen; Stickler, Samantha; Strange, Vicki; Tipton, Karen; Veroff, Jamie; Wacker, Diana; Watkins, Amanda; Williams, Scott; Wiseman, Sara; Wright, Sharon  
**Subject:** Added: New Account 403213

This account has been created.

Angela, this account has also been setup in OFMSDEV per your request.

---

**From:** Bush, Tom  
**Sent:** Monday, September 19, 2011 7:30 AM  
**To:** Erskine, Greg; Metts, Heather; Pienaar, Lesley; Raible, Eric; Shultz, Cathy; Strange, Vicki  
**Cc:** Crescente, Angela  
**Subject:** New Account 403213

Please see the attached request for new account 403213.

---

**From:** Wiseman, Sara  
**Sent:** Friday, September 16, 2011 9:18 AM  
**To:** Bush, Tom  
**Cc:** Crescente, Angela  
**Subject:** FW: GLAFF Change Request Form - Account 403213.xls

I approve this request.

This account is needed due to recording ARO gas transmission mains.

---

**From:** Crescente, Angela  
**Sent:** Friday, September 16, 2011 9:14 AM  
**To:** Wiseman, Sara  
**Subject:** GLAFF Change Request Form - Account 403213.xls



GLAFF Change  
Request Form - ...

Segment Change Request Form: ACCOUNT

Type of change requested	Open new account
Reason for requested change	New account for ARO Depreciation Expense
Account number	403213
Account description	DEPREC EXP ARO GAS TRANSMISSION
Account type	Expense
Unit of measure	Dollars
PPL income-statement report group	DEPRECIATION AND AMORTIZATION (PPLEDA)
<b>Account flexfield attributes:</b>	
Burden schedule assignment	None
Project required	NO
Project type	None
Make available in VOLTS	NO
Kentucky sales taxable	NO
Virginia sales taxable	NO
<b>PPL mappings:</b>	
PPL account	40310 - ARO Depreciation Expense
PPL affiliate assignment	NOT REQUIRED
<b>Financial statement assignments:</b>	
Oracle consolidation worksheets - balance sheet	NOT REQUIRED
Oracle consolidation worksheets - income statement	Depreciation, accretion, and amort expense
FERC-basis utility balance sheet	NOT REQUIRED
FERC-basis utility income statement	Depreciation
<b>Qualitative risks (for balance sheet reconciliation ranking):</b>	
1. Susceptibility of the accounts or transactions to loss due to errors or fraud, including past errors in the account.	NOT REQUIRED
2. Volume of activity, complexity, and homogeneity of the individual transactions process through the account.	NOT REQUIRED
3. Nature of the account (e.g., suspense accounts generally warrant greater attention)	NOT REQUIRED
4. Level of management judgment used in the account.	NOT REQUIRED
5. Existence of related party transactions in the account.	NOT REQUIRED
6. Changes from the prior period in account characteristics (e.g., new complexities or subjectivity or new types of transactions).	NOT REQUIRED
7. Sensitivity of the account in effecting the reporting entity's compliance with legal or regulatory requirements, loan covenants, or other contractual requirements.	NOT REQUIRED
8. <b>Override</b> - Do you believe this account should have a Qualitative Risk Ranking of 3 (high) regardless of your responses to the seven questions preceding this one?	NOT REQUIRED

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Monday, September 26, 2011 4:47 PM  
**To:** Charnas, Shannon  
**Cc:** Wiseman, Sara  
**Subject:** FW: Plant closures

Shannon:

Please see the email below as promised.

Thanks,  
Angela

---

**From:** Winkler, Michael  
**Sent:** Monday, September 26, 2011 10:46 AM  
**To:** Hudson, Rusty; Crescente, Angela  
**Cc:** Wiseman, Sara; Cosby, David  
**Subject:** RE: Plant closures

Everything Rusty stated is accurate.

Wink

---

**From:** Hudson, Rusty  
**Sent:** Monday, September 26, 2011 10:36 AM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara; Winkler, Michael; Cosby, David  
**Subject:** RE: Plant closures

The pond closure dates we are currently looking at are 2017 for Pineville, 2018 for Tyrone, and Cane Run, and 2019 for Green River. The timing on the pond closures will depend on the final rules that are scheduled to be issued in late 2012. There is expected to be a five-year implementation period, but it is very possible the 2012 date could be delayed, therefore the range on the closure dates could be between 2017 and 2019, if not later. On the plants to be retired (Tyrone, Green River, Cane Run coal), the current plans are to seal them up and keep them dry. There are no dollars in the long-term plan to demolish those units or to remove the asbestos. Wink or Dave, if you have a different view than this please reply back. Rusty

---

**From:** Crescente, Angela  
**Sent:** Monday, September 26, 2011 10:16 AM  
**To:** Hudson, Rusty  
**Cc:** Wiseman, Sara  
**Subject:** Plant closures

Rusty:



Charnas

For ARO purposes, are we planning on closing the ponds and landfills associated with Cane Run, Green River, and Tyrone when they are retired? If so, would that date be 2015? If we are planning closure, Sara and I will need to discuss with Shannon the possible revaluation (changing the date to 2015) in order to reflect the plan in the ARO liabilities. Also, I understand there is discussion between just retiring the plants or also demolishing them which also affects the asbestos AROs. Please advise us on anything you can in this regard so that we can plan accordingly. We are in the process of revaluing the costs for our landfills this month, so it would be good if we could do this all at the same time if possible.

Thanks for your help,

Angela

**Crescente, Angela**

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**From:** Ritchey, Stacy  
**Sent:** Monday, September 12, 2011 9:37 AM  
**To:** Clark, Ed  
**Cc:** Crescente, Angela  
**Subject:** Non Standard JE Number KU

Ed,

Could you provide me with a Non Standard JE number for September for KU? I need to reclass a vendor discount that was coded to ARO that should've been coded to removal. When the COD was completed the vendor discount did not get re-coded as it was originally automatically generated, and according to AP it must be reclassified via journal entry.

Thanks,

Stacy Ritchey  
Sr Budget Analyst  
Project Engineering  
Phone: (502) 627-4388  
Fax: (502) 217-4980

**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Friday, July 22, 2011 2:25 PM  
**To:** Riggs, Eric  
**Subject:** Depr numbers - 254

**Tracking:**                      Recipient    Read  
   Riggs, Eric    Read: 7/22/2011 2:43 PM

Eric,

I have attached three spreadsheets:



254 activity for  
depr study.xl...



254 EB 12-2009  
LGE.xlsx



254 EB 12-2009  
KU.xlsx

The one called "254 activity for depr study" is Ending Balance December 2010. The other two are Ending Balance December 2009.

Thanks,  
Angela

description	amount
KU-131101-AROP EWB 1 Struct & Imp Total	(25,522.07)
KU-131101-AROP EWB 3 Struct & Imp Total	(5,033.35)
KU-131101-AROP GH 1 Struct & Imp Total	(5,718.83)
KU-131101-AROP GR 1-2 Struct & Imp Total	(49,176.43)
KU-131101-AROP GR 4 Struct & Impr Total	(8,456.48)
KU-131101-AROP TY 3 Struct & Impr Total	(10,336.50)
KU-131201-AROP EWB 1 Boiler Plt Eqp Total	(1,297,304.32)
KU-131201-AROP EWB 3 Boiler Plt Eqp Total	(1,735.42)
KU-131201-AROP GH 1 Boiler Plt Eqp Total	(11,143.11)
KU-131201-AROP GH 1SC Boiler Plt Eq Total	(878,800.93)
KU-131201-AROP GH 2 Boiler Plt Eqp Total	(21,737.89)
KU-131201-AROP GH 4 Boiler Plt Eqp Total	(672,517.15)
KU-131201-AROP GR 1-2 Boiler Plt Eq Total	(59,642.89)
KU-131201-AROP GR 4 Boiler Plt Eqp Total	(14,286.35)
KU-131201-AROP TY 1-2 Boiler Plt Eq Total	(1,190.69)
KU-131201-AROP TY 3 Boiler Plt Eqp Total	(203,238.97)
KU-131401-AROP TY 3 Turbogenerator Total	(37,014.82)
KU-131501-AROP EWB 1 Acc Electric Total	(16,599.72)
KU-131501-AROP EWB 2 Acc Electric Total	(12,879.17)
KU-131501-AROP EWB 3 Acc Electric Total	(34,426.41)
KU-131501-AROP GH 1 Acc Electric Total	(49,495.26)
KU-131501-AROP GH 2 Acc Electric Total	(119,104.22)
KU-131501-AROP GH 3 Acc Electric Total	(279,532.95)
KU-131501-AROP GH 4 Acc Electric Total	(145,396.19)
KU-131501-AROP GR 4 Acc Electric Total	(78,039.65)
KU-131501-AROP TY3 Acc Electric Total	(22,144.06)
KU-134501-AROP EWB 10 Acc Electric Total	(52,723.94)
KU-134501-AROP EWB 11 Acc Electric Total	(52,723.94)
KU-134501-AROP EWB 5 Acc Electric Total	(51,669.47)
KU-134501-AROP EWB 6 Acc Electric Total	(31,634.36)
KU-134501-AROP EWB 7 Acc Electric Total	(31,634.36)
KU-134501-AROP EWB 8 Acc Electric Total	(51,669.47)
KU-134501-AROP EWB 9 Acc Electric Total	(48,506.02)
Grand Total	<u>(4,381,035.39)</u>

**COR**

BR3	(1,060,171.41)	0.032	(33,925.49)
BR2	(1,060,171.41)	0.012	(12,722.06)
BR1	(1,060,171.41)	0.015	(15,902.57)
GH1	(1,060,171.41)	0.046	(48,767.88)
GH2	(1,060,171.41)	0.111	(117,679.03)
GH4	(1,060,171.41)	0.131	(138,882.45)
GH3	(1,060,171.41)	0.259	(274,584.40)
GR4	(1,060,171.41)	0.069	(73,151.83)
TY3	(1,060,171.41)	0.021	(22,263.60)
BR6CT	(1,060,171.41)	0.03	(31,805.14)
BR7CT	(1,060,171.41)	0.03	(31,805.14)
BR9CT	(1,060,171.41)	0.046	(48,767.88)
BR8CT	(1,060,171.41)	0.049	(51,948.40)
BR5CT	(1,060,171.41)	0.049	(51,948.40)
BR10CT	(1,060,171.41)	0.05	(53,008.57)
BR11CT	(1,060,171.41)	0.05	(53,008.57)
			(1,060,171.41)

**SAL**

BR3	5,692.50	0.032	182.16
BR2	5,692.50	0.012	68.31
BR1	5,692.50	0.015	85.39
GH1	5,692.50	0.046	261.86
GH2	5,692.50	0.111	631.87
GH4	5,692.50	0.131	745.72
GH3	5,692.50	0.259	1,474.36
GR4	5,692.50	0.069	392.78
TY3	5,692.50	0.021	119.54
BR6CT	5,692.50	0.03	170.78
BR7CT	5,692.50	0.03	170.78
BR9CT	5,692.50	0.046	261.86
BR8CT	5,692.50	0.049	278.93
BR5CT	5,692.50	0.049	278.93
BR10CT	5,692.50	0.05	284.63
BR11CT	5,692.50	0.05	284.63
			5,692.50

description	amount
LGE-131101-AROP CR 1 Struct & Impr Total	(1,220.00)
LGE-131101-AROP CR 6 Struct & Impr Total	(380,477.78)
LGE-131101-AROP MC 1 Struct & Impr Tota	(22,427.08)
LGE-131101-AROP MC 3 Struct & Impr Tota	(53,695.57)
LGE-131101-AROP MC 4 Struct & Impr Tota	(81,226.91)
LGE-131101-AROP TC 1 Struct & Impr Total	(109,157.42)
LGE-131201-AROP MC3 Boiler Plt Equip Tot	(24,018.34)
LGE-131201-AROP MC4 SO2 Boiler Plt Tota	(43,745.93)
LGE-131501-AROP Cane Run 4 Acc Total	(2,698.81)
LGE-131501-AROP Cane Run 5 Acc Total	(1,283.74)
LGE-131501-AROP Cane Run 6 Acc Total	(17,674.73)
LGE-131501-AROP Mill Creek 1 Acc Total	(4,087.35)
LGE-131501-AROP Mill Creek 2 Acc Total	(5,175.70)
LGE-131501-AROP Mill Creek 3 Acc Total	(5,445.57)
LGE-131501-AROP Mill Creek 4 Acc Total	(11,010.24)
LGE-131501-AROP Trimble Unit 1 Acc Tota	(24,560.31)
LGE-235250- IN AROP Gas Stor UG Total	2,453.09
LGE-235250- KY AROP Gas Stor UG Total	<u>(2,389,972.12)</u>
Grand Total	<u><u>(3,175,424.51)</u></u>

**COR**

CR4	(3,555.07)	0.038	(135.09)
CR5	(3,555.07)	0.025	(88.88)
CR6	(3,555.07)	0.321	(1,141.18)
MC2	(3,555.07)	0.103	(366.17)
MC4	(3,555.07)	0.289	(1,027.42)
MC3	(3,555.07)	0.138	(490.60)
MC1	(3,555.07)	0.086	(305.74)
			(3,555.07)

**SAL**

CR4	948.02	0.038	36.02
CR5	948.02	0.025	23.70
CR6	948.02	0.321	304.31
MC2	948.02	0.103	97.65
MC4	948.02	0.289	273.98
MC3	948.02	0.138	130.83
MC1	948.02	0.086	81.53
			948.02

description	amount
LGE-131101-AROP CR 1 Struct & Impr Total	(1,220.00)
LGE-131101-AROP CR 6 Struct & Impr Total	(374,756.42)
LGE-131101-AROP MC 1 Struct & Impr Total	(22,153.12)
LGE-131101-AROP MC 3 Struct & Impr Total	(52,454.77)
LGE-131101-AROP MC 4 Struct & Impr Total	(71,795.75)
LGE-131101-AROP TC 1 Struct & Impr Total	(92,769.38)
LGE-131201-AROP MC3 Boiler Plt Equip Total	(21,173.02)
LGE-131201-AROP MC4 SO2 Boiler Plt Total	(40,996.61)
LGE-131501-AROP Cane Run 4 Acc Total	(1,098.97)
LGE-131501-AROP Cane Run 5 Acc Total	(533.86)
LGE-131501-AROP Cane Run 6 Acc Total	(7,312.97)
LGE-131501-AROP Mill Creek 1 Acc Total	(1,710.03)
LGE-131501-AROP Mill Creek 2 Acc Total	(2,155.90)
LGE-131501-AROP Mill Creek 3 Acc Total	(2,315.85)
LGE-131501-AROP Mill Creek 4 Acc Total	(4,698.36)
LGE-131501-AROP Trimble Unit 1 Acc Total	(18,438.15)
LGE-235250- IN AROP Gas Stor UG Total	5,653.81
LGE-235250- KY AROP Gas Stor UG Total	<u>(2,365,199.60)</u>
Grand Total	<u><u>(3,075,128.95)</u></u>

December 2009 Ending Balance



**COR**

CR4	(3,555.07)	0.038	(135.09)
CR5	(3,555.07)	0.025	(88.88)
CR6	(3,555.07)	0.321	(1,141.18)
MC2	(3,555.07)	0.103	(366.17)
MC4	(3,555.07)	0.289	(1,027.42)
MC3	(3,555.07)	0.138	(490.60)
MC1	(3,555.07)	0.086	(305.74)
			(3,555.07)

**SAL**

CR4	948.02	0.038	36.02
CR5	948.02	0.025	23.70
CR6	948.02	0.321	304.31
MC2	948.02	0.103	97.65
MC4	948.02	0.289	273.98
MC3	948.02	0.138	130.83
MC1	948.02	0.086	81.53
			948.02

description	amount
KU-131101-AROP EWB 1 Struct & Imp Total	(25,454.51)
KU-131101-AROP EWB 3 Struct & Imp Total	(4,956.55)
KU-131101-AROP GH 1 Struct & Imp Total	(5,620.55)
KU-131101-AROP GR 1-2 Struct & Imp Total	(49,176.43)
KU-131101-AROP GR 4 Struct & Impr Total	(8,456.48)
KU-131101-AROP TY 3 Struct & Impr Total	(10,336.50)
KU-131201-AROP EWB 1 Boiler Plt Eqp Total	(1,206,167.92)
KU-131201-AROP EWB 3 Boiler Plt Eqp Total	(1,708.30)
KU-131201-AROP GH 1 Boiler Plt Eqp Total	(10,401.63)
KU-131201-AROP GH 1SC Boiler Plt Eq Total	(823,961.77)
KU-131201-AROP GH 2 Boiler Plt Eqp Total	(20,904.73)
KU-131201-AROP GH 4 Boiler Plt Eqp Total	(601,169.95)
KU-131201-AROP GR 1-2 Boiler Plt Eq Total	(58,499.53)
KU-131201-AROP GR 4 Boiler Plt Eqp Total	(13,941.35)
KU-131201-AROP TY 1-2 Boiler Plt Eq Total	(1,190.33)
KU-131201-AROP TY 3 Boiler Plt Eqp Total	(199,947.13)
KU-131401-AROP TY 3 Turbogenerator Total	(36,636.94)
KU-131501-AROP EWB 1 Acc Electric Total	(16,118.16)
KU-131501-AROP EWB 2 Acc Electric Total	(12,740.45)
KU-131501-AROP EWB 3 Acc Electric Total	(34,006.05)
KU-131501-AROP GH 1 Acc Electric Total	(48,886.50)
KU-131501-AROP GH 2 Acc Electric Total	(117,838.34)
KU-131501-AROP GH 3 Acc Electric Total	(275,580.39)
KU-131501-AROP GH 4 Acc Electric Total	(140,928.83)
KU-131501-AROP GR 4 Acc Electric Total	(74,790.05)
KU-131501-AROP TY3 Acc Electric Total	(22,144.06)
KU-134501-AROP EWB 10 Acc Electric Total	(52,723.94)
KU-134501-AROP EWB 11 Acc Electric Total	(52,723.94)
KU-134501-AROP EWB 5 Acc Electric Total	(51,669.47)
KU-134501-AROP EWB 6 Acc Electric Total	(31,634.36)
KU-134501-AROP EWB 7 Acc Electric Total	(31,634.36)
KU-134501-AROP EWB 8 Acc Electric Total	(51,669.47)
KU-134501-AROP EWB 9 Acc Electric Total	(48,506.02)
Grand Total	<u>(4,142,124.99)</u>

December 2009 Ending Balance

**COR**

BR3	(1,060,171.41)	0.032	(33,925.49)
BR2	(1,060,171.41)	0.012	(12,722.06)
BR1	(1,060,171.41)	0.015	(15,902.57)
GH1	(1,060,171.41)	0.046	(48,767.88)
GH2	(1,060,171.41)	0.111	(117,679.03)
GH4	(1,060,171.41)	0.131	(138,882.45)
GH3	(1,060,171.41)	0.259	(274,584.40)
GR4	(1,060,171.41)	0.069	(73,151.83)
TY3	(1,060,171.41)	0.021	(22,263.60)
BR6CT	(1,060,171.41)	0.03	(31,805.14)
BR7CT	(1,060,171.41)	0.03	(31,805.14)
BR9CT	(1,060,171.41)	0.046	(48,767.88)
BR8CT	(1,060,171.41)	0.049	(51,948.40)
BR5CT	(1,060,171.41)	0.049	(51,948.40)
BR10CT	(1,060,171.41)	0.05	(53,008.57)
BR11CT	(1,060,171.41)	0.05	(53,008.57)
			(1,060,171.41)

**SAL**

BR3	5,692.50	0.032	182.16
BR2	5,692.50	0.012	68.31
BR1	5,692.50	0.015	85.39
GH1	5,692.50	0.046	261.86
GH2	5,692.50	0.111	631.87
GH4	5,692.50	0.131	745.72
GH3	5,692.50	0.259	1,474.36
GR4	5,692.50	0.069	392.78
TY3	5,692.50	0.021	119.54
BR6CT	5,692.50	0.03	170.78
BR7CT	5,692.50	0.03	170.78
BR9CT	5,692.50	0.046	261.86
BR8CT	5,692.50	0.049	278.93
BR5CT	5,692.50	0.049	278.93
BR10CT	5,692.50	0.05	284.63
BR11CT	5,692.50	0.05	284.63
			5,692.50

**Crescente, Angela**

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**From:** Ritchey, Stacy  
**Sent:** Thursday, July 21, 2011 9:35 AM  
**To:** Rose, Bruce  
**Cc:** Crescente, Angela  
**Subject:** RE: Set Up of Landfill Projects

Bruce,

Thanks for the information! I meet with Bob each month to discuss the forecast. I will print this e-mail and discuss how we can go about classifying the existing tasks. I will be in contact with Angela soon.

Thanks,

Stacy

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**From:** Rose, Bruce  
**Sent:** Thursday, July 21, 2011 9:25 AM  
**To:** Ritchey, Stacy  
**Cc:** Crescente, Angela  
**Subject:** Set Up of Landfill Projects

Stacy,

As you know, Sara, Angela, and myself met yesterday to discuss the project set up of the landfill projects, and to determine how these projects will be unitized. Per our meeting with Scott Straight and the civil engineers on the projects, there will be a project for each separate phase of the landfill work at each site. They also mentioned that there will be essentially sub-phases in each project that could be considered in service separately. This method will work well for Prop. Acct. in our unitization process, as well as the reporting to IMEA/PA, and the Rates Dept. for ECR.

We will need to ask your assistance with the subtasks. Hopefully, there will be just one task for each sub-phase, but in the event additional tasks are necessary, or should someone at the plant open a Maximo task, we will need to be made aware of this as soon as possible. We have to map the tasks for a sub-phase into a separate work order in order to group them together. This is also more easily done BEFORE the task has charges on it, otherwise we have to perform a special JE in PowerPlant to associate the old charges to the grouping work order. **For the existing TC project, we will need to know what existing tasks we need to aggregate together for each sub-phase, and then we will have to perform a JE for the association with the new work order.**

Also, as I mentioned to Joe and Bob yesterday, We will be relying on them and yourself to notify us when each sub-phase is considered I/S. I understand there will be lagging charges, but the bulk of the charges should be there when the sub-phase is moved to I/S.

Angela was wanting you to contact her concerning going ahead with the set up of ARO tasks to associate with the capping of each sub-phase. It will make it easier to map these tasks at the same time that we are mapping the capital tasks, and we know that although it may be well into the future, we will definitely be capping the landfills. Thanks for your help.

**Crescente, Angela**

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**From:** Riggs, Eric  
**Sent:** Wednesday, July 20, 2011 3:21 PM  
**To:** Crescente, Angela  
**Subject:** LG&E\_Plant report\_DEC 10 -Depr Reserve Summary - working file.xlsx  
**Importance:** High



LGE\_Plant  
report\_DEC 10 -...

Angela,

Please let me know when we can discuss adding the 254 account numbers to this file and the KU numbers as well.

Thanks,  
Eric Riggs

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
<b>Electric Distribution</b>			
LGE-136020-Elect. Dist. Substation	-		-
LGE-136025-Elect. Dist. Substation	-		-
LGE-136100-Electric Distribution Su	(1,921,347.73)		(1,921,347.73)
LGE-136200-Elect. Dist. Substation	(37,244,161.27)		(37,244,161.27)
LGE-136205-Elect. Dist. Substation	-		-
LGE-136400-Electric Distribution -	(66,944,686.12)		(66,944,686.12)
LGE-136500-Electric Distribution -	(91,531,623.62)		(91,531,623.62)
LGE-136600-Electric Distribution -	(25,555,775.76)		(25,555,775.76)
LGE-136700-Electric Distribution -	(46,512,557.79)		(46,512,557.79)
LGE-136800-Line Transformers	(60,280,828.41)		(60,280,828.41)
LGE-136910-Electric Distribution -	(1,625,948.89)		(1,625,948.89)
LGE-136920-Electric Distribution -	(18,798,716.66)		(18,798,716.66)
LGE-137000-Meters	(18,509,319.94)		(18,509,319.94)
LGE-137310-Electric Distribution -	(15,978,153.05)		(15,978,153.05)
LGE-137320-Electric Distribution -	(21,238,523.58)		(21,238,523.58)
LGE-137340-Electric Dist. - Street	(38,996.73)		(38,996.73)
LGE-137405-ARO Cost Elec Dist (L/B)	(1,256.54)		(1,256.54)
	(406,181,896.09)		(406,181,896.09)
			-
<b>Electric General Plant</b>			
LGE-139210-Transportation - Cars Tr	(8,803,312.17)		(8,803,312.17)
LGE-139220-Transportation - Traile	(251,977.49)		(251,977.49)
LGE-139400-Tools, Shop, and Garage	(1,444,853.81)		(1,444,853.81)
LGE-139500-Laboratory Equipment	0.00		0.00
LGE-139610-Power Op Equip-Hourly Rt	(2,240,916.57)		(2,240,916.57)
LGE-139620-Power Op Equip-Other	(26,826.26)		(26,826.26)
	(12,767,886.30)		(12,767,886.30)
			-
<b>Electric Hydro Production</b>			
LGE-133020-Ohio Falls Non-Project	-		-
LGE-133020-Ohio Falls Project 289	-		-

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
LGE-133100-Ohio Falls Non-Project	(38,518.71)		(38,518.71)
LGE-133100-Ohio Falls Project 289	(4,264,066.86)		(4,264,066.86)
LGE-133200-Ohio Falls Project 289	(1,476,442.85)		(1,476,442.85)
LGE-133300-Ohio Falls Project 289	(956,211.59)		(956,211.59)
LGE-133400-Ohio Falls Project 289	(1,803,592.25)		(1,803,592.25)
LGE-133500-Ohio Falls Non-Project	(3,306.92)		(3,306.92)
LGE-133500-Ohio Falls Project 289	(44,785.40)		(44,785.40)
LGE-133600-Ohio Falls Non-Project	(872.13)		(872.13)
LGE-133600-Ohio Falls Project 289	(16,934.08)		(16,934.08)
LGE-133707-ARO Cost Hydro Prod (Eq	(364.10)		(364.10)
	(8,605,094.89)		(8,605,094.89)
<b>Electric Other Production</b>			-
LGE-134020-TC 5 CT Land	-		-
LGE-134020-Waterside - Land	-		-
LGE-134100-Structures and Imp	(3,841,463.58)		(3,841,463.58)
LGE-134200-Fuel Holders, Prod	(2,022,097.37)		(2,022,097.37)
LGE-134300-Prime Movers	(34,755,976.79)		(34,755,976.79)
LGE-134400-Generators	(15,588,444.38)		(15,588,444.38)
LGE-134500-Accessory Electric	(5,425,826.61)		(5,425,826.61)
LGE-134600-Misc. Power Plant	(1,172,421.10)		(1,172,421.10)
LGE-134705-ARO Cost Other Prod (L/B	(192.68)		(192.68)
LGE-134707-ARO Cost Other Prod (Eq	(0.00)		(0.00)
	(62,806,422.51)		(62,806,422.51)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
<b>Electric Steam Production</b>			-
LGE-131020-Steam Production - Land	-		-
LGE-131100-Cane Run Unit 1 Structur	(5,048,304.93)		(5,048,304.93)
LGE-131100-Cane Run Unit 2 Structur	(2,106,202.77)		(2,106,202.77)
LGE-131100-Cane Run Unit 3 Structur	(5,917,984.83)		(5,917,984.83)
LGE-131100-Cane Run Unit 4 SO2-Stru	(1,721,629.00)		(1,721,629.00)
LGE-131100-Cane Run Unit 4 Structur	(4,622,834.20)		(4,622,834.20)
LGE-131100-Cane Run Unit 5 SO2-Stru	(2,327,062.63)		(2,327,062.63)
LGE-131100-Cane Run Unit 5 Structur	(6,149,922.39)		(6,149,922.39)
LGE-131100-Cane Run Unit 6 SO2-Stru	(2,164,899.19)		(2,164,899.19)
LGE-131100-Cane Run Unit 6 Structur	(13,283,279.44)		(13,283,279.44)
LGE-131100-Mill Creek Unit 1 SO2-St	(1,946,270.36)		(1,946,270.36)
LGE-131100-Mill Creek Unit 1 Struct	(17,178,409.71)		(17,178,409.71)
LGE-131100-Mill Creek Unit 2 SO2-St	(1,604,501.88)		(1,604,501.88)
LGE-131100-Mill Creek Unit 2 Struct	(9,992,528.13)		(9,992,528.13)
LGE-131100-Mill Creek Unit 3 SO2-St	(480,413.00)		(480,413.00)
LGE-131100-Mill Creek Unit 3 Struct	(20,881,166.87)		(20,881,166.87)
LGE-131100-Mill Creek Unit 4 SO2-St	(4,891,395.55)		(4,891,395.55)
LGE-131100-Mill Creek Unit 4 Struct	(37,077,042.12)		(37,077,042.12)
LGE-131100-TC 1 Future Use - 105	(11,260.94)		(11,260.94)
LGE-131100-Trimble Unit 1 SO2-Struc	(355,586.47)		(355,586.47)
LGE-131100-Trimble Unit 1 Structure	(56,786,000.45)		(56,786,000.45)
LGE-131100-Structures & Imp	(194,546,694.86)		(194,546,694.86)
LGE-131101-AROP CR 1 Struct & Impr	(5,430.86)		(5,430.86)
LGE-131101-AROP CR 6 Struct & Impr	(2,167,176.37)		(2,167,176.37)
LGE-131101-AROP MC 1 Struct & Impr	(142,846.52)		(142,846.52)
LGE-131101-AROP MC 3 Struct & Impr	(622,241.65)		(622,241.65)
LGE-131101-AROP MC 4 Struct & Impr	(3,587,955.18)		(3,587,955.18)
LGE-131101-AROP TC 1 Struct & Impr	(2,489,420.81)		(2,489,420.81)
LGE-131101-AROP Struct & Impr	(9,015,071.39)		(9,015,071.39)
LGE-131110-CR 6 Capital Leased Equi	(1,097.40)		(1,097.40)
LGE-131110-MC 4 Capital Leased Equi	(1,264.53)		(1,264.53)



LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
LGE-131110-CAPITAL LEASED EQUIP	(2,361.93)		(2,361.93)
LGE-131200-Cane Run Locomotives - B	(54,187.52)		(54,187.52)
LGE-131200-Cane Run Rail Cars - Boi	(1,114,249.37)		(1,114,249.37)
LGE-131200-Cane Run Unit 1 Boiler P	(1,228,538.15)		(1,228,538.15)
LGE-131200-Cane Run Unit 2 Boiler P	(152,754.79)		(152,754.79)
LGE-131200-Cane Run Unit 3 Boiler P	(1,182,185.79)		(1,182,185.79)
LGE-131200-Cane Run Unit 4 Boiler P	(19,926,728.43)		(19,926,728.43)
LGE-131200-Cane Run Unit 4 SO2 Boil	(18,709,047.02)		(18,709,047.02)
LGE-131200-Cane Run Unit 5 Boiler P	(16,267,964.56)		(16,267,964.56)
LGE-131200-Cane Run Unit 5 SO2 Boil	(29,107,153.47)		(29,107,153.47)
LGE-131200-Cane Run Unit 6 Boiler P	(27,996,649.96)		(27,996,649.96)
LGE-131200-Cane Run Unit 6 SO2 Boil	(27,029,885.93)		(27,029,885.93)
LGE-131200-MC Offsite Rail Cars	-		-
LGE-131200-Mill Creek Locomotives B	(472,402.15)		(472,402.15)
LGE-131200-Mill Creek Rail Cars Boi	(2,121,302.02)		(2,121,302.02)
LGE-131200-Mill Creek Unit 1 Boiler	(32,761,422.75)		(32,761,422.75)
LGE-131200-Mill Creek Unit 1 SO2 Bo	(30,638,148.04)		(30,638,148.04)
LGE-131200-Mill Creek Unit 2 Boiler	(24,757,137.23)		(24,757,137.23)
LGE-131200-Mill Creek Unit 2 SO2 Bo	(26,905,062.64)		(26,905,062.64)
LGE-131200-Mill Creek Unit 3 Boiler	(64,365,663.77)		(64,365,663.77)
LGE-131200-Mill Creek Unit 3 SO2 Bo	(33,692,759.92)		(33,692,759.92)
LGE-131200-Mill Creek Unit 4 Boiler	(98,189,484.04)		(98,189,484.04)
LGE-131200-Mill Creek Unit 4 SO2 Bo	(72,966,455.50)		(72,966,455.50)
LGE-131200-TC 1 Futue Use - 105	(595.38)		(595.38)
LGE-131200-Trimble Unit 1 Boiler Pl	(73,129,616.71)		(73,129,616.71)
LGE-131200-Trimble Unit 1 SO2 Boile	(44,272,966.31)		(44,272,966.31)
LGE-131200-Boiler	(647,042,361.45)		(647,042,361.45)
LGE-131201-AROP MC3 Boiler Plt Equip	(234,246.51)		(234,246.51)
LGE-131201-AROP MC4 SO2 Boiler Plt	(337,521.12)		(337,521.12)
LGE-131201-AROP Boiler Plt	(571,767.63)		(571,767.63)
LGE-131400-Cane Run Unit 1 Turbog	(158,076.86)		(158,076.86)
LGE-131400-Cane Run Unit 2 Turbog	(20,928.57)		(20,928.57)

**LOUISVILLE GAS & ELECTRIC COMPANY**  
**RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE**  
**Dec-2010**

	KY Balance	IN Balance	Total Balance
LGE-131400-Cane Run Unit 3 Turbog	(1,004,854.68)		(1,004,854.68)
LGE-131400-Cane Run Unit 4 Turbog	(8,674,789.57)		(8,674,789.57)
LGE-131400-Cane Run Unit 5 Turbog	(7,650,532.04)		(7,650,532.04)
LGE-131400-Cane Run Unit 6 Turbog	(10,892,905.67)		(10,892,905.67)
LGE-131400-Mill Creek Unit 1 Turbog	(12,749,251.29)		(12,749,251.29)
LGE-131400-Mill Creek Unit 2 Turbog	(12,911,907.45)		(12,911,907.45)
LGE-131400-Mill Creek Unit 3 Turbog	(21,146,756.78)		(21,146,756.78)
LGE-131400-Mill Creek Unit 4 Turbog	(27,967,070.14)		(27,967,070.14)
LGE-131400-TC 1 Future Use - 105	(2,052,997.11)		(2,052,997.11)
LGE-131400-Trimble Unit 1 Turbogene	(21,348,827.48)		(21,348,827.48)
LGE-131400-Turbogenerators	(126,578,897.64)		(126,578,897.64)
LGE-131500-Cane Run Unit 1 Accessor	(2,336,183.31)		(2,336,183.31)
LGE-131500-Cane Run Unit 2 Accessor	(1,625,642.34)		(1,625,642.34)
LGE-131500-Cane Run Unit 3 Accessory	(1,319,656.59)		(1,319,656.59)
LGE-131500-Cane Run Unit 4 Accessor	(3,546,725.85)		(3,546,725.85)
LGE-131500-Cane Run Unit 4 SO2 Acce	(2,234,481.45)		(2,234,481.45)
LGE-131500-Cane Run Unit 5 Accessor	(4,048,129.36)		(4,048,129.36)
LGE-131500-Cane Run Unit 5 SO2 Acce	(3,068,643.86)		(3,068,643.86)
LGE-131500-Cane Run Unit 6 Accessor	(5,102,692.30)		(5,102,692.30)
LGE-131500-Cane Run Unit 6 SO2 Acce	(2,849,782.12)		(2,849,782.12)
LGE-131500-Mill Creek Unit 1 Access	(7,639,507.03)		(7,639,507.03)
LGE-131500-Mill Creek Unit 1 SO2 Ac	(6,247,233.72)		(6,247,233.72)
LGE-131500-Mill Creek Unit 2 Access	(4,384,884.52)		(4,384,884.52)
LGE-131500-Mill Creek Unit 2 SO2 Ac	(5,128,383.11)		(5,128,383.11)
LGE-131500-Mill Creek Unit 3 Access	(11,551,218.78)		(11,551,218.78)
LGE-131500-Mill Creek Unit 3 SO2 Ac	(3,313,867.93)		(3,313,867.93)
LGE-131500-Mill Creek Unit 4 Access	(15,048,710.72)		(15,048,710.72)
LGE-131500-Mill Creek Unit 4 SO2 Ac	(5,712,368.74)		(5,712,368.74)
LGE-131500-TC 1 Future Use - 105	(6,096.69)		(6,096.69)
LGE-131500-Trimble Unit 1 Accessory	(23,480,030.83)		(23,480,030.83)
LGE-131500-Trimble Unit 1 SO2 Acces	(2,267,775.64)		(2,267,775.64)
LGE-131500-Accessory	(110,912,014.89)		(110,912,014.89)
LGE-131501-AROP Cane Run Unit 4 Accessor	(371,247.06)		(371,247.06)
LGE-131501-AROP Cane Run Unit 5 Accessor	(215,937.84)		(215,937.84)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
LGE-131501-AROP Cane Run Unit 6 Accessor	(1,211,490.89)		(1,211,490.89)
LGE-131501-AROP MC 1 Accessor	(732,962.19)		(732,962.19)
LGE-131501-AROP MC 2 Accessor	(866,912.46)		(866,912.46)
LGE-131501-AROP MC 3 Accessor	(1,132,148.56)		(1,132,148.56)
LGE-131501-AROP MC 4 Accessor	(2,126,567.57)		(2,126,567.57)
LGE-131501-AROP TC 1 Accessor	(974,628.34)		(974,628.34)
LGE-131501-AROP Accessory	(7,631,894.91)		(7,631,894.91)
LGE-131600-Cane Run Unit 1 Misc. Po	(23,531.62)		(23,531.62)
LGE-131600-Cane Run Unit 3 Misc. Po	(12,867.86)		(12,867.86)
LGE-131600-Cane Run Unit 4 Misc. Po	(15,511.09)		(15,511.09)
LGE-131600-Cane Run Unit 4 SO2 Misc	(16,694.23)		(16,694.23)
LGE-131600-Cane Run Unit 5 Misc. Po	(31,566.75)		(31,566.75)
LGE-131600-Cane Run Unit 5 SO2 Misc	(72,517.07)		(72,517.07)
LGE-131600-Cane Run Unit 6 Misc. Po	(1,285,087.90)		(1,285,087.90)
LGE-131600-Cane Run Unit 6 SO2 Misc	(50,277.52)		(50,277.52)
LGE-131600-Mill Creek Unit 1 Misc P	(466,440.76)		(466,440.76)
LGE-131600-Mill Creek Unit 2 Misc.	(91,131.44)		(91,131.44)
LGE-131600-Mill Creek Unit 3 Misc.	(314,370.04)		(314,370.04)
LGE-131600-Mill Creek Unit 4 Misc.	(2,435,375.64)		(2,435,375.64)
LGE-131600-Mill Creek Unit 4 SO2 Mi	(36,151.28)		(36,151.28)
LGE-131600-Trimble Unit 1 Misc. Pow	(1,120,207.48)		(1,120,207.48)
LGE-131600-Misc. Power Plant	(5,971,730.68)		(5,971,730.68)
LGE-131707-ARO Cost Steam (Eqp)	(204,061.94)		(204,061.94)
	(1,102,476,857.32)		(1,102,476,857.32)
<b>Electric Transmission</b>			-
LGE-135010-Electric Transmission -	(1,705,463.51)	(261,421.09)	(1,966,884.60)
LGE-135020-Electric Transmission -	-		-
LGE-135210-Electric Transmission -	(1,139,118.39)	(219,991.89)	(1,359,110.28)
LGE-135210-TC Sw. Station - Substat	(67,361.54)		(67,361.54)
LGE-135210-TC Unit 1 - Trans Sub	(54.97)		(54.97)
LGE-135310-Electric Transmission -	(61,827,919.47)	(7,153,900.23)	(68,981,819.70)
LGE-135310-TC Sw. Station - Substat	(5,897.17)		(5,897.17)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
LGE-135310-TC Unit 1 - Trans. - Sub	(501.17)		(501.17)
LGE-135311-AROP Station Equip	(1,975.03)		(1,975.03)
LGE-135311-AROP TC1 Station Equip	(637.73)		(637.73)
LGE-135400-Electric Transmission -	(17,524,493.98)	(4,482,843.60)	(22,007,337.58)
LGE-135500-Electric Transmission -	(16,056,160.47)	(975,026.26)	(17,031,186.73)
LGE-135600-Electric Transmission -	(20,644,950.75)	(2,850,958.85)	(23,495,909.60)
LGE-135700-Electric Transmission -	(572,847.54)		(572,847.54)
LGE-135800-Electric Transmission -	(1,992,169.22)		(1,992,169.22)
LGE-135915-ARO Cost Transm (L/B)	(41.40)		(41.40)
LGE-135917-ARO Cost Transm (Eqp)	-		-
	(121,539,592.34)	(15,944,141.92)	(137,483,734.26)
<b>Total Electric Depreciation Reserves</b>	<u>(1,714,377,749.45)</u>	<u>(15,944,141.92)</u>	<u>(1,730,321,891.37)</u>
<b>Electric Intangible Plant</b>			
LGE-130100-Elect. Intangible Plant -	-		-
LGE-130200-Franchises and Consents	(100.00)		(100.00)
	(100.00)		(100.00)
<b>Total Electric Amortization Reserves</b>	<u>(100.00)</u>		<u>(100.00)</u>

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
<b>Gas Distribution</b>			
LGE-237412-Gas Distribution Land	-		-
LGE-237422-Gas Distribution Land Ri	(77,380.41)		(77,380.41)
LGE-237510-Gas Distribution - City	(140,372.16)		(140,372.16)
LGE-237520-Gas Distribution - Other	(151,960.81)		(151,960.81)
LGE-237600-Gas Distribution - Mains	(106,484,418.72)		(106,484,418.72)
LGE-237800-Gas Distribution - Measu	(2,606,919.28)		(2,606,919.28)
LGE-237900-Gas Distribution - City	(1,641,638.08)		(1,641,638.08)
LGE-238000-Gas Distribution - Gas S	(63,826,934.60)		(63,826,934.60)
LGE-238100-Meters	(6,147,387.57)		(6,147,387.57)
LGE-238300-Regulators	(481,888.98)		(481,888.98)
LGE-238500-Gas Distribution - Indus	(90,339.31)		(90,339.31)
LGE-238700-Gas Distribution - Other	(17,927.70)		(17,927.70)
LGE-238805-ARO Cost Gas Dist (L/B)	(16.49)		(16.49)
LGE-238807-ARO Cost Gas Dist (Eqp)	(49,718.44)		(49,718.44)
	(181,716,902.55)		(181,716,902.55)
<b>Gas General Plant</b>			
LGE-239210-Transportation Equip-Car	(1,729,426.89)		(1,729,426.89)
LGE-239220-Transportation Equip-Tra	(193,391.91)		(193,391.91)
LGE-239400-Tools, Shop, and Garage	(1,746,389.37)		(1,746,389.37)
LGE-239500-Laboratory Equipment	-		-
LGE-239610-Power Op Equip-Hourly Ra	(2,371,373.10)		(2,371,373.10)
LGE-239620-Power Op Equip - Other	(33,259.58)		(33,259.58)
	(6,073,840.85)		(6,073,840.85)
<b>Gas Storage</b>			
LGE-235010-Gas Storage Underground	-		-
LGE-235020-Gas Storage Underground	(70,451.45)		(70,451.45)
LGE-235120-Gas Storage Undg. - Comp	(895,910.24)		(895,910.24)
LGE-235130-Gas Storage Undg. - Regu	(14,636.49)		(14,636.49)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
LGE-235140-Gas Storage Underground	(745,762.87)	(67,541.73)	(813,304.60)
LGE-235210-Gas Storage Undg. - Leas	(569,589.96)		(569,589.96)
LGE-235220-Gas Storage Underground	(452,027.29)		(452,027.29)
LGE-235230-Gas Storage Undg. - Non	(7,683,607.10)		(7,683,607.10)
LGE-235240-Gas Storage Underground	(2,295,088.96)	(295,082.07)	(2,590,171.03)
LGE-235250-AROP Gas Storage Underground	(494,643.48)	(204,975.61)	(699,619.09)
LGE-235255-Gas Storage Underground	122,644.28	(79,719.13)	42,925.15
LGE-235300-Gas Storage Undergroun	(6,768,797.06)	(511,276.55)	(7,280,073.61)
LGE-235400-Gas Storage Undg. - Comp	(4,468,675.27)		(4,468,675.27)
LGE-235500-Gas Storage Undg. - Meas	(276,726.99)		(276,726.99)
LGE-235600-Gas Storage Undg. - Puri	(5,095,927.81)		(5,095,927.81)
LGE-235700-Gas Storage Underground	(278,478.74)	(42,511.83)	(320,990.57)
LGE-235805-ARO Cost Gas UG Store (L	(153.13)		(153.13)
LGE-235807-ARO Cost Gas UG Store (E	(39,312.97)		(39,312.97)
	(30,027,145.53)	(1,201,106.92)	(31,228,252.45)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
<b>Gas Transmission</b>			
LGE-236520-Gas Transmission Rights	(208,241.67)		(208,241.67)
LGE-236700-Gas Transmission - Mains	(12,039,254.49)		(12,039,254.49)
	(12,247,496.16)		(12,247,496.16)
<b>Total Gas Depreciation Reserves</b>	(230,065,385.09)	(1,201,106.92)	(231,266,492.01)
<b>Gas Intangible Plant</b>			
LGE-230200-Franchises and Consents	(800.00)		(800.00)
	(800.00)		(800.00)
<b>Total Gas Amortization Reserves</b>	(800.00)		(800.00)
<b>Common General Plant</b>			
LGE-338910-Common - Land	-		-
LGE-338920-Common - Land Rights	(128,904.90)		(128,904.90)
LGE-339010-Common Structures - Broa	(10,391,006.37)		(10,391,006.37)
LGE-339010-Common Structures - Gene	(5,914,604.14)		(5,914,604.14)
LGE-339010-Struct and Imp-LGE Bldg	(1,439,151.29)		(1,439,151.29)
LGE-339020-Common Structures - Tran	556,716.16		556,716.16
LGE-339030-Common Structures - Stor	(7,444,731.94)		(7,444,731.94)
LGE-339040-Common Structures - Othe	(163,954.73)		(163,954.73)
LGE-339060-Common Structures - Micr	(220,809.62)		(220,809.62)
LGE-339110-Office Furniture	(6,642,123.27)		(6,642,123.27)
LGE-339120-Office Equipment	(2,169,148.74)		(2,169,148.74)
LGE-339130-Computer Equipment	(12,520,156.68)		(12,520,156.68)
LGE-339131-Personal Computers	(1,809,200.64)		(1,809,200.64)
LGE-339140-Security Equipment	(1,398,872.10)		(1,398,872.10)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE  
Dec-2010

	KY Balance	IN Balance	Total Balance
LGE-339210-Trans Equip-Cars and Tru	(101,702.26)		(101,702.26)
LGE-339220-Trans Equip-Trailers	(26,448.51)		(26,448.51)
LGE-339300-Stores Equipment	(597,209.94)		(597,209.94)
LGE-339400-Tools, Shop, Garage Equi	(1,265,933.33)		(1,265,933.33)
LGE-339500-Laboratory Equipment	0.00		0.00
LGE-339610-Power Op Equip-Hourly Ra	(233,967.19)		(233,967.19)
LGE-339620-Power Op Equip - Other	(8,719.37)		(8,719.37)
LGE-339700-Common - Communication E	(18,935,480.84)	(502,034.50)	(19,437,515.34)
LGE-339710-Communication Equip-Comp	(5,749,900.01)		(5,749,900.01)
LGE-339800-Miscellaneous Equipment	(566,188.81)		(566,188.81)
LGE-339915-ARO Cost Common (L/B)	(343.19)		(343.19)
	<u>(77,171,841.71)</u>	<u>(502,034.50)</u>	<u>(77,673,876.21)</u>
<b>Non-Utility Property</b>			-
LGE-312101-Nonutility Prop - Coal L	-		-
LGE-312103-Nonutility-Coal Rts of W	(249.93)		(249.93)
LGE-312104-Nonutility Prop - Misc L	-		-
LGE-312102-Nonutility-Coal Mineral	(63,110.43)		(63,110.43)
	<u>(63,360.36)</u>	-	<u>(63,360.36)</u>
<b>Total Common Depreciation Reserves</b>	<u>(77,235,202.07)</u>	<u>(502,034.50)</u>	<u>(77,737,236.57)</u>



**LOUISVILLE GAS & ELECTRIC COMPANY**  
**RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE**  
 Dec-2010

	KY Balance	IN Balance	Total Balance
<b>Common Intangible Plant</b>			
LGE-330100-Common Intangible Plant	-		-
LGE-330200-Franchises and Consents	(4,200.00)		(4,200.00)
LGE-330300-Misc Intang Plant-Softwa	(9,309,277.51)		(9,309,277.51)
LGE-330310-CCS Software	(6,992,913.09)		(6,992,913.09)
LGE-330320-Law Library	-		-
	(16,306,390.60)	-	(16,306,390.60)
<b>Total Common Amortization Reserves</b>	(16,306,390.60)	-	(16,306,390.60)
<b>TOTAL RESERVES</b>	(2,037,985,627.21)	(17,647,283.34)	(2,055,632,910.55)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE - KENTUCKY - FINANCIAL ACCOUNTING  
#REF1

	Beginning Balance	Accruals	Retirements	Transfers/ Adjustments	RWIP Transfers Out	Cost of Removal	Salvage	Other Credits	Ending Balance
<b>Electric Distribution</b>									
LGE-136020-Elect. Dist. Substation	-	-	-	-	-	-	-	-	-
LGE-136025-Elect. Dist. Substation	-	-	-	-	-	-	-	-	-
LGE-136100-Electric Distribution Su	(1,905,781.24)	(34,828.79)	5,399.39	-	-	13,863.91	-	-	(1,921,347.73)
LGE-136200-KY Elect. Dist. Substation	(36,537,248.01)	(922,278.45)	100,421.18	-	-	114,943.01	-	-	(37,244,161.27)
LGE-136205-Elect. Dist. Substation	-	-	-	-	-	-	-	-	-
LGE-136400-Electric Distribution -	(66,433,271.02)	(3,807,305.88)	1,151,011.95	-	-	2,155,537.98	(10,659.15)	-	(69,844,686.12)
LGE-136500-Electric Distribution -	(89,442,414.28)	(6,310,914.09)	2,089,939.79	-	-	2,163,476.73	(31,711.79)	-	(91,531,623.62)
LGE-136600-Electric Distribution -	(25,300,815.87)	(891,550.24)	133,387.59	(43.82)	-	483,415.52	(10,169.04)	-	(25,555,775.79)
LGE-136700-Electric Distribution -	(45,849,599.81)	(2,294,748.23)	1,178,733.24	43.82	-	440,798.84	(7,785.75)	-	(46,512,557.79)
LGE-136800-Line Transformers	(57,728,977.79)	(2,856,860.68)	190,083.01	-	-	240,110.22	(125,183.10)	-	(60,286,628.41)
LGE-136910-Electric Distribution -	(1,989,883.39)	(138,682.48)	22,543.84	-	-	160,633.12	-	-	(1,825,948.89)
LGE-136920-Electric Distribution -	(17,935,035.56)	(1,054,088.54)	83,113.58	-	-	127,293.88	-	-	(18,798,716.89)
LGE-137000-Motors	(17,208,835.52)	(1,378,182.05)	75,897.63	-	-	-	-	-	(18,506,319.94)
LGE-137310-Electric Distribution -	(18,209,882.52)	(963,813.96)	928,572.75	-	-	2,269,681.57	(3,810.88)	-	(15,978,153.05)
LGE-137320-Electric Distribution -	(20,278,312.38)	(1,391,893.68)	80,771.92	-	-	352,871.67	(1,781.11)	-	(21,238,523.58)
LGE-137340-Electric Dist. - Street	(89,350.62)	-	87,548.43	-	-	59,363.89	(96,595.53)	-	(38,996.73)
LGE-137405-ARO Cost Elec Dist (L/B)	(13,192.72)	(7,587.89)	-	14,504.04	-	-	-	-	(1,255.54)
	(398,602,548.51)	(22,005,826.89)	8,109,222.30	14,504.04	-	8,590,190.42	(287,437.45)	-	(408,181,898.09)
<b>Electric General Plant</b>									
LGE-136210-Transportation - Cars Tr	(9,015,691.64)	(63,559.93)	278,315.85	(376.55)	-	-	-	-	(8,803,312.17)
LGE-136220-Transportation - Trailo	(229,788.80)	(22,178.89)	-	-	-	-	-	-	(251,977.49)
LGE-136400-Tools, Shop, and Garage	(1,188,383.97)	(153,287.55)	2,121.07	(125,303.36)	-	-	-	-	(1,444,853.81)
LGE-136500-Laboratory Equipment	(1,300,131.25)	(321,323.48)	1,496,151.35	125,303.36	-	-	-	-	0.00
LGE-136910-Power Co Equip-Hourly Rt	(2,269,437.40)	(28,182.15)	58,702.88	-	-	-	-	-	(2,240,816.57)
LGE-136920-Power Co Equip-Other	(25,110.98)	(1,715.30)	-	-	-	-	-	-	(26,826.28)
	(14,008,553.82)	(560,247.28)	1,831,261.35	(376.55)	-	-	-	-	(12,767,885.30)
<b>Electric Hydro Production</b>									
LGE-133020-Ohio Falls Non-Project	-	-	-	-	-	-	-	-	-
LGE-133020-Ohio Falls Project 289	-	-	-	-	-	-	-	-	-
LGE-133100-Ohio Falls Non-Project	(38,169.96)	(348.72)	-	-	-	-	-	-	(38,518.71)
LGE-133100-Ohio Falls Project 289	(4,260,296.82)	(3,788.24)	-	-	-	-	-	-	(4,264,085.06)
LGE-133200-Ohio Falls Project 289	(1,098,224.57)	(378,218.28)	-	-	-	-	-	-	(1,476,442.85)
LGE-133300-Ohio Falls Project 289	(907,205.93)	(48,005.96)	-	-	-	-	-	-	(955,211.59)
LGE-133400-Ohio Falls Project 289	(1,844,429.41)	(199,162.94)	-	-	-	-	-	-	(1,803,592.25)
LGE-133500-Ohio Falls Non-Project	(2,897.00)	(409.82)	-	-	-	-	-	-	(3,306.82)
LGE-133500-Ohio Falls Project 289	(38,289.74)	(6,495.68)	-	-	-	-	-	-	(44,785.40)
LGE-133600-Ohio Falls Non-Project	(872.13)	-	-	-	-	-	-	-	(872.13)
LGE-133600-Ohio Falls Project 289	(16,934.08)	-	-	-	-	-	-	-	(16,934.08)
LGE-133707-ARO Cost Hydro Prod (Eqp	(17,810.24)	(482.28)	-	17,928.42	-	-	-	-	(364.10)
	(8,025,131.41)	(597,891.80)	-	17,928.42	-	-	-	-	(8,605,094.89)
<b>Electric Other Production</b>									
LGE-134020-TO 5 CT Land	-	-	-	-	-	-	-	-	-
LGE-134020-Waterwido - Land	-	-	-	-	-	-	-	-	-
LGE-134100-Structures and Imp	(3,382,959.26)	(478,504.32)	-	-	-	-	-	-	(3,841,463.58)
LGE-134200-Fuel Holders, Prod	(1,964,978.66)	(291,730.66)	174,811.95	-	-	-	-	-	(2,022,097.37)
LGE-134300-Primo Movers	(28,889,842.27)	(5,876,332.71)	10,198.19	-	-	-	-	-	(34,755,976.79)
LGE-134400-Generators	(14,517,236.70)	(1,071,207.88)	-	-	-	-	-	-	(15,588,444.38)
LGE-134500-Accessory Electric	(4,748,138.88)	(877,687.73)	-	-	-	-	-	-	(5,425,826.61)
LGE-134600-Misc. Power Plant	(1,098,283.55)	(106,127.55)	-	-	-	-	-	-	(1,172,421.10)
LGE-134705-ARO Cost Other Prod (L/B	(837.12)	(315.91)	-	960.35	-	-	-	-	(162.68)
LGE-134707-ARO Cost Other Prod (Eqp	(88,481.36)	(54,532.21)	-	143,013.57	-	-	-	-	(0.00)
	(54,538,767.60)	(8,496,438.77)	184,810.14	143,973.92	-	-	-	-	(62,608,422.51)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE - KENTUCKY - FINANCIAL ACCOUNTING #REF1

	Beginning Balance	Accruals	Retirements	Transfers/Adjustments	RWP Transfers Out	Cost of Removal	Salvage	Other Credits	Ending Balance
<b>Electric Steam Production</b>									
LGE-131020-Steam Production - Land									
LGE-131100-Cane Run Unit 1 Structure	(5,048,304.93)	-	-	-	-	-	-	-	(5,048,304.93)
LGE-131100-Cane Run Unit 2 Structure	(2,105,202.77)	-	-	-	-	-	-	-	(2,105,202.77)
LGE-131100-Cane Run Unit 3 Structure	(5,917,984.83)	-	-	-	-	-	-	-	(5,917,984.83)
LGE-131100-Cane Run Unit 4 SO2-Stru	(1,714,405.60)	(7,223.40)	-	-	-	-	-	-	(1,721,629.00)
LGE-131100-Cane Run Unit 4 Structure	(4,579,270.72)	(43,563.48)	-	-	-	-	-	-	(4,622,834.20)
LGE-131100-Cane Run Unit 5 SO2-Stru	(2,300,598.19)	(25,464.44)	-	-	-	-	-	-	(2,327,062.63)
LGE-131100-Cane Run Unit 5 Structure	(6,041,394.90)	(120,861.32)	12,303.83	-	-	-	-	-	(6,140,922.38)
LGE-131100-Cane Run Unit 6 SO2-Stru	(2,124,011.35)	(40,887.84)	-	-	-	-	-	-	(2,164,899.18)
LGE-131100-Cane Run Unit 6 Structure	(12,890,580.14)	(447,944.47)	2,391.83	-	-	52,853.34	-	-	(13,285,279.44)
LGE-131100-Mill Creek Unit 1 SO2-St	(1,818,060.16)	(28,210.20)	-	-	-	-	-	-	(1,846,270.36)
LGE-131100-Mill Creek Unit 1 Struct	(18,979,344.00)	(315,919.61)	11,928.32	-	-	3,925.64	-	-	(17,178,409.71)
LGE-131100-Mill Creek Unit 2 SO2-St	(1,579,281.24)	(25,220.64)	-	-	-	-	-	-	(1,604,501.88)
LGE-131100-Mill Creek Unit 2 Struct	(9,852,487.31)	(153,681.39)	19,601.84	-	-	4,018.70	-	-	(9,992,528.13)
LGE-131100-Mill Creek Unit 3 SO2-St	(475,078.88)	(5,334.12)	-	-	-	-	-	-	(480,413.00)
LGE-131100-Mill Creek Unit 3 Struct	(20,647,391.35)	(367,218.77)	105,976.30	-	-	27,466.95	-	-	(20,881,166.87)
LGE-131100-Mill Creek Unit 4 SO2-St	(4,797,577.87)	(93,817.68)	-	-	-	-	-	-	(4,891,395.55)
LGE-131100-Mill Creek Unit 4 Struct	(38,035,878.82)	(1,057,631.59)	14,570.81	-	-	1,895.48	-	-	(37,077,042.12)
LGE-131100-TC 1 Future Use - 105	(10,796.18)	(494.76)	-	-	-	-	-	-	(11,290.94)
LGE-131100-Trumble Unit 1 SO2-Struc	(344,326.31)	(11,281.16)	-	-	-	-	-	-	(355,607.47)
LGE-131100-Trumble Unit 1 Structure	(54,500,008.57)	(2,295,257.28)	8,265.40	-	-	-	-	-	(56,796,000.45)
LGE-131100-Structures & Imp	(189,771,951.18)	(5,040,942.12)	176,038.33	-	-	90,160.11	-	-	(194,548,684.88)
LGE-131101-AROP CR 1 Struct & Impr	(5,430.86)	-	-	-	-	-	-	-	(5,430.86)
LGE-131101-AROP CR 8 Struct & Impr	(2,119,813.41)	(47,282.98)	-	-	-	-	-	-	(2,167,178.37)
LGE-131101-AROP MC 1 Struct & Impr	(140,873.72)	(1,972.80)	-	-	-	-	-	-	(142,846.52)
LGE-131101-AROP MC 8 Struct & Impr	(810,891.53)	(11,250.12)	-	-	-	-	-	-	(822,241.65)
LGE-131101-AROP MC 4 Struct & Impr	(3,481,068.06)	(106,886.52)	-	-	-	-	-	-	(3,587,955.18)
LGE-131101-AROP TC 1 Struct & Impr	(2,405,552.45)	(83,868.38)	-	-	-	-	-	-	(2,489,420.81)
LGE-131101-AROP Struct & Impr	(8,793,830.63)	(251,240.79)	-	-	-	-	-	-	(9,015,071.39)
LGE-131110-CR 8 Capital Leased Equip	(1,097.49)	-	-	-	-	-	-	-	(1,097.49)
LGE-131110-MC 4 Capital Leased Equip	(1,284.53)	-	-	-	-	-	-	-	(1,284.53)
LGE-131110-CAPITAL LEASED EQUIP	(2,381.93)	-	-	-	-	-	-	-	(2,381.93)
LGE-131200-Cane Run Locomotives - B	(52,811.12)	(1,376.40)	-	-	-	-	-	-	(54,187.52)
LGE-131200-Cane Run Rail Cars - Bol	(1,067,093.89)	(47,155.98)	-	-	-	-	-	-	(1,114,249.37)
LGE-131200-Cane Run Unit 1 Boiler P	(1,228,538.15)	-	-	-	-	-	-	-	(1,228,538.15)
LGE-131200-Cane Run Unit 2 Boiler P	(152,754.79)	-	-	-	-	-	-	-	(152,754.79)
LGE-131200-Cane Run Unit 3 Boiler P	(1,182,185.79)	-	-	-	-	-	-	-	(1,182,185.79)
LGE-131200-Cane Run Unit 4 Boiler P	(18,137,319.60)	(1,849,294.53)	50,613.86	-	-	3,271.84	-	-	(19,026,728.43)
LGE-131200-Cane Run Unit 4 SO2 Bol	(17,908,891.77)	(840,940.25)	33,827.93	-	-	8,957.17	-	-	(18,709,047.02)
LGE-131200-Cane Run Unit 5 Boiler P	(19,872,123.81)	(2,490,655.62)	57,952.71	-	-	15,262.46	-	-	(19,287,964.59)
LGE-131200-Cane Run Unit 5 SO2 Bol	(27,962,984.43)	(1,144,168.94)	-	-	-	-	-	-	(29,107,153.47)
LGE-131200-Cane Run Unit 8 Boiler P	(25,334,215.38)	(2,792,851.49)	91,302.28	-	-	36,114.65	-	-	(27,996,640.96)
LGE-131200-Cane Run Unit 8 SO2 Bol	(25,588,349.29)	(1,443,536.64)	-	-	-	-	-	-	(27,031,885.93)
LGE-131200-MC Offsite Rail Cars	(522,111.39)	(1,910.47)	524,021.85	-	-	-	-	-	-
LGE-131200-Mill Creek Locomotives B	(464,812.87)	(17,789.26)	-	-	-	-	-	-	(472,602.15)
LGE-131200-Mill Creek Rail Cars Bol	(2,028,497.14)	(92,804.88)	-	-	-	-	-	-	(2,121,302.02)
LGE-131200-Mill Creek Unit 1 Boiler	(30,701,818.81)	(2,264,436.07)	102,499.48	-	-	12,132.67	-	-	(32,791,422.75)
LGE-131200-Mill Creek Unit 1 SO2 Bo	(28,739,576.92)	(1,990,194.32)	49,084.38	-	-	9,501.82	-	-	(30,639,148.04)
LGE-131200-Mill Creek Unit 2 Boiler	(22,365,596.18)	(2,490,509.75)	89,055.72	-	-	32,912.59	-	-	(24,757,137.23)
LGE-131200-Mill Creek Unit 2 SO2 Bo	(25,739,881.79)	(1,523,782.23)	281,131.38	-	-	77,250.00	-	-	(26,905,002.64)
LGE-131200-Mill Creek Unit 3 Boiler	(50,021,210.25)	(5,505,477.28)	133,468.10	-	-	27,555.66	-	-	(55,509,684.77)
LGE-131200-Mill Creek Unit 3 SO2 Bo	(31,258,617.48)	(2,433,142.44)	-	-	-	-	-	-	(33,691,759.92)
LGE-131200-Mill Creek Unit 4 Boiler	(68,870,157.34)	(9,550,194.10)	932,760.50	-	-	149,538.64	(45,461.74)	-	(96,189,484.04)
LGE-131200-Mill Creek Unit 4 SO2 Bo	(68,970,766.88)	(4,237,231.72)	224,882.98	-	-	22,650.00	-	-	(72,968,455.50)
LGE-131200-TC 1 Future Use - 105	(488.82)	(106.56)	-	-	-	-	-	-	(595.38)
LGE-131200-Trumble Unit 1 Boiler PI	(97,009,941.47)	(7,850,954.38)	1,329,552.71	-	-	201,728.43	-	-	(73,128,616.71)
LGE-131200-Trumble Unit 1 SO2 Boile	(41,970,851.71)	(2,302,314.60)	2,302,314.60	-	-	-	-	-	(41,970,851.71)
LGE-131200-Boiler	(600,962,799.85)	(50,619,118.03)	3,887,133.85	-	-	597,884.33	(45,461.74)	-	(647,042,361.45)
LGE-131201-AROP MCA Boiler Pk Equip	(225,530.81)	(8,745.80)	-	-	-	-	-	-	(234,276.61)
LGE-131201-AROP MCA SO2 Boiler Pk	(327,877.64)	(9,843.48)	-	-	-	-	-	-	(337,721.12)
LGE-131201-AROP Boiler Pk	(553,178.55)	(18,589.08)	-	-	-	-	-	-	(571,767.63)
LGE-131400-Cane Run Unit 1 Turbogeo	(158,076.88)	-	-	-	-	-	-	-	(158,076.88)
LGE-131400-Cane Run Unit 2 Turbogeo	(20,826.57)	-	-	-	-	-	-	-	(20,826.57)
LGE-131400-Cane Run Unit 3 Turbogeo	(1,004,854.68)	-	-	-	-	-	-	-	(1,004,854.68)
LGE-131400-Cane Run Unit 4 Turbogeo	(8,392,813.65)	(281,875.02)	-	-	-	-	-	-	(8,674,788.67)
LGE-131400-Cane Run Unit 5 Turbogeo	(7,474,448.80)	(178,085.24)	-	-	-	-	-	-	(7,652,534.04)
LGE-131400-Cane Run Unit 6 Turbogeo	(10,483,112.70)	(500,193.11)	96,081.87	-	-	3,278.27	-	-	(10,892,905.67)
LGE-131400-Mill Creek Unit 1 Turbogeo	(12,433,492.17)	(215,759.12)	-	-	-	-	-	-	(12,749,251.29)
LGE-131400-Mill Creek Unit 2 Turbogeo	(12,498,379.48)	(413,528.31)	-	-	-	-	-	-	(12,911,907.79)
LGE-131400-Mill Creek Unit 3 Turbogeo	(20,542,218.23)	(604,537.55)	-	-	-	-	-	-	(21,146,755.78)
LGE-131400-Mill Creek Unit 4 Turbogeo	(26,597,637.24)	(978,826.22)	7,383.32	-	-	-	-	-	(27,568,079.14)
LGE-131400-TC 1 Future Use - 105	(1,850,195.75)	(102,801.38)	-	-	-	-	-	-	(2,052,997.11)
LGE-131400-Trumble Unit 1 Turbogeo	(18,944,882.10)	(1,403,895.38)	-	-	-	-	-	-	(21,348,777.48)
LGE-131400-Turbogenerators	(121,901,016.88)	(4,784,632.21)	103,475.19	-	-	3,278.27	-	-	(126,578,867.64)
LGE-131500-Cane Run Unit 1 Accessor	(2,380,879.77)	-	-	-	-	17,140.69	-	-	(2,398,020.46)
LGE-131500-Cane Run Unit 2 Accessor	(1,625,642.34)	-	-	-	-	-	-	-	(1,625,642.34)

LOUISVILLE GAS & ELECTRIC COMPANY  
 RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE - KENTUCKY - FINANCIAL ACCOUNTING  
 #REF!

	Beginning Balance	Accruals	Retirements	Transfers/ Adjustments	RWP/ Transfers Out	Cost of Removal	Salvage	Other Credits	Ending Balance
LGE-131500-Cane Run Unit 3 Accessory	(1,319,858.58)	-	-	-	-	-	-	-	(1,319,858.58)
LGE-131500-Cane Run Unit 4 Accessory	(3,970,503.32)	(176,970.12)	747.59	-	-	-	-	-	(3,546,725.85)
LGE-131500-Cane Run Unit 4 SO2 Acco	(2,228,380.25)	(8,101.20)	-	-	-	-	-	-	(2,234,481.45)
LGE-131500-Cane Run Unit 5 Accessory	(3,782,878.10)	(285,253.28)	-	-	-	-	-	-	(4,048,128.38)
LGE-131500-Cane Run Unit 5 SO2 Acco	(3,035,818.06)	(33,025.80)	-	-	-	-	-	-	(3,098,843.86)
LGE-131500-Cane Run Unit 5 Accessory	(4,852,368.91)	(250,323.59)	-	-	-	-	-	-	(5,102,692.50)
LGE-131500-Cane Run Unit 6 SO2 Acco	(2,818,163.44)	(31,878.68)	-	-	-	-	-	-	(2,949,782.12)
LGE-131500-Mill Creek Unit 1 Access	(7,242,151.24)	(397,355.79)	-	-	-	-	-	-	(7,639,507.03)
LGE-131500-Mill Creek Unit 1 SO2 Ac	(8,154,687.44)	(82,546.28)	-	-	-	-	-	-	(8,247,233.72)
LGE-131500-Mill Creek Unit 2 Accoas	(4,254,129.64)	(130,754.68)	-	-	-	-	-	-	(4,384,884.32)
LGE-131500-Mill Creek Unit 2 SO2 Ac	(5,052,247.87)	(76,135.44)	-	-	-	-	-	-	(5,128,383.31)
LGE-131500-Mill Creek Unit 3 Access	(11,335,111.35)	(215,505.68)	-	-	-	398.25	-	-	(11,551,218.78)
LGE-131500-Mill Creek Unit 3 SO2 Ac	(3,274,372.33)	(39,495.80)	-	-	-	-	-	-	(3,313,868.13)
LGE-131500-Mill Creek Unit 4 Access	(4,677,801.95)	(371,108.77)	-	-	-	-	-	-	(5,048,710.72)
LGE-131500-Mill Creek Unit 4 SO2 Ac	(5,612,077.68)	(100,291.68)	-	-	-	-	-	-	(5,712,369.36)
LGE-131500-TC 1 Future Use - 105	(5,840.01)	(256.68)	-	-	-	-	-	-	(6,096.69)
LGE-131500-Trimbale Unit 1 Accessory	(22,522,320.98)	(971,980.00)	12,889.98	-	-	1,380.15	-	-	(23,489,030.83)
LGE-131500-Trimbale Unit 1 SO2 Accoas	(2,208,753.00)	(58,022.64)	-	-	-	-	-	-	(2,267,775.64)
LGE-131500-Accessory	(107,733,122.03)	(3,218,785.29)	20,893.35	-	-	18,899.08	-	-	(110,912,014.89)
LGE-131501-AROP Cane Run Unit 4 Accessory	(381,541,344)	(9,705.72)	-	-	-	-	-	-	(371,247.08)
LGE-131501-AROP Cane Run Unit 5 Accessory	(210,501.12)	(5,438.72)	-	-	-	-	-	-	(205,062.40)
LGE-131501-AROP Cane Run Unit 6 Accessory	(1,136,620.77)	(74,070.12)	-	-	-	-	-	-	(1,211,460.89)
LGE-131501-AROP MC 1 Accessory	(712,706.07)	(20,188.12)	-	-	-	-	-	-	(732,894.19)
LGE-131501-AROP MC 2 Accessory	(850,157.22)	(18,755.24)	-	-	-	-	-	-	(868,912.46)
LGE-131501-AROP MC 3 Accessory	(1,114,674.18)	(17,474.40)	-	-	-	-	-	-	(1,132,148.58)
LGE-131501-AROP MC 4 Accessory	(2,084,854.81)	(41,712.58)	-	-	-	-	-	-	(2,126,567.39)
LGE-131501-AROP TC 1 Accessory	(815,849.34)	(59,079.60)	-	-	-	-	-	-	(874,928.94)
LGE-131501-AROP Accessory	(7,386,594.83)	(245,300.28)	-	-	-	-	-	-	(7,631,895.11)
LGE-131600-Cane Run Unit 1 Misc. Po	(23,531.82)	-	-	-	-	-	-	-	(23,531.82)
LGE-131600-Cane Run Unit 3 Misc. Po	(12,867.88)	-	-	-	-	-	-	-	(12,867.88)
LGE-131600-Cane Run Unit 4 Misc. Po	(10,014.37)	(5,466.72)	-	-	-	-	-	-	(15,511.09)
LGE-131600-Cane Run Unit 4 SO2 Misc	(16,511.23)	(183.00)	-	-	-	-	-	-	(16,694.23)
LGE-131600-Cane Run Unit 5 Misc. Po	(26,330.19)	(5,235.56)	-	-	-	-	-	-	(31,565.75)
LGE-131600-Cane Run Unit 5 SO2 Misc	(71,168.89)	(1,348.08)	-	-	-	-	-	-	(72,516.97)
LGE-131600-Cane Run Unit 6 Misc. Po	(1,774,513.03)	(122,302.40)	8,727.53	-	-	-	-	-	(1,285,087.90)
LGE-131600-Cane Run Unit 6 SO2 Misc	(49,499.32)	(898.20)	-	-	-	-	-	-	(50,277.52)
LGE-131600-Mill Creek Unit 1 Misc P	(443,831.08)	(22,806.67)	-	-	-	-	-	-	(466,637.75)
LGE-131600-Mill Creek Unit 2 Misc.	(87,542.73)	(3,588.71)	-	-	-	-	-	-	(91,131.44)
LGE-131600-Mill Creek Unit 3 Misc.	(305,913.67)	(8,458.37)	-	-	-	-	-	-	(314,372.04)
LGE-131600-Mill Creek Unit 4 Misc.	(2,242,835.58)	(192,540.98)	-	-	-	-	-	-	(2,435,376.56)
LGE-131600-Mill Creek Unit 4 SO2 Mi	(43,753.78)	(2,199.18)	8,801.69	-	-	-	-	-	(38,151.28)
LGE-131600-Trimbale Unit 1 Misc. Pow	(1,037,333.88)	(82,873.80)	-	-	-	-	-	-	(1,120,207.68)
LGE-131600-Misc. Power Plant	(5,542,357.34)	(447,902.53)	18,529.19	-	-	-	-	-	(5,971,730.68)
LGE-131707-ARO Cost Steam (Eq)	(2,542,438.73)	(778,839.85)	3,369.00	-	-	-	-	-	(3,247,909.58)
	(1,045,180,651.57)	(65,465,549.30)	4,309,469.71	3,114,913.79	-	710,221.79	(45,461.74)	-	(1,102,478,857.32)
<b>Electric Transmission</b>									
LGE-135010 - KY Electric Transmission -	(1,418,684.11)	(286,799.40)	-	-	-	-	-	-	(1,705,483.51)
LGE-135020-Electric Transmission -	-	-	-	-	-	-	-	-	-
LGE-135210 - KY Electric Transmission -	(1,268,556.53)	(58,134.58)	200,353.49	(12,780.79)	-	-	-	-	(1,138,118.39)
LGE-135210-TC Sw. Station - Substat	(64,752.88)	(2,808.55)	-	-	-	-	-	-	(67,361.43)
LGE-135210-TC Unit 1 - Trans Sub	(11,571.59)	(1,294.20)	-	12,780.79	-	-	-	-	(54.97)
LGE-135310 - KY Electric Transmission -	(80,888,871.83)	(1,425,242.01)	328,033.65	-	-	159,160.52	-	-	(81,827,819.47)
LGE-135310-TC Sw. Station - Substat	(5,898.59)	(0.58)	-	-	-	-	-	-	(5,897.17)
LGE-135310-TC Unit 1 - Trans. - Sub	(501.17)	-	-	-	-	-	-	-	(501.17)
LGE-135311-AROP Station Equip	(1,975.03)	-	-	-	-	-	-	-	(1,975.03)
LGE-135311-AROP TC1 Station Equip	(637.73)	-	-	-	-	-	-	-	(637.73)
LGE-135400 - KY Electric Transmission -	(17,170,383.82)	(354,130.16)	-	-	-	-	-	-	(17,524,493.98)
LGE-135500 - KY Electric Transmission -	(14,871,353.99)	(1,304,017.36)	59,795.82	-	-	50,415.08	-	-	(16,056,160.47)
LGE-135600 - KY Electric Transmission -	(19,787,844.80)	(1,000,723.57)	137,321.13	-	-	57,601.77	(71,305.28)	-	(20,844,960.75)
LGE-135700-Electric Transmission -	(531,773.78)	(41,073.78)	-	-	-	-	-	-	(572,847.54)
LGE-135800-Electric Transmission -	(1,808,510.38)	(189,558.84)	-	-	-	-	-	-	(1,992,169.22)
LGE-135915-ARO Cost Transm (L/B)	(607.12)	(72.71)	-	698.43	-	-	-	-	(41.40)
LGE-135917-ARO Cost Transm (Eq)	-	-	-	-	-	-	-	-	-
	(117,810,041.22)	(4,860,625.71)	725,504.09	698.43	-	276,177.35	(71,305.28)	-	(121,638,592.34)
<b>Total Electric Depreciation Reserves</b>	<b>(1,638,245,894.33)</b>	<b>(101,758,379.85)</b>	<b>13,160,287.58</b>	<b>3,281,642.06</b>	<b>-</b>	<b>9,576,588.56</b>	<b>(404,204.47)</b>	<b>-</b>	<b>(1,714,377,749.45)</b>
<b>Electric Intangible Plant</b>									
LGE-130100-Elect. Intangible Plant -	-	-	-	-	-	-	-	-	-
LGE-130200-Franchises and Consents	(100.00)	-	-	-	-	-	-	-	(100.00)
	(100.00)	-	-	-	-	-	-	-	(100.00)
<b>Total Electric Amortization Reserves</b>	<b>(100.00)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(100.00)</b>

LOUISVILLE GAS & ELECTRIC COMPANY  
 RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE - KENTUCKY - FINANCIAL ACCOUNTING  
 #REF!

Beginning Balance	Assestis	Reformments	Transfers/ Adjustments	RVIP Transfers Out	Cost of Removal	Subvato	Other Credits	Ending Balance

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE - KENTUCKY - FINANCIAL ACCOUNTING  
#REF!

	Beginning Balance	Accruals	Retirements	Transfers/ Adjustments	RWIP Transfers Out	Cost of Removal	Salvage	Other Credits	Ending Balance
<b>Gas Distribution</b>									
LGE-237412-Gas Distribution Land	-	-	-	-	-	-	-	-	-
LGE-237422-Gas Distribution Land RI	(77,350.77)	(29.64)	-	-	-	-	-	-	(77,380.41)
LGE-237510-Gas Distribution - City	(136,481.22)	(3,890.94)	-	-	-	-	-	-	(140,372.16)
LGE-237520-Gas Distribution - Other	(126,057.78)	(44,269.91)	4,564.22	-	-	13,832.84	-	-	(151,980.81)
LGE-237600-Gas Distribution - Mains	(102,713,001.40)	(5,453,240.34)	1,628,955.41	-	-	54,667.81	-	-	(105,484,418.72)
LGE-237800-Gas Distribution - Meters	(2,461,810.44)	(270,878.59)	98,140.31	-	-	27,629.44	-	-	(2,606,819.28)
LGE-237900-Gas Distribution - City	(1,596,495.89)	(95,822.42)	37,748.73	-	-	12,901.50	-	-	(1,641,538.08)
LGE-238000-Gas Distribution - Gas S	(57,705,213.38)	(6,221,361.56)	41,171.84	-	-	58,468.50	-	-	(63,828,934.60)
LGE-238100-Meters	(4,734,534.87)	(1,424,088.34)	11,215.64	-	-	-	-	-	(6,147,387.57)
LGE-238300-Regulators	(995,895.70)	(483,831.36)	918,088.90	-	-	69,089.85	(9,300.67)	-	(481,888.88)
LGE-238500-Gas Distribution - Indus	(113,340.31)	(3,452.93)	12,109.47	-	-	14,344.16	-	-	(90,339.31)
LGE-238700-Gas Distribution - Other	(14,945.82)	(2,981.88)	-	-	-	-	-	-	(17,927.70)
LGE-238805-ARO Cost Gas Dist (L/B)	(177.12)	(22.33)	-	182.66	-	-	-	-	(16.40)
LGE-238807-ARO Cost Gas Dist (Eqp)	(20,203.33)	(110,110.86)	-	80,565.55	-	-	-	-	(49,718.44)
	(170,695,578.01)	(14,094,060.60)	2,749,974.52	80,778.51	-	251,313.70	(9,300.67)	-	(181,716,902.55)
<b>Gas General Plant</b>									
LGE-239210-Transportation Equip-Car	(1,896,147.04)	(4,799.36)	139,830.54	1,688.97	-	-	-	-	(1,729,426.89)
LGE-239220-Transportation Equip-Trn	(181,279.75)	(22,024.15)	-	9,611.99	-	-	-	-	(193,391.91)
LGE-239400-Tools, Shop, and Garage	(1,438,296.93)	(196,562.90)	-	(111,529.54)	-	-	-	-	(1,746,389.37)
LGE-239500-Laboratory Equipment	(430,423.33)	(169,717.86)	430,028.54	110,114.45	-	-	-	-	-
LGE-239510-Power Op Equip-Hourly Ra	(2,337,010.27)	(58,787.86)	35,486.97	(10,061.94)	-	-	-	-	(2,371,373.10)
LGE-239620-Power Op Equip - Other	(31,846.66)	(1,289.00)	-	(123.93)	-	-	-	-	(33,259.59)
	(6,285,002.97)	(394,181.93)	605,344.05	(0.00)	-	-	-	-	(6,073,840.85)
<b>Gas Storage</b>									
LGE-235010-Gas Storage Underground	-	-	-	-	-	-	-	-	-
LGE-235020-Gas Storage Underground	(70,451.45)	-	-	-	-	-	-	-	(70,451.45)
LGE-235120-Gas Storage Undq. - Comp	(848,110.03)	(61,993.25)	14,163.04	-	-	-	-	-	(895,910.24)
LGE-235130-Gas Storage Undq. - Regu	(14,636.49)	-	-	-	-	-	-	-	(14,636.49)
LGE-235140- KY Gas Storage Underground	(804,103.36)	(14,026.85)	25,726.34	-	-	47,604.60	(63.60)	-	(745,762.87)
LGE-235210-Gas Storage Undq. - Leas	(569,569.96)	-	-	-	-	-	-	-	(569,569.96)
LGE-235220-Gas Storage Underground	(452,027.28)	-	-	-	-	-	-	-	(452,027.28)
LGE-235230-Gas Storage Undq. - Non	(7,594,637.58)	(66,769.52)	-	-	-	-	-	-	(7,661,407.10)
LGE-235240- KY Gas Storage Underground	(2,287,367.44)	(7,721.52)	-	-	-	-	-	-	(2,295,088.96)
LGE-235250- KY AROP Gas Storage Underground	(537,191.85)	(157,595.47)	-	200,143.84	-	-	-	-	(494,643.48)
LGE-235255- KY Gas Storage Underground	-	(71,473.90)	450,235.06	(257,859.09)	-	1,642.21	-	-	122,644.28
LGE-235300- KY Gas Storage Underarou	(6,814,339.83)	(218,696.39)	146,462.86	58,446.21	-	59,310.09	-	-	(6,768,797.05)
LGE-235400-Gas Storage Undq. - Comp	(5,399,415.47)	(209,684.72)	1,094,362.53	871.83	-	45,190.48	-	-	(4,468,675.27)
LGE-235500-Gas Storage Undq. - Meas	(271,485.41)	(5,241.56)	-	-	-	-	-	-	(276,726.98)
LGE-235600-Gas Storage Undq. - Purf	(4,997,518.91)	(213,981.49)	58,123.18	-	-	27,448.41	-	-	(5,095,927.81)
LGE-235700- KY Gas Storage Underground	(253,263.14)	(25,215.80)	-	-	-	-	-	-	(278,478.74)
LGE-235805-ARO Cost Gas UG Store (L	(1,939.40)	-	-	2,039.91	-	-	-	-	(153.13)
LGE-235807-ARO Cost Gas UG Store (E	(400,303.77)	(37,766.23)	-	399,757.03	-	-	-	-	(38,312.97)
	(31,286,811.38)	(1,113,260.16)	1,789,093.01	402,259.83	-	181,396.77	(63.60)	-	(30,027,145.50)

LOUISVILLE GAS & ELECTRIC COMPANY  
RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE - KENTUCKY - FINANCIAL ACCOUNTING  
#REF!

	Beginning Balances	Accruals	Retirements	Transfers/ Adjustments	RWIP Transfers Out	Cost of Removal	Salvage	Other Credits	Ending Balance
<b>Gas Transmission</b>									
LGE-236520-Gas Transmission Rights	(207,845.87)	(595.80)	-	-	-	-	-	-	(208,241.67)
LGE-236700-Gas Transmission - Mains	(12,005,381.40)	(58,289.32)	6,088.28	-	-	19,817.95	-	-	(12,038,754.49)
	(12,213,627.27)	(58,885.12)	6,088.28	-	-	19,817.95	-	-	(12,247,486.16)
<b>Total Gas Depreciation Reserves</b>	<b>(220,480,819.60)</b>	<b>(15,681,418.81)</b>	<b>5,150,510.96</b>	<b>483,078.34</b>	<b>-</b>	<b>452,628.42</b>	<b>(9,384.27)</b>	<b>-</b>	<b>(230,065,345.09)</b>
<b>Gas Intangible Plant</b>									
LGE-230200-Franchises and Consents	(800.00)	-	-	-	-	-	-	-	(800.00)
	(800.00)	-	-	-	-	-	-	-	(800.00)
<b>Total Gas Amortization Reserves</b>	<b>(800.00)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(800.00)</b>
<b>Common General Plant</b>									
LGE-338910-Common - Land	-	-	-	-	-	-	-	-	-
LGE-338920-Common - Land Rights	(122,843.08)	(5,981.84)	-	-	-	-	-	-	(128,824.92)
LGE-338910-Common Structures - Bldgs	(9,839,853.99)	(810,298.04)	151,800.49	-	-	113,314.54	-	-	(10,391,038.37)
LGE-338910-Common Structures - Gate	(5,078,291.10)	(968,984.53)	93,604.09	-	-	35,007.40	-	-	(5,814,604.14)
LGE-338910-Struct and Imp-LGE Bldg	(1,341,907.80)	(97,243.49)	-	-	-	-	-	-	(1,438,151.29)
LGE-338920-Common Structures - Tran	663,545.88	(106,282.52)	-	-	-	-	-	-	555,716.16
LGE-338930-Common Structures - Stor	(7,318,093.88)	(166,121.97)	31,313.95	-	-	8,139.98	-	-	(7,444,731.94)
LGE-338940-Common Structures - Othr	(158,687.24)	(6,575.88)	288.19	-	-	1,000.00	-	-	(163,954.73)
LGE-338960-Common Structures - Micr	(199,258.78)	(21,552.84)	-	-	-	-	-	-	(220,809.62)
LGE-338910-Office Furniture	(5,857,078.35)	(785,048.82)	-	-	-	-	-	-	(6,642,123.27)
LGE-338920-Office Equipment	(1,834,041.81)	(335,107.13)	-	-	-	-	-	-	(2,169,148.74)
LGE-338930-Computer Equipment	(22,525,829.48)	(4,592,847.15)	14,558,299.98	-	-	-	-	-	(12,559,156.65)
LGE-338931-Personal Computers	(1,153,492.82)	(855,707.72)	-	-	-	-	-	-	(1,809,200.84)
LGE-338940-Security Equipment	(1,190,378.48)	(208,489.81)	-	-	-	-	-	-	(1,398,872.10)
LGE-338920-Trans Equip-Cars and Tru	(92,152.33)	(9,549.93)	-	-	-	-	-	-	(101,702.28)
LGE-338920-Trans Equip-Trailers	(24,580.86)	(1,887.65)	-	-	-	-	-	-	(26,448.51)
LGE-338930-Stores Equipment	(528,422.19)	(88,787.75)	-	-	-	-	-	-	(597,208.94)
LGE-338940-Tools, Shop, Garage Equi	(1,053,784.66)	(202,422.69)	-	(9,745.78)	-	-	-	-	(1,265,633.33)
LGE-338950-Laboratory Equipment	(22,391.93)	(8,665.35)	22,281.50	9,745.78	-	-	-	-	0.00
LGE-338910-Power Cp Equip-Hourly Ra	(258,314.21)	(2,279.19)	26,628.21	-	-	-	-	-	(233,965.19)
LGE-338920-Power Cp Equip - Other	(8,152.01)	(567.39)	-	-	-	-	-	-	(8,719.37)
LGE-338970- KY Common - Communication E	(14,808,060.22)	(4,347,898.88)	10,744.41	-	-	9,833.65	-	-	(18,935,480.84)
LGE-338970-Communication Equip-Comp	(6,892,287.37)	(57,832.84)	-	-	-	-	-	-	(5,748,900.01)
LGE-338980-Miscellaneous Equipment	(358,954.78)	(207,234.03)	-	-	-	-	-	-	(566,188.81)
LGE-338915-ARO Cost Common (L/B)	(1,233.92)	(832.88)	-	1,553.72	-	-	-	-	(343.10)
	(78,802,101.48)	(13,633,407.80)	14,894,758.80	1,553.72	-	187,355.05	-	-	(77,171,841.71)
<b>Non-Utility Property</b>									
LGE-312101-Nonutility Prop - Coal L	-	-	-	-	-	-	-	-	-
LGE-312103-Nonutility-Cool Res of W	(249.83)	-	-	-	-	-	-	-	(249.83)
LGE-312104-Nonutility Prop - Misc L	-	-	-	-	-	-	-	-	-
LGE-312102-Nonutility-Coal Mineral	(63,110.43)	-	-	-	-	-	-	-	(63,110.43)
	(63,360.36)	-	-	-	-	-	-	-	(63,360.36)
<b>Total Common Depreciation Reserves</b>	<b>(78,885,481.84)</b>	<b>(13,633,407.80)</b>	<b>14,894,758.80</b>	<b>1,553.72</b>	<b>-</b>	<b>187,355.05</b>	<b>-</b>	<b>-</b>	<b>(77,235,202.07)</b>

LOUISVILLE GAS & ELECTRIC COMPANY  
 RESERVE FOR DEPRECIATION AND AMORTIZATION OF ELECTRIC PLANT IN SERVICE - KENTUCKY - FINANCIAL ACCOUNTING  
 #REF!

	Beginning Balance	Accruals	Retirements	Transfers/ Adjustments	RWIP Transfer Out	Cost of Removal	Salvage	Other Credits	Ending Balance
Common Intangible Plant									
LGE-330100-Common Intangible Plant	-	-	-	-	-	-	-	-	-
LGE-330200-Franchises and Consents	(4,200.00)	-	-	-	-	-	-	-	(4,200.00)
LGE-330300-Misc Intang Plant-Softwa	(15,402,812.34)	(3,605,682.82)	9,699,197.65	-	-	-	-	-	(9,309,297.51)
LGE-330310-CCS Software	(2,871,587.01)	(4,121,328.08)	-	-	-	-	-	-	(6,992,915.09)
LGE-330320-Law Library	-	-	-	-	-	-	-	-	-
	(18,278,599.35)	(7,726,988.90)	9,699,197.65	-	-	-	-	-	(16,306,390.60)
<b>Total Common Amortization Reserves</b>	<b>(18,278,599.35)</b>	<b>(7,726,988.90)</b>	<b>9,699,197.65</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(16,306,390.60)</b>
<b>TOTAL KENTUCKY RESERVES</b>	<b>(1,955,671,476.15)</b>	<b>(136,778,195.98)</b>	<b>42,904,784.90</b>	<b>3,776,274.11</b>	<b>-</b>	<b>10,166,573.03</b>	<b>(413,688.74)</b>	<b>-</b>	<b>(2,037,685,827.21)</b>



LOUISVILLE GAS & ELECTRIC COMPANY  
 RESERVE FOR DEPRECIATION AND AMORTIZATION OF PLANT IN SERVICE - INDIANA - FINANCIAL ACCOUNTING  
 #REF!

	Beginning Balance	Accruals	Retirements	Transfers/ Adjustments	RWIP Transfers Out	Cost of Removal	Salvage	Other Credits	Ending Balance
<b>Electric Distribution</b>									
LGE-136200- IN Elect. Dist. Substation	-	-	-	-	-	-	-	-	-
<b>Electric Transmission</b>									
LGE-135010- IN Electric Transmission -	(243,189.13)	(18,231.96)	-	-	-	-	-	-	(261,421.09)
LGE-135020- IN Electric Trans -	-	-	-	-	-	-	-	-	-
LGE-135210- IN Electric Transmission -	(216,029.01)	(3,962.88)	-	-	-	-	-	-	(219,991.89)
LGE-135310- IN Electric Transmission -	(7,024,687.67)	(139,301.41)	7,945.07	-	-	2,143.78	-	-	(7,153,900.23)
LGE-135400- IN Electric Transmission -	(4,617,656.20)	(84,918.07)	125,471.54	-	-	115,830.42	(21,571.29)	-	(4,482,843.60)
LGE-135500- IN Electric Transmission -	(919,537.81)	(55,488.45)	-	-	-	-	-	-	(975,026.26)
LGE-135600- IN Electric Transmission -	(2,810,331.71)	(85,928.83)	25,868.36	-	-	23,880.67	(4,447.34)	-	(2,850,958.85)
	(15,831,431.53)	(387,831.60)	159,284.97	-	-	141,854.87	(26,018.63)	-	(15,944,141.92)
<b>Total Electric Depreciation Reserves</b>	<b>(15,831,431.53)</b>	<b>(387,831.60)</b>	<b>159,284.97</b>	<b>-</b>	<b>-</b>	<b>141,854.87</b>	<b>(26,018.63)</b>	<b>-</b>	<b>(15,944,141.92)</b>
<b>Gas Storage</b>									
LGE-235140- IN Gas Storage Underground	(62,823.57)	(4,718.16)	-	-	-	-	-	-	(67,541.73)
LGE-235240- IN Gas Storage Underground	(293,624.07)	(1,458.00)	-	-	-	-	-	-	(295,082.07)
LGE-235250- IN AROP Gas Storage Underground	(303,477.17)	(20,362.19)	-	118,863.75	-	-	-	-	(204,975.61)
LGE-235255- IN Gas Storage Underground	-	(12,571.66)	54,470.80	(123,203.02)	-	1,584.75	-	-	(79,719.13)
LGE-235300- IN Gas Storage Underground	(625,349.75)	(24,081.52)	133,137.30	3,708.31	-	1,309.11	-	-	(511,276.55)
LGE-235400- IN Gas Storage Undergroun-Compress	(9,072.49)	-	-	9,072.49	-	-	-	-	-
LGE-235700- IN Gas Storage Underground	(23,253.19)	(9,314.22)	-	(9,944.42)	-	-	-	-	(42,511.83)
	(1,317,600.24)	(72,505.75)	187,608.10	(1,502.89)	-	2,893.86	-	-	(1,201,106.92)
<b>Total Gas Depreciation Reserves</b>	<b>(1,317,600.24)</b>	<b>(72,505.75)</b>	<b>187,608.10</b>	<b>(1,502.89)</b>	<b>-</b>	<b>2,893.86</b>	<b>-</b>	<b>-</b>	<b>(1,201,106.92)</b>
<b>Common General Plant</b>									
LGE-339700- IN Common - Communication E	(409,207.90)	(92,826.60)	-	-	-	-	-	-	(502,034.50)
<b>Total Common Depreciation Reserves</b>	<b>(409,207.90)</b>	<b>(92,826.60)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(502,034.50)</b>
<b>TOTAL INDIANA RESERVES</b>	<b>(17,558,239.67)</b>	<b>(553,163.95)</b>	<b>346,893.07</b>	<b>(1,502.89)</b>	<b>-</b>	<b>144,748.73</b>	<b>(26,018.63)</b>	<b>-</b>	<b>(17,647,263.34)</b>

**Crescente, Angela**

---

**From:** PowerPlantAlerts@lge-ku.com  
**Sent:** Tuesday, July 19, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Project 134560 has ARO

[login to powerplant](#)

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Friday, July 15, 2011 10:41 AM  
**To:** Raque, Gary; Ritchey, Stacy  
**Subject:** RE: Brown Main Pond Close Out

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Raque, Gary	Read: 7/15/2011 10:43 AM
	Ritchey, Stacy	Read: 7/15/2011 11:47 AM

Please be sure to let me know when you begin construction on the new landfill (inserting the first bottom layer) so I can remove the main ash pond's liability.

Thanks,  
Angela

---

**From:** Raque, Gary  
**Sent:** Friday, July 15, 2011 10:39 AM  
**To:** Crescente, Angela  
**Subject:** RE: Brown Main Pond Close Out

Angela,  
Due to our conversation today we will not be charging ARO or removal charges to the Brown CCR ash pond. At this time we will not be utilizing an ARO task.

---

**From:** Crescente, Angela  
**Sent:** Friday, July 15, 2011 9:34 AM  
**To:** Raque, Gary  
**Subject:** RE: Brown Main Pond Close Out

Gary,  
I haven't seen any charges on this task yet, but it is my understanding (based on what I heard in the meeting we were just in) that the pond has been drained and construction is being started on the landfill conversion. I was just wondering where the closeout of the ash pond charges have been going.

Thanks,  
Angela

---

**From:** Raque, Gary  
**Sent:** Monday, June 20, 2011 3:51 PM  
**To:** Crescente, Angela  
**Subject:** RE: Brown Main Pond Close Out

Yes its being converted to a Landfill

---

**From:** Crescente, Angela  
**Sent:** Monday, June 20, 2011 3:49 PM  
**To:** Raque, Gary  
**Subject:** RE: Brown Main Pond Close Out

I have set up a task called CP ARO for this purpose. Is the whole ash pond being closed?

---

**From:** Raque, Gary  
**Sent:** Monday, June 20, 2011 3:38 PM  
**To:** Crescente, Angela  
**Subject:** Brown Main Pond Close Out

Angela,

Just wanted to bring to your attention that we will probably have charges this year related to "closing out" of the Brown CCR Main Pond (Project #132371). This will need to have an the ARO task set up. I know that you set them up before.

Gary Raque  
LG&E and KU Energy LLC  
Project Engineering  
BOC 3  
Phone: (502) 627-3241  
Fax: (502) 217-2801  
[gary.raque@lge-ku.com](mailto:gary.raque@lge-ku.com)

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Thursday, June 09, 2011 9:05 AM  
**To:** Rose, Bruce; Ritchey, Stacy  
**Subject:** RE: TC and Ghent Landfill Capping / Holcim

Tracking:	Recipient	Read
	Rose, Bruce	Read: 6/9/2011 9:08 AM
	Ritchey, Stacy	Read: 6/9/2011 11:09 AM

I agree with Bruce. I can help set up a task for you using account 108799 for the cover soil and seed portion as the closing/retirement of the landfill is considered an ARO. If you have any removal costs on the same project not related to the ARO retirement, then a separate task using account 108901 would be needed. I would not expect there to be any other removal costs based on your email below, but thought I should mention that just in case. It would also help us to know the amount of acres that are still active as far as the landfill goes including the amount retired as Bruce stated below.

Thanks,  
Angela

---

**From:** Rose, Bruce  
**Sent:** Thursday, June 09, 2011 8:51 AM  
**To:** Ritchey, Stacy; Crescente, Angela  
**Subject:** RE: TC and Ghent Landfill Capping / Holcim

Stacy,

The capping you speak of is essentially cover soil and seeding per the process at Mill Creek. I assume this is what you are speaking of. In this case, they are in effect closing that portion of the landfill, meaning that these charges should be associated with removal/retirement, and then we would retire a portion of the landfill. However, as these costs are ARO, the proper account is 108799. When done we will need an engineer to tell us how many acres or a percentage of total acreage needs to be retired. Anything to add Angela??

---

**From:** Ritchey, Stacy  
**Sent:** Thursday, June 09, 2011 8:45 AM  
**To:** Crescente, Angela; Rose, Bruce  
**Subject:** FW: TC and Ghent Landfill Capping / Holcim

Angela or Bruce,

Could you take a look at the e-mail below. Would landfill capping be considered ARO at Ghent and Trimble?

Thanks,

Stacy

---

**From:** Hudson, Rusty

**Sent:** Thursday, June 09, 2011 8:18 AM  
**To:** Ritchey, Stacy  
**Subject:** RE: TC and Ghent Landfill Capping / Holcim

Stacy, I would check with Bruce. I thought those were ARO but I could be mistaken. Rusty

---

**From:** Ritchey, Stacy  
**Sent:** Wednesday, June 08, 2011 2:34 PM  
**To:** Hudson, Rusty  
**Subject:** TC and Ghent Landfill Capping / Holcim

Rusty,

At the end of Landfill construction there are costs associated with capping, are those cost capital or O&M? For example, the Ghent Landfill is expected to be complete in 2013. There are capping costs associated with Phase I in 2015 and 2016. If they are capital do we hold the project open to cover the capping costs, or do we associate the capping of Phase I as part of the cost of Phase II? Or should it be considered O&M?

Also, on Holcim I think assumption 4.3 should be changed to 3<sup>rd</sup> quarter 2012. We are going to the IC for an EPC contract in the October 2011 time frame.

Thanks,

Stacy

**Crescente, Angela**

---

**From:** Stratman, Paul  
**Sent:** Monday, May 09, 2011 4:10 PM  
**To:** Singleton, Janna; Leenerts, Patricia  
**Cc:** Murphy, Kevin; Crescente, Angela  
**Subject:** RE: Project MAN414

For all LSMR414, PMR414 and MAN414 retirements, the pipe is cut, capped, purged and abandoned in place (left in the ground to rot away for all eternity).

Miles and miles of it.

---


**From:** Singleton, Janna  
**Sent:** Monday, May 09, 2011 4:07 PM  
**To:** Leenerts, Patricia; Stratman, Paul  
**Cc:** Murphy, Kevin; Crescente, Angela  
**Subject:** RE: Project MAN414

Pat,

Just to clarify and prevent further emails...

Is your question – Did the tasks 6THMARRET and JEF13THINV have cut, cap and purge associated with them in which the pipe remained in the ground without gas flowing through it; therefore, making them ARO retirements?

*Janna*

 Think Green! Before printing this e-mail, ask the question, is it necessary?

---

**From:** Leenerts, Patricia  
**Sent:** Monday, May 09, 2011 4:00 PM  
**To:** Stratman, Paul  
**Cc:** Murphy, Kevin; Singleton, Janna; Crescente, Angela  
**Subject:** RE: Project MAN414

Paul, I did not define my question clearly. I am attempting to determine if the retirements involved on this (and any gas) project would be an ARO retirement. The ARO retirement is defined by cut, cap and purge, but also includes the retired pipe to be left in the ground without active flow of gas. I will refer to this as ARO retirements, if that is helpful for the future. I'm hoping to reduce confusion in the future from my questions, so if there is better terminology then let me know.

I believe that pipe is cut, cap and purged either temporarily or permanently so that work may be performed on the pipe. If you cut, cap and purge a pipe and then T into it to reroute, this would not be an ARO or even a regular retirement. The section of pipe which has been left in the ground, without gas flowing through it, would be the ARO (108799) retirement. If a section of pipe is retired and removed from the ground, then the cost associated with this type of retirement would be a normal 108901 retirement.

Thanks,

Pat  
502-627-3811

---

**From:** Stratman, Paul  
**Sent:** Wednesday, April 20, 2011 3:13 PM  
**To:** Leenerts, Patricia  
**Cc:** Murphy, Kevin  
**Subject:** RE: Project MAN414

Yes, these are cut, cap and purge retirements.

It is impossible to retire a gas facility without a cut, cap and purge operation. Without such an operation, gas would continually leak out into the atmosphere.

---

**From:** Leenerts, Patricia  
**Sent:** Wednesday, April 20, 2011 2:44 PM  
**To:** Stratman, Paul  
**Subject:** Project MAN414

Paul, is this blanket your responsibility?

Could retirements have cut, cap and purge? I have 2 tasks in particular that I'm trying to work... 6THMARRET and JEF13THINV.

If you could let me know by April 27, I would appreciate it...if not your project, please let me know so that I can forward to correct person and still get the answer by Apr 27.

Thanks,

Pat  
502-627-3811



**Crescente, Angela**

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**From:** Raque, Gary  
**Sent:** Thursday, April 28, 2011 2:59 PM  
**To:** Crescente, Angela  
**Subject:** FW: Ohio Falls

Angela,  
Is there an ARO set up for the Ohio Falls project?

Gary Raque  
LG&E and KU Energy LLC  
Project Engineering  
BOC 3  
Phone: (502) 627-3241  
Fax: (502) 217-2801  
[gary.raque@lge-ku.com](mailto:gary.raque@lge-ku.com)

**Crescente, Angela**

---

**From:** Mooney, Mike (BOC 3)  
**Sent:** Tuesday, April 26, 2011 10:10 AM  
**To:** Crescente, Angela  
**Subject:** Canal and Paddy's Run DEMO

Angela,

I am getting ready to send AIP's through to open up the Canal and Paddy's Run Demolition projects. Stacy Ritchey suggested I check with you to see if there is an ARO reserve set up for them.

THANKS!!!

**Mike Mooney**  
Budget Analyst III, Project Engineering  
BOC 3  
BOC Phone: (502) 627-3671  
Fax: (502) 217- 2943  
E-mail: [Mike.Mooney@lge-ku.com](mailto:Mike.Mooney@lge-ku.com)

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Friday, April 15, 2011 11:52 AM  
**To:** Duce, John; Richardson, Ralph  
**Cc:** Kinder, Debra; Wacker, Diana; Wiseman, Sara; 'nalexander@pwrplan.com'; Jim Ogilvie; Neal, Susan  
**Subject:** RE: Build is Ready

The updated ARO reports look great and they are ready to be moved into the build next week in PROD.

Thanks,  
Angela

---

**From:** Nick Alexander [<mailto:nalexander@pwrplan.com>]  
**Sent:** Thursday, April 14, 2011 2:51 PM  
**To:** Duce, John; Richardson, Ralph  
**Cc:** Kinder, Debra; Wacker, Diana; Wiseman, Sara; Neal, Susan; Crescente, Angela; Jim Ogilvie  
**Subject:** Build is Ready

John/Ralph,

The build completed successfully and is ready to be migrated for testing in DEV and TEST.

I've copied the files to the network. The \\fs4\lgeoracle\PowerPlan\CitrixTest\IFRS\bin folder includes the powerpla.exe and 44 PBD's from the new build.

The SRC folder has also been updated with the PBL's used to create this build.

Please run the attached script in TEST for the ARO Report object name updates. The script has already been run in DEV.

This build includes:

Cr Drilldown update – Allows the system control to be case sensitive.

5 updated ARO Reports – Angela will test.

Cursor Fix – Need to test through Citrix.

Let me know if you have any questions.

Nick Alexander

[NALEXANDER@PWRPLAN.COM](mailto:NALEXANDER@PWRPLAN.COM)  
POWERPLAN CONSULTANTS, INC.  
(404) 217-7379

\*\*\*PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Friday, April 15, 2011 11:00 AM  
**To:** Trenary, Samara  
**Cc:** Sneed, Lydia; Wiseman, Sara; Pienaar, Lesley  
**Subject:** Note 4

Samara:

Please use this one for LKE Note 4:



Note 4 - Asset  
Retirement Obli...

Thanks,  
Angela

**Note 4 - Asset Retirement Obligations**

A summary of LKE's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	<u>ARO Net Assets</u>	<u>ARO Liabilities</u>	<u>Regulatory Assets</u>
As of December 31, 2010	\$ 97	\$ (103)	\$ 9
ARO accretion and depreciation	-(1)	(21)	2
ARO settlements	-	-	-
Removal cost incurred	-	-	-
As of <u>Error! Reference source not found.</u> March 31, 2011	<u>\$ 9796</u>	<u>\$ (405104)</u>	<u>\$ 11</u>

At March 31, 2011, AROs totaling \$105-104 million were recorded on the Balance Sheet, of which \$1 million is included in "Other current liabilities."

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Condensed Consolidated Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied; therefore, ARO net assets, ARO liabilities and regulatory asset balances do not net to zero.

LKE's AROs are primarily related to the final retirement of assets associated with generating units and natural gas mains and wells. LKE's transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

**Crescente, Angela**

---

**From:** Raible, Eric  
**Sent:** Friday, April 15, 2011 10:56 AM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** RE: Note 3

I'll look into this and let you know.

Thanks,  
*T. Eric Raible, CPA*  
Manager, Regulatory Accounting & Reporting  
Controller Group  
LG&E and KU  
P: 627-3426  
F: 217-4800

---

**From:** Crescente, Angela  
**Sent:** Friday, April 15, 2011 10:34 AM  
**To:** Raible, Eric  
**Cc:** Wiseman, Sara  
**Subject:** Note 3

Eric,

I don't see the ARO Regulatory Asset line (h) on LKE, is there a reason it is not showing?

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Friday, April 15, 2011 10:55 AM  
**To:** Trenary, Samara  
**Cc:** Sneed, Lydia; Wiseman, Sara; Pienaar, Lesley  
**Subject:** Note 4 changes

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Trenary, Samara	Read: 4/15/2011 10:55 AM
	Sneed, Lydia	
	Wiseman, Sara	
	Pienaar, Lesley	Read: 4/15/2011 10:55 AM

Samara:

I had to change Note 4 on KU and LKE. Please see the attached:



Note 4 - Asset Retirement Obl...    Note 4 - Asset Retirement Obl...

Thanks,  
Angela

**Note 4 - Asset Retirement Obligations**

A summary of LKE's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	<u>ARO Net Assets</u>	<u>ARO Liabilities</u>	<u>Regulatory Assets</u>
As of December 31, 2010	\$ 97	\$ (103)	\$ 9
ARO accretion and depreciation	-(1)	(21)	2
ARO settlements	-	-	-
Removal cost incurred	-	-	-
As of <u>Error! Reference source not found.</u> March 31, 2011	<u>\$ 9796</u>	<u>\$ (405104)</u>	<u>\$ 11</u>

At March 31, 2011, AROs totaling \$105 million were recorded on the Balance Sheet, of which \$1 million is included in "Other current liabilities."

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Condensed Consolidated Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied; therefore, ARO net assets, ARO liabilities and regulatory asset balances do not net to zero.

LKE's AROs are primarily related to the final retirement of assets associated with generating units and natural gas mains and wells. LKE's transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.



**Note 4 - Asset Retirement Obligations**

A summary of KU's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	ARO Net Assets	ARO Liabilities	Regulatory Assets
As of December 31, 2010	\$ 52	\$ (54)	\$ 2
ARO accretion and depreciation	-(1)	(1)	1
ARO settlements	-	-	-
Removal cost incurred	-	-	-
As of <u>Error! Reference source not found.</u> March 31, 2011	<u>\$ 521</u>	<u>\$ (554)</u>	<u>\$ 3</u>

At March 31, 2011, AROs totaling \$554 million were recorded on the Balance Sheet, of which less than \$1 million is included in "Other current liabilities."

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Condensed Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied.

KU's AROs are primarily related to the final retirement of assets associated with generating units. KU's transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

**Note 4 - Asset Retirement Obligations**

A summary of KU's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	ARO Net Assets	ARO Liabilities	Regulatory Assets
As of December 31, 2010	\$ 52	\$ (54)	\$ 2
ARO accretion and depreciation	-(1)	(1)	1
ARO settlements	-	-	-
Removal cost incurred	-	-	-
As of <u>Error! Reference source not found.</u> March 31, 2011	<u>\$ 521</u>	<u>\$ (554)</u>	<u>\$ 3</u>

At March 31, 2011, AROs totaling \$554 million were recorded on the Balance Sheet, of which less than \$1 million is included in "Other current liabilities."

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Condensed Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied.

KU's AROs are primarily related to the final retirement of assets associated with generating units. KU's transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Friday, April 15, 2011 10:37 AM  
**To:** Raible, Eric  
**Cc:** Wiseman, Sara  
**Subject:** RE: Note 3

Eric,

The same is true for KU, I can't find it there either.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Friday, April 15, 2011 10:34 AM  
**To:** Raible, Eric  
**Cc:** Wiseman, Sara  
**Subject:** Note 3

Eric,

I don't see the ARO Regulatory Asset line (h) on LKE, is there a reason it is not showing?

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Tuesday, April 12, 2011 11:21 AM  
**To:** Trenary, Samara  
**Cc:** Wiseman, Sara  
**Subject:** RE: Reporting Package

Samara:

I went ahead and deleted the line "Removal cost incurred" per discussion with John Nitsche at PPL since he wanted us to use the line "Obligations settled" for our cash payments.

Thanks,  
Angela

---

**From:** Trenary, Samara  
**Sent:** Tuesday, April 12, 2011 9:58 AM  
**To:** Crescente, Angela  
**Subject:** RE: Reporting Package

My apologies...I didn't know there was a difference. Whatever is considered the reporting package support is due today. I checked the calendar and the notes tie-out is due on the 25<sup>th</sup>. Thanks for the clarification!

---

**From:** Crescente, Angela  
**Sent:** Tuesday, April 12, 2011 9:50 AM  
**To:** Trenary, Samara  
**Subject:** RE: Reporting Package

Based on the meeting this morning, it was my understanding that the reporting package support was due today, but the footnote support isn't due until the 25<sup>th</sup>. Please confirm.

---

**From:** Trenary, Samara  
**Sent:** Tuesday, April 12, 2011 9:43 AM  
**To:** Crescente, Angela  
**Subject:** Reporting Package

FYI...the supporting documentation/tie-outs for your footnote are due today. We are giving everything to Shannon and Valerie to review at two today. It would be great if you could get me your things for the ARO footnote prior to that. Let me know if that is feasible. Thanks!

**Crescente, Angela**

---

**From:** Jim Ogilvie <jogilvie@pwrplan.com>  
**Sent:** Wednesday, April 06, 2011 9:31 AM  
**To:** Kinder, Debra; Nick Alexander  
**Cc:** Wacker, Diana; Riggs, Eric; Crescente, Angela; Neal, Susan; Wiseman, Sara  
**Subject:** RE: Outstanding items on Project List

Here is the information on the Preliminary Retirements. Please read through and let us know if you have any questions. You should be able to set up and process some test preliminary retirements in DEV on your own.

- To enable, update the Work Order Type table in table maintenance and set the "Allow Prelim Retires" field to "yes" (1).
- Preliminary retirements (equivalent to CCNC for Original Cost Retire) can be entered on the lower portion of the normal WO retirements screen, which is activated once the work order type is set to allow preliminary retirements.
- These retirements are represented on the CPR as a header record with a retirement activity. If is not associated with the assets being retired. Basically, it looks like a credit asset. The activity will be treated as a retirement for Account Summary and Depr Ledger as well as for tax processing.
- Preliminary retirement pending transactions are created when you run auto 106.
- Post will automatically create the CPR header and create a relationship to other assets with those characteristics.
- Post will also automatically reverse all of the estimated retirements for a WO from the CPR once the first actual retirement is posted on that WO.
- Preliminary retirements are created in the bottom half of the window using the Add Prelim Ret, Copy Prelim Ret, Delete Prelim Ret, and Update buttons.
- Preliminary retirements go through the pending and approval process just like other transactions.
- You must have a special property unit (and retirement unit) called "Estimated Retirement" with id = -1. These should already exist in your database, but if they do not, then we can create them for you. That property unit must be related to all companies & utility accounts that you will want to use this functionality for. You must also relate at least one property group to this property unit.

--  
Jim Ogilvie  
[jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com)  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The New Address is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Kinder, Debra [<mailto:Debra.Kinder@lge-ku.com>]  
**Sent:** Tuesday, 05 April, 2011 2:55 PM  
**To:** Jim Ogilvie; Nick Alexander

**Cc:** Wacker, Diana; Riggs, Eric; Crescente, Angela; Neal, Susan; Charnes, Sara

**Subject:** Outstanding items on Project List

- 1) Inventory Unitization – What are the solutions to deal with the inability to allocate RWIP to the depr groups where no warehouse material and no specific retirements exist.
- 2) Improvements to the WO header creation interface to prevent the need to continually map.
- 3) Need process for AIP review by Budget Coordinators before being routed for approval.
- 4) ARO existing reports need changes to formatting
- 5) PPC was to review the problem of file names greater than 60 characters causing files not to attach to email notifications. If the file name cannot be extended then perhaps a warning box to prompt users that the file name is too long could be employed.
- 6) Where do we stand on the O&M charges on work orders?
- 7) We need to supply examples of Unit Estimates not carrying over to a later revision and authorizations in email PDFs not matching the AIP printouts. (Bruce reported these issues – will ask him to provide examples)
- 8) We would like to discuss any current PP functionality to record ‘Preliminary Retirements’ (retirements to coincide with 106 unitizations).

Thanks,

Deb

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***NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.***

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**Crescente, Angela**

---

**From:** Porter, Janice  
**Sent:** Wednesday, April 06, 2011 8:55 AM  
**To:** Crescente, Angela  
**Subject:** FW: Well Plugging Projects

I should have copied you on this.

---

**From:** Porter, Janice  
**Sent:** Wednesday, April 06, 2011 8:54 AM  
**To:** Leenerts, Patricia  
**Subject:** RE: Well Plugging Projects

Pat,

This is a total change in processing procedure and will not only affect this project but other well projects in the future, The projects have in the past been treated like blankets. Spending in the current year affected the budgeted project in that year. I need to talk with others about the change you are proposing.

Janice

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**From:** Leenerts, Patricia  
**Sent:** Wednesday, April 06, 2011 8:50 AM  
**To:** Porter, Janice  
**Cc:** Crescente, Angela  
**Subject:** RE: Well Plugging Projects

Janice, what is the process for obtaining the RAC approval? When should we expect appropriate approvals to take place?

The well names are always what is needed to record that the wells are permanently plugged. With the movement of the dollars to 131113, it seemed wise to verify which wells were being permanently plugged on 124831 and 126421. Also, we will not be able to unitize 124831 or 126421 until the JE is done to move the necessary charges to 131113. Angela, anything else?

Thanks,

Pat  
502-627-3811

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**From:** Porter, Janice  
**Sent:** Wednesday, April 06, 2011 8:35 AM  
**To:** Leenerts, Patricia  
**Cc:** Crescente, Angela  
**Subject:** RE: Well Plugging Projects

Pat,

This is a RAC issue and will have to be addressed as such.

Janice

Angela,

Please tell what you need and in what format if I am unable to get an early decision from the ED RAC.

Thanks,

Janice

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**From:** Leenerts, Patricia

**Sent:** Tuesday, April 05, 2011 5:35 PM

**To:** Porter, Janice

**Subject:** RE: Well Plugging Projects

Janice, It is too bad that you were not able to follow through when I sent the email to you on March 17. When should we expect ED RAC approval, if it is needed? I don't know how that process works. The ARO Analyst intends for me to unitize charges remaining on the CP ARO xxx tasks in April, if charges remain on projects 124831 and on project 126421. I will need for you to tell me the names of the wells, whose charges will be left behind and that will be retired on projects 124831 and 126421.

I have attached the 2 journal entries which I prepared in 2010 to move the COR to the ARO COR tasks. Hopefully these entries will help you get started. If you use these as the template, please do not type, delete or add a row near the light yellow shaded lines. The light yellow shaded lines have code in them. Tampering with the coded lines will cause problems during the JE upload and/or posting process.

<< File: 2010-11 J310-0100-1110-Reclass 126421-RETtask ro CP PLUG WELL task.xlsm >> << File: 2010-10 J308-0100-1010-Move 124831 from RETxx tasks to CP PLUG WELL-xx.xlsm >>

Thanks,

Pat

502-627-3811

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**From:** Porter, Janice

**Sent:** Tuesday, April 05, 2011 3:35 PM

**To:** Leenerts, Patricia

**Subject:** RE: Well Plugging Projects

No I will not. I did not have enough time to find out the effect on whether a revised AIP is needed or not. If it does require a revised AIP, I have to get ED RAC approval before the over-spending occurs.

Janice

---

**From:** Leenerts, Patricia

**Sent:** Tuesday, April 05, 2011 2:40 PM

**To:** Porter, Janice

**Subject:** RE: Well Plugging Projects

As I stated in the April 04, 2011 2:02 PM email, today is the last day to upload the JE for March quarter-end closing. Will you be able to make that deadline?



Thanks,

Pat  
502-627-3811

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**From:** Porter, Janice  
**Sent:** Tuesday, April 05, 2011 2:06 PM  
**To:** Leenerts, Patricia  
**Cc:** Crescente, Angela  
**Subject:** RE: Well Plugging Projects

I am going to have to review this further since the budget was approved for the spending that corresponds with each project. I will have to see if I have to send through revised AIPs and also get approval and at what level the approval changes. Now that the forecast is tied into PP, a whole new set of issues.

I will get back with you.

---

**From:** Leenerts, Patricia  
**Sent:** Tuesday, April 05, 2011 10:50 AM  
**To:** Porter, Janice  
**Cc:** Crescente, Angela  
**Subject:** RE: Well Plugging Projects

Janice,

What needs to be moved are the associated dollars that are in the "CP ARO – location" tasks. So, for instance, Glenn is saying that the L. London #3, was started on project 124831 and completed on project 126421. The charges for L. London #3 on project 124831 should be in the CP PLUG WELL-CTR task. So the charges need to be moved from 124831- CP PLUG WELL-CTR to 126421- CP PLUG WELL-CTR.

The most confusing are the charges for Harrington #10. For both projects 126421 and 124831, the charges should be residing in the CP PLUG WELL-DRK task. You can take those charges for both projects directly to 131113.

Thanks,

Pat  
502-627-3811

---

**From:** Porter, Janice  
**Sent:** Tuesday, April 05, 2011 10:35 AM  
**To:** Leenerts, Patricia  
**Subject:** RE: Well Plugging Projects

Pat,

I am confused as to what you want me to do. The balance on each and every one of the tasks on 126421 that you listed is zero.

Thanks,  
Janice

---

**From:** Leenerts, Patricia  
**Sent:** Monday, April 04, 2011 2:02 PM  
**To:** Porter, Janice  
**Subject:** RE: Well Plugging Projects

Status update please on the Well Plugging reclass entry? I need it by Tuesday preferably by noon to allow for uploading. You and your approver will need to be available until the JE is reviewed and uploaded, in case changes need to be made. Reminder to use the correct non-burdened expenditure type.

Don't forget that the explanation at the bottom of the JE needs to be complete so that a person can pick up the JE and understand just from what is written there. Also, a new requirement now exists to include referencing on the JEs. (I just found out about this late Friday.) You will need to scan your approved JE and backup with the referencing and the tic and ties marked between the two. You can email them, but it might be hard to put the tic and tie on the email files. Also, please make sure your JE and back up are scaled no smaller than 60% of normal size for Oracle IPM scanning purposes. Since the backup is usually landscape, it helps to take the left and right margins down to 0.

Let me know if you need any help or if you want me to review the JE prior to submitting to your approver. I can look at an email file or pdf, your choice.

Thanks,

Pat  
502-627-3811

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**From:** Sundheimer, Glenn  
**Sent:** Friday, April 01, 2011 9:49 AM  
**To:** Porter, Janice  
**Cc:** Leenerts, Patricia  
**Subject:** RE: Well Plugging Projects

See below.

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**From:** Porter, Janice  
**Sent:** Friday, April 01, 2011 8:15 AM  
**To:** Sundheimer, Glenn  
**Cc:** Leenerts, Patricia  
**Subject:** FW: Well Plugging Projects

Glenn,  
See my question to Pat and her reply.  
Thanks,  
Janice

---

**From:** Leenerts, Patricia

**Sent:** Thursday, March 31, 2011 5:03 PM  
**To:** Porter, Janice  
**Subject:** RE: Well Plugging Projects

Glen will have to supply you with the info. I don't think he informed me.

Thanks,

Pat  
502-627-3811

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**From:** Porter, Janice  
**Sent:** Thursday, March 31, 2011 5:01 PM  
**To:** Leenerts, Patricia  
**Subject:** RE: Well Plugging Projects  
**Importance:** High

Pat,  
How do I know where to put the charges? Project completed on? Am I missing something?  
Thanks,  
Janice

---

**From:** Leenerts, Patricia  
**Sent:** Thursday, March 31, 2011 2:39 PM  
**To:** Porter, Janice  
**Subject:** RE: Well Plugging Projects

Janice, I haven't heard from you regarding this JE. I need it by noon on April 5<sup>th</sup> to be able to process it into March's quarter end books. Let me know that you are on track to meet that deadline or earlier (©).

Thanks,

Pat  
502-627-3811

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**From:** Porter, Janice  
**Sent:** Thursday, March 17, 2011 2:34 PM  
**To:** Leenerts, Patricia  
**Subject:** RE: Well Plugging Projects

This is the first time I have seen this. ☺  
Let me see how next week goes. I know I have PP Forecast work to do Monday and Tuesday.

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**From:** Leenerts, Patricia

**Sent:** Thursday, March 17, 2011 2:22 PM  
**To:** Porter, Janice  
**Subject:** FW: Well Plugging Projects

Janice, can you give me an estimate of when you expect to be able to do the JEs required?

Thanks,

Pat  
502-627-3811

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**From:** Leenerts, Patricia  
**Sent:** Wednesday, March 16, 2011 4:53 PM  
**To:** Sundheimer, Glenn  
**Subject:** Well Plugging Projects

You are too good to me. Thanks for the quick response.

As I mentioned I noticed an invoice for TF Davis #6 which is not on either of your lists. Should I review all the charges or assume that invoices may have incorrect info and use your list?

I do remember you indicating that some wells were started, then finished on another project. I will also need the project number that the wells will be finished on.  
Actually, the dollars will need to be moved from the "start" project to the "finish" project. Janice will need to provide to me a JE so that I can upload for March's quarter end to be correct.

Project 126421 Well	Field
Harrington #10 131113	Doe Run (plugging started but not completed on this project) Will work on under project
Keith #3 131113	Doe Run (plugging started but not completed on this project) Will work on under project
TF Davis #2 project 131113	Magnolia Deep (plugging started but not completed on this project) Will work on under
Fowler #6 131113	Doe Run (plugging started but not completed on this project) Will work on under project
TF Davis #5 project 131113	Magnolia Upper (plugging started but not completed on this project) Will work on under
H. Benningfield #7 project 131113	Magnolia Upper (plugging started but not completed on this project) Will work on under
P. Janes #1 131113	Center (plugging started but not completed on this project)) Will work on under project

Project 124831 Well	Field
Harrington #10	Doe Run (plugging started but not completed on this project) Continued on 126421
Z. Kidd #1A	Center (plugging started but not completed on this project) Completed on 126421
L. London #3	Center (plugging started but not completed on this project) Completed on 126421
England Heirs #1A	Center (plugging started but not completed on this project) Completed on 126421
C. Nunn #1	Center (plugging started but not completed on this project) Completed on 126421

R. Atwell #1  
TF Davis #2  
126421

Center (plugging started but not completed on this project) Completed on 126421  
Magnolia Deep (plugging started but not completed on this project) Continued on

Thanks,

Pat  
502-627-3811

**Crescente, Angela**

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**From:** Leenerts, Patricia  
**Sent:** Tuesday, April 05, 2011 3:19 PM  
**Cc:** Crescente, Angela  
**Subject:** RE: Main Replacement Projects

Angela, see what you think about me sending this to Janna... don't skip the red answers below. Let me know.

---

Janna, I know Angela spoke with you on the phone and cleared up some of the confusion. But I would still like to address some of your questions here...more of a future reference type thing. See my answers below in **Red**.

Also, I want to apologize if my wording came across in a demeaning or insulting way. That was not the intent. Maybe I need to attend a class on word-smithing.

We are still in the growing stages of utilizing PowerPlant (PP) to its fullest. ARO and blankets have been the last to come on-line. Please bear with us as we determine the best and most efficient way for your group and Property Accounting to get the information which we both need. Angela and I discussed what we thought would work for our side. Once I dug into more details last night I realized that wasn't the best option. Which prompted the meeting this morning. Which, unfortunately still left us with some questions for the future.

Thanks,

Pat  
502-627-3811

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**From:** Singleton, Janna  
**Sent:** Tuesday, April 05, 2011 10:06 AM  
**To:** Leenerts, Patricia  
**Cc:** Crescente, Angela; Stratman, Paul  
**Subject:** RE: Main Replacement Projects

Pat/Angela,

Yes, I was "made aware by Angela" that the retirement would have to go into a different task/account, but I have not heard anything about doing a MISC AIP for all of the retirements. *My email I sent last night was the first notification that we needed the Misc AIP Form – which Angela mentioned on the phone this morning that we no longer believe that I need.* I was under the impression that a MISC AIP is for small tool purchases. I was requesting a Misc AIP Form (not a Misc AIP). *The Misc AIP Form is used to define activity when a project has multiple items hitting the same tasks when that information was not on the original AIP or when the plans may have changed. The CP ARO 2011 task would have been this type of task. The meeting this morning, which Angela mentioned to you on the phone, eliminates the need for the Misc AIP Form (at least until we have further discussion). When multiple locations were going to be charged to the CP ARO 2011, Angela and I thought, as of yesterday, that I would need the Misc AIP Form to know what was retired on that task. This was more of a timing issue between when the charges hitting for the retirement and the installation. After some additional work last night and the meeting we had today, the Misc AIP Form may not be the right choice for us, as Angela mentioned to you today. Angela and I will have some more meetings in-house and then we will discuss your needs before a final decision is made.* Why do we need to do one for retirements? Please forward the policy so that I can read it and familiarize myself with it.

As for the tax district/location, the majority of these are under a generic location "Gas Distribution Mains". *Angela mentioned to me that you are familiar with the Detail screen in PowerPlant (PP) as you also do work with*

*software, if I'm remembering correctly. The information ~~was~~ requesting on location is the PP Asset Location on the detail tab. On the Detail tab the Major location will show Gas Distribution Mains as you indicated. Also, on the PP Detail tab you will find the Asset Location, which is similar to the Tax District description in Oracle.*

I will have to defer to Paul on some of this information as I can only make educated guesses as to the detail and timing of the work. These three projects that you mention are part of a large initiative. I am not certain that PMR work is strictly emergency (Paul would have to correct me) – I believe it is just used for Priority Main work of which there is less work than LSMR. Also, MAN414 is complete and there shouldn't be any work after 2010. It should have closed out on 3/31/11 per PP; you won't need to work on this one going forward. This initiative has been going on since 2005, why are you now asking for all of this information?

Because it seems that Main Replacement has suddenly come onto your radar, I am going to set up a meeting between the four of us to go through what actually needs to be done on each of these projects going forward.

*Janna*



Think Green! Before printing this e-mail, ask the question, is it necessary?



Misc. Proj. AIP  
Form Revised.x...

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**From:** Leenerts, Patricia  
**Sent:** Monday, April 04, 2011 7:30 PM  
**To:** Singleton, Janna  
**Cc:** Crescente, Angela  
**Subject:** Main Replacement Projects

Janna,

You were made aware, by Angela, to start charging cut, cap and purge retirements to the CP ARO YYYY task. As a part of this process I will need you to provide to me a list of which locations had retirements and what equipment was retired. You may need to track as charges hit, but you can simply send me an email or complete a Miscellaneous AIP Form on a manageable schedule which we will need to work out. This will start with the CP ARO 2011 task which, effective at the end of March, should be the only task which you will be charging the cut, cap and purge retirements. After I have processed the Journal Entry to move the Mar 2010 and prior charges, you should close all 108901 tasks related to cut, cap and purge retirements.

I believe that the majority of the work is cyclical for MAN414 and LSMR414. What time of the year is the low point, least amount of work/activity, happening? The off-season would be the best time for me to process the additions and retirements. We can work together for the locations as what I need are the Utility Account and the PP Asset Location (Tax District in Oracle) by material (plastic, steel) and size. I believe that summarizing the information might be easier for you.

I believe that the PMR project is for emergencies, so I'll have to decide on a schedule for this project and just stick to it. Any timing suggestions for PMR414?

Let me know if you have any questions/comments. I appreciate your help to properly record our assets additions and retirements.

<< File: Misc. Proj. AIP Form Revised.xls >>

Thanks,

Miscellaneous Project Information Sheet

Original  
 Revised

EON U.S. Services Co.       Louisville Gas & Electric Co.       Kentucky Utilities Company  
 Other: \_\_\_\_\_

Name of Project/Task:		
Date Requested:	Project Number:	Task Number:
Expected Start Date	Expected In-service Date:	Expected Completion Date:
Project Manager:		Phone:
Product Code	Resp. Center	Location #

REASONS AND DETAILED DESCRIPTION OF PROJECT  
 (include sketch no., if applicable)

INVESTMENT MATERIALS

Task #	UOP#	Description	Quantity	Total Cost
Total			-	-

RETIRED EQUIPMENT (OR MATERIALS)

Task #	UOP#	Description	Original Project Number	Vintage Year	Qty

SALVAGE & TRANSFERRED EQUIPMENT

Task #	UOP#	Description	Salvage Stock (return to storeroom)	Salvage Junk (sold to 3 <sup>rd</sup> Party)	Salvaged Equipment	Transferred Equipment
Total			\$ -	\$ -	\$ -	\$ -



**Crescente, Angela**

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**From:** Koellner, Corey  
**Sent:** Thursday, April 21, 2011 5:12 PM  
**To:** Crescente, Angela  
**Subject:** ARO Regulatory Assets

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Angela –

I'm preparing the Regulatory Asset/Liab information that will be included in the Form 3 filing. Karen previously completed this information and during our transition she indicated I should reach out to you to assist if I identify any ARO assets with credit activity. That being said, the four items below have credit activity during 1Q11:

Account	Account	Je Name	Line Description	Debits
182317	OTHER REGULATORY ASSETS ARO - GENERATION	J309-0100-0111 Adjustment USD 01-JAN-11	Journal Import Created	0.00
182317	OTHER REGULATORY ASSETS ARO - GENERATION	J315-0100-0211 Adjustment USD 01-FEB-11	Journal Import Created	0.00
182317	OTHER REGULATORY ASSETS ARO - GENERATION	J319-0100-0311 Adjustment USD 01-MAR-11	Journal Import Created	0.00
182317	OTHER REGULATORY ASSETS ARO - GENERATION	PP ARO USD 01-MAR-11	Journal Import Created	6,347,740.

If you could let me know if these items are accurately included as credits, it would be appreciated. I'm assuming you provided Karen similar information in the past and this email will make sense – if it doesn't, however, please let me know.

Thanks!

Corey Koellner  
Regulatory Accounting & Reporting  
LG&E and KU Energy LLC  
Direct: (502) 627-2965  
[corey.koellner@lge-ku.com](mailto:corey.koellner@lge-ku.com)

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Sunday, January 16, 2011 3:02 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela; Pienaar, Lesley  
**Subject:** RE: ARO tab of reporting package

Shannon:

I will work with Angela to add FCD on Monday morning. Additionally, if Lesley can provide more direction on the PPL account numbers, we will also take care of that. We can contact someone at PPL to find out about if we need to—I'm copying Lesley on this so maybe she can advise.

I'm not sure what is meant by LGE and KU not matching the supporting documentation, but I will try to catch you early tomorrow so you can show me.

I'm guessing your last comment has to do with the mapping as opposed to the dollar amounts. Once Angela's schedule included FCD it will tie in total to the amounts that Greg is showing in his file (on 2 different lines).

---

**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 1:54 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** ARO tab of reporting package

It looks like FCD is not included in this information. Also, it looks like the LG&E and KU numbers do not tie to the supporting documentation. Also, the instructions indicate PPL account numbers should be listed. Please make appropriate updates in the Final version and let me know when updated (by noon tomorrow).

It looks like you and Greg do not have the same ARO accounts and RWIP accounts rolling up to the balance. Difference appears to be on LG&E and FCD.

**Shannon Charnas**  
*Director, Utility Accounting & Reporting*  
LG&E and KU  
(502) 627-4978

**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 2:37 PM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: ARO tab of reporting package

I just asked Lesley, she can't remember. She is going to confirm. Just seems odd that PPL included it on the file and then doesn't really need it (although I know this is true in at least one case).

**Shannon Charnas**

*Director, Utility Accounting & Reporting  
LG&E and KU  
(502) 627-4978*

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**From:** Wiseman, Sara  
**Sent:** Sunday, January 16, 2011 2:26 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** RE: ARO tab of reporting package

Shannon: We will look into what you are asking about—I can immediately tell you that Lesley said we did not need to include PPL account numbers when we asked about it.

---

**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 1:54 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** ARO tab of reporting package

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**Shannon Charnas**

*Director, Utility Accounting & Reporting  
LG&E and KU  
(502) 627-4978*

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Sunday, January 16, 2011 2:26 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** RE: ARO tab of reporting package

Shannon: We will look into what you are asking about—I can immediately tell you that Lesley said we did not need to include PPL account numbers when we asked about it.

---

**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 1:54 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** ARO tab of reporting package

It looks like FCD is not included in this information. Also, it looks like the LG&E and KU numbers do not tie to the supporting documentation. Also, the instructions indicate PPL account numbers should be listed. Please make appropriate updates in the Final version and let me know when updated (by noon tomorrow).

It looks like you and Greg do not have the same ARO accounts and RWIP accounts rolling up to the balance. Difference appears to be on LG&E and FCD.

**Shannon Charnas**  
*Director, Utility Accounting & Reporting*  
*LG&E and KU*  
*(502) 627-4978*

**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 1:54 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** ARO tab of reporting package

It looks like FCD is not included in this information. Also, it looks like the LG&E and KU numbers do not tie to the supporting documentation. Also, the instructions indicate PPL account numbers should be listed. Please make appropriate updates in the Final version and let me know when updated (by noon tomorrow).

It looks like you and Greg do not have the same ARO accounts and RWIP accounts rolling up to the balance. Difference appears to be on LG&E and FCD.

***Shannon Charnas***

*Director, Utility Accounting & Reporting*

*LG&E and KU*

*(502) 627-4978*

Clark, Ed

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**From:** Jim Dahlby <jdahlby@pwrplan.com>  
**Sent:** Monday, January 10, 2011 7:31 AM  
**To:** Crescente, Angela; 'Josh Hirschel'; 'Jim Ogilvie'; 'support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

Angela-

That is correct, I'll add a maintenance request to determine the best approach.

Jim Dahlby  
PowerPlan Consultants  
[jdahlby@pwrplan.com](mailto:jdahlby@pwrplan.com)  
(678) 269-7950

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 05 January, 2011 12:27 PM  
**To:** Jim Dahlby; Josh Hirschel; Jim Ogilvie; support  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

Jim,

I have confirmed that what I am trying to do works as expected as long as ARO processing runs before depreciation gets calculated. When we get through December's close, I will do more testing and send you information about what I have found out. This is the second time I have seen problems with reg entries when depreciation is calculated before we close. If you already know that this is going on, just let me know. I'm just concerned that this might not be something people know about and they may have problems down the road. I work very closely with our closing people so we know to watch for that if I am doing unordinary things to the AROs (which I have been doing a lot of lately), or I guess it could be any assets that are affected by the reg entries.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Friday, December 31, 2010 7:51 PM  
**To:** 'Jim Dahlby'; 'Josh Hirschel'; 'Jim Ogilvie'; 'support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

Jim,

I just tried one more time and made sure that the current month's depreciation calculation had not been ran prior to closing the books and it looks like it worked. I would like to try this one more time with a clean refresh of PTAXDEV on Monday just to be sure. It appears that the problem lies in whether or not depreciation calculation is clicked on before the closing process actually starts. Have you seen this before or would you expect that?

As soon as I get finished testing on Monday, I will send you an email to let you know how it turned out. So, for the time being, please disregard my message I sent earlier today and I will keep you posted.

Thanks and Happy New Year!

Angela

---

**From:** Crescente, Angela  
**Sent:** Friday, December 31, 2010 3:59 PM  
**To:** 'Jim Dahlby'; 'Josh Hirschel'; 'Jim Ogilvie'; 'support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

I have tried a few times to do what we talked about on the phone, but it appears that the reg entries are only set up to look at current month's expense. Is there a way I can set up some new reg entries to deal with adjustments for these special cases only? In other words, one reg entry would pick up current month depr (as always) and another reg entry would pick up the adjustment for this special thing. Then, I would be able to disable the special reg entries by removing the AROs until next time I need to do a depr adjustment? If this is possible, please let me know. We would like to have this corrected for December's work unless this is just not possible.

Thanks,  
Angela

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**From:** Jim Dahlby [mailto:jdahlby@pwrplan.com]  
**Sent:** Tuesday, December 21, 2010 11:33 PM  
**To:** Crescente, Angela; 'Josh Hirschel'; 'Jim Ogilvie'; 'support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

I didn't follow why the transition amount for October would be booked to Reg asset account instead of Accum Reserve. Under original transition rules, the entry was CR 108 and DR 182, so I would have expected something along those lines for this case.

Feel free to give me a call to discuss the accounting further.

Jim Dahlby  
PowerPlan Consultants  
[jdahlby@pwrplan.com](mailto:jdahlby@pwrplan.com)  
(678) 269-7950

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 21 December, 2010 03:38 PM  
**To:** Jim Dahlby; Josh Hirschel; Jim Ogilvie; support  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

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**Sent:** Tuesday, December 21, 2010 3:23 PM  
**To:** Crescente, Angela; 'Josh Hirschel'; 'Jim Ogilvie'; 'support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
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[jdahlby@pwrplan.com](mailto:jdahlby@pwrplan.com)  
(678) 269-7950

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 21 December, 2010 02:58 PM  
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**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** ARO Depr Group Adjustment

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Clark, Ed

---

**From:** Leichty, Doug  
**Sent:** Monday, January 10, 2011 7:29 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

The reason for this monthly file is to calculate thirteen month average balances. The Discoverer report is also helpful and if it is not too much trouble I would like that also. Thanks.

---

**From:** Crescente, Angela  
**Sent:** Sunday, January 09, 2011 2:56 PM  
**To:** Leichty, Doug  
**Subject:** RE: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

Doug:

This replaces the piece of paper with ending balances that I used to give you because everything is on here, right? Or are you going to still need the Discoverer report that I used to give you as well?

Thanks,  
Angela

---

**From:** Leichty, Doug  
**Sent:** Wednesday, December 29, 2010 9:35 AM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** FW: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

I will need the attached file for the period ending December 31, 2010 by February 1, 2010.

Thanks,  
Doug

---

**From:** Crescente, Angela  
**Sent:** Friday, July 16, 2010 9:35 AM  
**To:** Leichty, Doug  
**Subject:** ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

**Clark, Ed**

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**From:** Daly, Karen  
**Sent:** Friday, January 07, 2011 12:03 PM  
**To:** Crescente, Angela  
**Subject:** FW: ARO Rollforward with my summary for GAAP cash flows

FYI

---

**From:** Fackler, Andrea  
**Sent:** Friday, January 07, 2011 11:56 AM  
**To:** Daly, Karen  
**Subject:** ARO Rollforward with my summary for GAAP cash flows



ARO Rollforward  
LGE KU Balanc...

Andrea Fackler, CPA  
Accounting Analyst II  
LG&E and KU Energy, LLC  
220 W. Main Street, 9th Floor  
Louisville, KY 40202  
P: (502) 627-3442





Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Wednesday, January 05, 2011 12:27 PM  
**To:** 'Jim Dahlby'; 'Josh Hirschel'; 'Jim Ogilvie'; 'support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

Jim,

I have confirmed that what I am trying to do works as expected as long as ARO processing runs before depreciation gets calculated. When we get through December's close, I will do more testing and send you information about what I have found out. This is the second time I have seen problems with reg entries when depreciation is calculated before we close. If you already know that this is going on, just let me know. I'm just concerned that this might not be something people know about and they may have problems down the road. I work very closely with our closing people so we know to watch for that if I am doing unordinary things to the AROs (which I have been doing a lot of lately), or I guess it could be any assets that are affected by the reg entries.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Friday, December 31, 2010 7:51 PM  
**To:** 'Jim Dahlby'; 'Josh Hirschel'; 'Jim Ogilvie'; 'support'  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

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As soon as I get finished testing on Monday, I will send you an email to let you know how it turned out. So, for the time being, please disregard my message I sent earlier today and I will keep you posted.

Thanks and Happy New Year!  
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Clark, Ed

---

**From:** Stratman, Paul  
**Sent:** Tuesday, January 04, 2011 8:01 AM  
**To:** Crescente, Angela  
**Subject:** RE: LSMR414 - ARO

What is "normal" and what is "ARO"?

All the work is cut, cap and purge associated with LSMR414.

---

**From:** Crescente, Angela  
**Sent:** Monday, January 03, 2011 5:13 PM  
**To:** Stratman, Paul  
**Subject:** LSMR414 - ARO

Paul,

I saw in 2011, LSMR414 removal costs are budgeted for \$263,340. Is all of that cut, cap, and purge like we discussed during the revaluation? In other words, is all of the cost of removal budget going to be ARO related or will it be split between "normal" cost of removal and ARO removal? If it is going to be split, could you give me an approximate estimate between the two?

I have to split out expected the ARO cost of removal between short-term and long-term before Thursday and anything budgeted for next year would be considered short-term. I apologize for the short notice, but if you could let me know by **COB, Wednesday, January 5<sup>th</sup>** that would be much appreciated.

As always, I appreciate your help! Please feel free to call if you have any questions.

Thanks!  
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**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** RE: ARO Depr Group Adjustment

Tracking:	Recipient	Read
	'Jim Dahlby'	
	'Josh Hirschel'	
	'Jim Ogilvie'	
	'support'	
	Wacker, Diana	Read: 1/1/2011 10:00 AM
	Kinder, Debra	Read: 1/3/2011 7:29 AM
	Wiseman, Sara	Read: 12/31/2010 7:58 PM

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 21 December, 2010 02:58 PM  
**To:** Josh Hirschel; Jim Ogilvie; Jim Dahlby; support  
**Cc:** Wacker, Diana; Kinder, Debra; Wiseman, Sara  
**Subject:** ARO Depr Group Adjustment

All:

In November, we set up our new AROs as transition AROs for Purchase Accounting in order to capture November's accretion. In doing so, the system (with good reason) booked 1 ½ months of depreciation. One full month was treated as a reserve adjustment and the other ½ month ran through as current depr expense. Due to Purchase Accounting requirements, I reversed the extra ½ month of depreciation on a top-side entry to make the GL correct.

I need to go back and change the depr ledger to reflect this. However, I know that depr adjustments on individually depreciated assets that are not fully depreciated doesn't adjust quite how we would like for it to. Is there a way that we can adjust the depr ledger for a one-time adjustment without it recalculating a different depr expense amount over the remaining life?

I have attached screenshots to show what I am talking about. The first one shows the \$31,807.14 in the reserve adjustment column for the set up of the transition ARO and \$15,903.56 for the current month's ½ depr expense. The second one shows the (\$15,903.56) depr adjustment that I performed in DEV. I used reserve adj as the activity code. The current depr expense for the month changes to \$31,857.65 instead of \$31,807.14 like I wanted it to. Although this doesn't seem to be much of an amount different, this will be need to be done to all of the 100 or so assets that I set up the transition AROs for and that could add up to a lot of difference. Is there any way to correct the reserve to reduce it without changing the monthly depr expense?

<<Angela0001.pdf>>

Thanks,

Angela

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**Clark, Ed**

---

**From:** PowerPlantAlerts@eon-us.com  
**Sent:** Thursday, December 30, 2010 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - E.ON - AIP - ARO

Project 130727 has ARO

[login to powerplant](#)

**Crescente, Angela**

---

**From:** Leenerts, Patricia  
**Sent:** Monday, March 28, 2011 8:34 PM  
**To:** Stratman, Paul  
**Cc:** Singleton, Janna; Crescente, Angela  
**Subject:** Gas Blanket Project questions - get back to me on Tuesday - if you can - as early as possible

Paul,  
Please answer the 3 questions at the top of the attached spreadsheet before digging into the following questions within this email. The questions on the spreadsheet are what I would appreciate getting by mid day on Tuesday.

When there are retirements that may be replacements, is the old pipe cut, capped and purged? Then the removal charges would be ARO CP charges to 108799. Or are they typically fully replaced and attached to the old pipe? Any time that there is cut, cap and purge there needs to be an ARO CP task setup and charged.

RRCSxxxG needs an AOR task, at least, when the "house being demolished and gas service needs to be cutout at the main connection". Are cutouts always cut, cap and purge? What about cutouts on LSMR414?  
If there are retirements on NBGCSxxx or NBGSxxx, then are they cut, cap and purge? If so, need ARO CP tasks.



Book2.xls

Project	analyst	PA status	worked month	job_task_id	work_order_number	work_st	chg	de	gl_account	fund_proj_description	func_class	work_order_type	amount
GME406	PAT		MAR/APR	84938R02	GME406-84938	open	200808	108901	RETIREMENT - RWIP	GAS MAIN EXT 406	Gas Distribution	Gas Dist Blanket NonInv Issue	\$455.76

You say retire like... but I don't see an add for this task number. Usually when we say like, we automatically retire a quantity to match each Add/Investment task. Is that what you thought that I meant?

RCST406G	PAT		MAR/APR	113772R02	RCST406G-113772	open	200311	108901	RETIREMENT - RWIP	Customer requested - Gas	Gas Distribution	Gas Dist Blanket NonInv Issue	-\$350.89
RCST406G	PAT		MAR/APR	45074R02	RCST406G-45074	open	200503	108901	RETIREMENT - RWIP	Customer requested - Gas	Gas Distribution	Gas Dist Blanket NonInv Issue	-\$18,292.76

Here's the table I am referring to above:

ASBLY419	LG&E	Normal Cost of Removal -	ARO -108799	No	ARO - What type of work is done on this blanket?	Are there usually retirements? Or should I just retire "like" - meaning retire the same (size, material, etc) assets that I add to the books? Or just retire when there are 108 charges?
		108901	108901			
GME406	GAS MAIN EXT 406	\$	\$		No Regulator facility replacements - project complete (2009?), no additional charges.	like
LSMR414	Large Scale Main Replacements	\$	\$	YES	No New business, gas main extensions.	Retirements not typical.
MAN414	ELECTRIC/GAS MANHOLE CONFLICTS	\$	\$	No	No Main Replacement	Like length, but size and materials are different.
NBGS419	NEW BUS CONNECT SERV 419	\$	\$	No	No Main Replacement	Like length, but size and materials are different.
NBGS341	INSTALL GAS SVC-JOINT TRENCH	\$	\$	No	No New business, gas service installations	Retirements not typical.
NBGS419	NEW BUS GAS SERV 419	\$	\$	No	No New business, joint trench work.	Retirements not typical.
NBGS421	NEW BUS GAS SERV 421	\$	\$	No	No New business, gas service installations	Retirements not typical.
NBGS422	NEW BUS GAS SERV 422	\$	\$	No	No New business, gas service installations	Retirements not typical.
PMR414	Priority Main Replacement	\$	\$	YES	No Main Relocations (customer request pipeline relocation)	Like
RCST406G	Customer requested - Gas	\$	\$	YES	No Service line replacements and cutouts	This one is a bit complicated. Replacement have a like retirement, but individual retirements are also charged to this project (i.e. house being demolished and gas service needs to be cutout at the main connection).
RRCS419G	REP CO GAS SERV 419	\$	\$	YES	No Service line replacements and cutouts	
RRCS421G	REM/REPL CO GAS SERVICE-421	\$	\$	No	No Service line replacements and cutouts	
RRCS422G	REM/REPL CO GAS SERVICE-422	\$	\$	No	No System enhancements	Retirements not typical, but when they occur, they are generally like length, size and material, but not always.
SYSEN406G	System enhancements - Gas	\$	\$	YES	No Leak repair (misc. main cutouts, valve replacements).	Typically like, but not always retirements and installation 1 for 1.
TBRD419G	MISC GAS MAIN LEAK REPAIR/REM	\$	\$	YES		

**Crescente, Angela**

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, January 12, 2011 8:20 AM  
**To:** Crescente, Angela  
**Subject:** FW: discount rate  
**Attachments:** Kentucky Regulated WACC (as of 12.31.10).xls

For future reference....I'm not sure if this would be ARO related or not....

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, January 12, 2011 8:19 AM  
**To:** Wiseman, Sara; Mazza, Frank; Raible, Eric  
**Subject:** FW: discount rate

FYI, this is our current discount rate from PPL and we should be getting updates each quarter. There is more information in this file, but the rate calculation is included.

**Shannon Charnas**

*Director, Utility Accounting & Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Garrett, Chris  
**Sent:** Tuesday, January 11, 2011 12:26 PM  
**To:** Elmore, Barry; Charnas, Shannon; Scott, Valerie  
**Subject:** FW: discount rate

I know your teams have inquired as to the discount rate to apply now that we are part of the PPL team. The attached file will show that we should be using 6.9% as of 12/31/2010. It is my understanding that PPL will supply a quarterly update of the WACC going forward.

Chris

---

**From:** Reither II, Joseph [<mailto:JReither@ppiweb.com>]  
**Sent:** Tuesday, January 11, 2011 10:30 AM  
**To:** Garrett, Chris  
**Subject:** RE: discount rate

Chris,

Here is the discount rate updated for your testing date of 12.31.2010. I just reviewed it this morning and the risk free rate is up 80 basis points from Sept which has caused the WACC to rise accordingly. Let me we know if there is any additional backup that you will need.

I will be setting up a meeting for tomorrow for a couple folks from here to discuss impairment testing with your team. We would like to have the meeting to discuss methodology because Vince Sorgi and Mark Cunningham feel it is important (and best practice) that we use consistent methodology across all reporting units (I am about to head to a meeting to discuss this same topic with our WPD team). Additionally, E&Y is going to want to see a sum of the parts analysis that reconciles to PPL's market Cap. It is a sanity check that the valuation teams from the audit firms use support the results of the test. So, we will need to make sure the values of each reporting unit fall in line.

Is there a particular time to works best for you?

Thanks,

Joe

---

**From:** Garrett, Chris [mailto:Chris.Garrett@lge-ku.com]  
**Sent:** Tuesday, January 11, 2011 10:05 AM  
**To:** Reither II, Joseph  
**Subject:** discount rate

Joe,

Can you go ahead and provide me the discount rate for 12/31/2010 for LKE as discussed last week?

Thank you,

Chris

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**Goodwill Impairment Analysis**  
**Kentucky Regulated Weighted Average Cost of Capital Analysis**  
**Testing Date: September 30, 2010**  
*(Millions of Dollars, except per share data)*

Comparable Compaies	Ticker	S&P Ratings	Debt Outstanding (1)	Average Stock Price (2)	Shares Outstanding (1)	Market Value of Equity	Debt to Capital	Equity to Capital	Tax Rate (3)	Equity Beta (4)	Unlevered Beta	
AEP	AEP	BBB	18807.0	\$35.87	480.0	17219.1	52.2%	47.8%	30.8%	0.699	0.398	
Ameren Corp	AEE	BBB-	7738.0	\$28.48	239.7	6826.7	53.1%	46.9%	40.0%	0.764	0.455	
Constellation Energy Group	CEG	BBB-	4482.0	\$29.31	202.2	5925.8	43.1%	56.9%	37.7%	0.702	0.477	
Duke Energy Corp	DUK	A-	17490.0	\$17.66	1324.0	23379.2	42.8%	57.2%	39.5%	0.596	0.410	
Entergy Corp	ETR	BBB	12558.2	\$70.94	181.5	12876.7	49.4%	50.6%	31.9%	0.699	0.420	
Southern Co	SO	A	21612.0	\$38.08	838.7	31932.4	40.4%	59.6%	31.7%	0.493	0.337	
							Average	46.82%	53.18%	35.27%	0.659	0.416
							Median	46.22%	53.78%	34.80%	0.699	0.415
							<b>Selected</b>	<b>45.00%</b>	<b>55.00%</b>			<b>0.415</b>

	Selected Unlevered Beta	Selected Debt to Capital	Selected Equity to Capital	Tax Rate (7)	Relevered Beta	Risk Free Rate (8)	Market Risk Premium (9)	Size Premium	Credit Spread (10)	Component Cost	Weighted Component Cost
Cost of Equity (5)	0.415		55.00%	38.9%	0.623	4.9%	6.67%			9.05%	4.98%
Cost of Debt (After-Tax) (6)		45.00%		38.9%		4.9%			2.15%	4.31%	1.94%
<b>WACC (Rounded)</b>											<b>6.90%</b>

**Notes:**

- (1) Source: Bloomberg.
- (2) 30-day average stock price as of the testing date.
- (3) 12-month trailing effective tax rate per Bloomberg.
- (4) 5 year daily raw Bloomberg equity beta as of the testing date.
- (5) Cost of Equity calculated using the Capital Asset Pricing Model.
- (6) Cost of Debt equal to the risk free rate plus the credit spread tax effected.
- (7) Kentucky effective tax rate.
- (8) 10-Year US Treasury average forward yield curves for the next 10 years.
- (9) Source: Ibbotson S&P 500 Valuation Yearbook Long Horizon ERP derived from 1926 - 2009 data.
- (10) 3 Year average BBB+ utility credit spread as of the testing date.

**Crescente, Angela**

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, January 12, 2011 5:09 PM  
**To:** Raible, Eric  
**Cc:** Tipton, Karen; Crescente, Angela  
**Subject:** Regulatory assets

Eric:

We need to tie to the ARO assets number in regulatory assets table for LGE, KU and LKE in the Rates and Regulatory note. I looked in Sharepoint but the table has not been updated yet. Would you be able to give us that number so we can tie? If not, when do you anticipate it will be available?

*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*



**Crescente, Angela**

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, January 12, 2011 5:12 PM  
**To:** Wiseman, Sara; Raible, Eric  
**Cc:** Tipton, Karen; Crescente, Angela  
**Subject:** RE: Regulatory assets

Eric:

After talking with Angela for a few minutes longer, we are basically stopped on the ARO footnote until we know what the rounding will be on that table.

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, January 12, 2011 5:09 PM  
**To:** Raible, Eric  
**Cc:** Tipton, Karen; Crescente, Angela  
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*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, January 12, 2011 7:07 PM  
**To:** Porter, Janice  
**Subject:** RE: Project 132543

Janice,

Since we never used oil with PCB's in it, we never set up an ARO for PCB. Although, we will still have to dispose of this material properly as was done in the past, this is considered a rare occurrence that we didn't know existed since it wasn't part of our pipe originally. Therefore, go ahead and use 108901 for the account on your task for removal. This pipe will actually be removed from the ground, not just cut, capped, and purged, right?

Thanks,  
Angela

---

**From:** Porter, Janice  
**Sent:** Wednesday, January 12, 2011 9:43 AM  
**To:** Crescente, Angela  
**Subject:** FW: Project 132543

Angela,  
This is per John Skaggs:

PCB's have been detected in the gas pipe that has been removed at Center at least one time years ago (10+). The pipe had to be sent to Arizona/New Mexico to a special landfill or incinerator.

PCB's get inside of the gas pipe from oils used in compressors that have PCB's. We have never used oil w/ PCB's at LG&E that I know of. The most likely way that the PCB's got into the pipe at Center would be from skid mounted compressors that were brought in during the '77 or '78 winter to help remove gas from Center field.

**Crescente, Angela**

---

**From:** Porter, Janice  
**Sent:** Thursday, January 13, 2011 8:35 AM  
**To:** Crescente, Angela  
**Subject:** RE: Project 132543

Correct.

---

**From:** Crescente, Angela  
**Sent:** Wednesday, January 12, 2011 7:07 PM  
**To:** Porter, Janice  
**Subject:** RE: Project 132543

Janice,

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Thanks,  
Angela

---

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**Sent:** Wednesday, January 12, 2011 9:43 AM  
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**Crescente, Angela**

---

**From:** Raible, Eric  
**Sent:** Friday, January 14, 2011 9:57 AM  
**To:** Crescente, Angela; Freibert, Beth  
**Cc:** Tipton, Karen; Wiseman, Sara  
**Subject:** RE: Regulatory assets

Angela – we should have the Regulatory Asset/Liabilities table updated today – hopefully before noon-1pmish.

Beth/Karen – Do we think that will be a problem? I know we were pretty comfortable with the numbers last night, but just let me & Property know.

Thanks,  
*T. Eric Raible, CPA*  
Manager, Regulatory Accounting & Reporting  
Controller Group  
LG&E and KU  
P: 627-3426  
F: 627-3820

---

**From:** Crescente, Angela  
**Sent:** Friday, January 14, 2011 9:43 AM  
**To:** Raible, Eric  
**Cc:** Tipton, Karen; Wiseman, Sara  
**Subject:** RE: Regulatory assets

Eric,

I was just checking on an update for the regulatory asset table. Do have an idea about when it will be ready?

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, January 12, 2011 5:12 PM  
**To:** Wiseman, Sara; Raible, Eric  
**Cc:** Tipton, Karen; Crescente, Angela  
**Subject:** RE: Regulatory assets

Eric:

After talking with Angela for a few minutes longer, we are basically stopped on the ARO footnote until we know what the rounding will be on that table.

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, January 12, 2011 5:09 PM  
**To:** Raible, Eric

**Cc:** Tipton, Karen; Crescente, Angela  
**Subject:** Regulatory assets

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We need to tie to the ARO assets number in regulatory assets table for LGE, KU and LKE in the Rates and Regulatory note. I looked in Sharepoint but the table has not been updated yet. Would you be able to give us that number so we can tie? If not, when do you anticipate it will be available?

*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Tuesday, November 08, 2011 1:03 PM  
**To:** Cloyd, Russ  
**Cc:** Satkamp, Mark  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Russ,

I just spoke with Mark and he agreed that I should ask you for verification in regards to the regulator station question I asked below. He said there is cut, cap and purge involvement for the regulator stations that are retired in place. However, the costs per regulator station would probably be considerably smaller than the \$12,432 estimate given for the regulator pits due to the fact that the stations are above ground and the pits are underground. Could you please provide me with an estimate for the cut, cap and purge of the regulator stations each? If you could, please send this to me no later than **Friday, November 11<sup>th</sup>**.

Thanks so much for your help,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Monday, November 07, 2011 11:45 AM  
**To:** Satkamp, Mark; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark and Russ,

One last question, I think. For the regulator stations (since they are above ground), does cut, cap and purge happen to the ones that are retired in place? Or, does cut, cap and purge only happen to things left in the ground like regulator pits?

Thanks,  
Angela

---

**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 10:16 AM  
**To:** Crescente, Angela; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

All regulator stations are above ground. Through the years, some have been removed and some have been retired in place. We have about 70 regulator stations. We have about 180 regulator pits that are in the ground.

---

**From:** Crescente, Angela  
**Sent:** Tuesday, October 25, 2011 10:03 AM  
**To:** Satkamp, Mark; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Russ and Mark,

Based on conversations with Mark, I also understand that only ones that are underground would apply since all above ground are removed. Is this also correct? If so, how many pits and stations are underground in total?

Thanks,  
Angela

---

**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 9:55 AM  
**To:** Cloyd, Russ  
**Cc:** Crescente, Angela  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Russ,

As I think I understand, the ARO would only possibly apply to a regulator facility that is abandoned in place, due to the legal obligation to cut, cap and purge. If a regulator facility is removed, then there is no ARO due to no legal obligation to cut, cap and purge. I believe this is how this would break down for district regulator facilities:

- 1) For existing regulator assemblies retirements or replacements, the existing facility is always removed, so no ARO exists.
- 2) For existing regulator pits retirements or replacements, the existing facility is sometimes removed, and sometimes abandoned in place.
- 3) For existing regulator stations retirements or replacements, the existing facility is sometimes removed, and sometimes abandoned in place.

For the cost estimate that you provided previously, would this be applicable to pits that were abandoned in place ?  
Would this also be a reasonable estimate for stations that were abandoned in place ?

Thanks,

Mark

---

**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 7:29 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Angela,

We typically will retire only a handful (approx. half a dozen or less), of district regulator facilities each year. Regarding the service lines – we have an annual project to re-work existing HP commercial and industrial customer services. However, the work scope of this project typically involves the conversion of existing customer services from high pressure to medium pressure. As such, the retirement of service lines for this project typically is not applicable.

Thanks,

Mark

---

**From:** Crescente, Angela  
**Sent:** Wednesday, October 19, 2011 10:11 AM  
**To:** Satkamp, Mark  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

So, would it be correct to say we currently have about \$2,237,760.00 in expected dollars to permanently cut, cap, and purge 180 regulator pits at a today's cost of \$12,432.00 each if we were to retire them all now? Do many get added during the year? Would it also be possible to get an estimate for permanent cut, cap and purge of the service lines? I think you said these service lines are actually for commercial use and would have not been included in our numbers given to us by Paul Stratman as part of distribution. Please confirm.

Thanks,  
Angela

---

**From:** Satkamp, Mark  
**Sent:** Wednesday, October 19, 2011 9:40 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Angela, We have about 180 regulator pit facilities. Typically, only a handful or less of these are retired each year. This estimate would not apply to a service line, which would have less cost associated with retirement.

Russ, Let me know if I have mis-stated anything.

Thanks,

Mark

---

**From:** Crescente, Angela  
**Sent:** Wednesday, October 19, 2011 9:34 AM  
**To:** Satkamp, Mark  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark and Russ:

Thanks for the information. How much would it cost if we were to abandon all that we have of what you are referring to below? In other words, I am not aware of how many regulator pit facilities we have so that I could calculate the total liability. Does this estimate also include the service lines we spoke about before? I apologize if I am misunderstanding anything.



Thanks,  
Angela

---

**From:** Satkamp, Mark  
**Sent:** Wednesday, October 19, 2011 6:21 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Angela,

The cost estimate to cut, cap and purge a regulator pit facility with four inch inlet piping and six inch outlet piping is \$12,432. Please use this figure to assess the materiality of this portion of these projects.

Russ, Thank you for putting together this cost estimate.

**Mark Satkamp**  
Manager, Gas Control  
502-627-3135 Office  
[mark.satkamp@lge-ku.com](mailto:mark.satkamp@lge-ku.com)

---

**From:** Cloyd, Russ  
**Sent:** Tuesday, October 18, 2011 10:31 PM  
**To:** Satkamp, Mark  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

I have not forgotten about this. I came up with \$12,432 for a typical estimate to cut, cap and purge a regulator facility with four inch inlet piping and six inch outlet. This would be somewhat typical of a regulator pit retirement. I can send you the spreadsheet showing the estimate I used if you like. Let me know if you need more information. I hope this helps.

Russ

---

**From:** Satkamp, Mark  
**Sent:** Friday, October 14, 2011 3:38 PM  
**To:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Yes. Thank you.

---

**From:** Cloyd, Russ

**Sent:** Friday, October 14, 2011 3:35 PM  
**To:** Satkamp, Mark  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

I don't have an estimate but would be happy to calculate one. If I come up with an estimate by Monday would that be sufficient?

Thanks,

Russ

---

**From:** Satkamp, Mark  
**Sent:** Friday, October 14, 2011 3:31 PM  
**To:** Cloyd, Russ  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Russ,

We had a discussion previously regarding whether or not regulator facility retirements should be considered as AROs. Do you have an estimate of the cost to permanently cut, cap and purge (abandon) a regulator facility (typically associated with the regulator capacity and/or HP commercial services project) in place? I would forward this estimate to Angela which would help Property Accounting to assess the materiality of this portion of these projects.

Thanks,

Mark

---

**From:** Crescente, Angela  
**Sent:** Friday, October 14, 2011 2:25 PM  
**To:** Satkamp, Mark  
**Cc:** Wiseman, Sara  
**Subject:** Gas Regulator Facilities and Service Lines

Mark,

In regards to the questions you had for the above referenced items, is there any way you could send me an estimate as to how much you think it would cost to permanently cut, cap and purge (abandon) them in place if we were to do that today? Please correct me if I am misstating something, but if I remember correctly, the concerns you mentioned to me surrounded the abandonment of such pipe. I also remember discussing the possibility that the materiality of it would be very low. I thought it would be best if I could provide an estimate of these items to senior management in an effort to aid them in making the ultimate materiality decision. If there are any other concerns that have forgotten that we discussed would create the need to discuss AROs, please feel free to remind me so we talk more.

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Charnas

we have used a cost per mile estimate, so maybe that will help you come up with your estimate for the pipe at the regulator facilities including the service lines.

I would appreciate if you could provide an estimate to me **by October 28<sup>th</sup>**.

Please feel free to call me with any questions you may have.

Thanks,  
Angela

**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Monday, November 07, 2011 11:45 AM  
**To:** Satkamp, Mark; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Tracking:	Recipient	Read
	Satkamp, Mark	Read: 11/7/2011 11:46 AM
	Cloyd, Russ	Read: 11/7/2011 1:01 PM

Mark and Russ,

One last question, I think. For the regulator stations (since they are above ground), does cut, cap and purge happen to the ones that are retired in place? Or, does cut, cap and purge only happen to things left in the ground like regulator pits?

Thanks,  
Angela

---

**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 10:16 AM  
**To:** Crescente, Angela; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

All regulator stations are above ground. Through the years, some have been removed and some have been retired in place. We have about 70 regulator stations. We have about 180 regulator pits that are in the ground.

---

**From:** Crescente, Angela  
**Sent:** Tuesday, October 25, 2011 10:03 AM  
**To:** Satkamp, Mark; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Russ and Mark,

Based on conversations with Mark, I also understand that only ones that are underground would apply since all above ground are removed. Is this also correct? If so, how many pits and stations are underground in total?

Thanks,  
Angela

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**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 9:55 AM  
**To:** Cloyd, Russ  
**Cc:** Crescente, Angela  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Russ,

As I think I understand, the ARO would only possibly apply to a regulator facility that is abandoned in place, due to the legal obligation to cut, cap and purge. If a regulator facility is removed, then there is no ARO due to no legal obligation to cut, cap and purge. I believe this is how this would break down for district regulator facilities:

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For the cost estimate that you provided previously, would this be applicable to pits that were abandoned in place ?  
Would this also be a reasonable estimate for stations that were abandoned in place ?

Thanks,

Mark

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**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 7:29 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Angela,

We typically will retire only a handful (approx. half a dozen or less), of district regulator facilities each year. Regarding the service lines – we have an annual project to re-work existing HP commercial and industrial customer services. However, the work scope of this project typically involves the conversion of existing customer services from high pressure to medium pressure. As such, the retirement of service lines for this project typically is not applicable.

Thanks,

Mark

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**From:** Crescente, Angela  
**Sent:** Wednesday, October 19, 2011 10:11 AM  
**To:** Satkamp, Mark  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

So, would it be correct to say we currently have about \$2,237,760.00 in expected dollars to permanently cut, cap, and purge 180 regulator pits at a today's cost of \$12,432.00 each if we were to retire them all now? Do many get added

Charnas

during the year? Would it also be possible to get an estimate for permanent cut, cap and purge of the service lines? I think you said these service lines are actually for commercial use and would have not been included in our numbers given to us by Paul Stratman as part of distribution. Please confirm.

Thanks,  
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**From:** Satkamp, Mark  
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**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

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Russ, Let me know if I have mis-stated anything.

Thanks,

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**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark and Russ:

Thanks for the information. How much would it cost if we were to abandon all that we have of what you are referring to below? In other words, I am not aware of how many regulator pit facilities we have so that I could calculate the total liability. Does this estimate also include the service lines we spoke about before? I apologize if I am misunderstanding anything.

Thanks,  
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**From:** Satkamp, Mark  
**Sent:** Wednesday, October 19, 2011 6:21 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Angela,

The cost estimate to cut, cap and purge a regulator pit facility with four inch inlet piping and six inch outlet piping is \$12,432. Please use this figure to assess the materiality of this portion of these projects.

Russ, Thank you for putting together this cost estimate.

**Mark Satkamp**  
Manager, Gas Control  
502-627-3135 Office  
[mark.satkamp@lge-ku.com](mailto:mark.satkamp@lge-ku.com)

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**From:** Cloyd, Russ  
**Sent:** Tuesday, October 18, 2011 10:31 PM  
**To:** Satkamp, Mark  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

I have not forgotten about this. I came up with \$12,432 for a typical estimate to cut, cap and purge a regulator facility with four inch inlet piping and six inch outlet. This would be somewhat typical of a regulator pit retirement. I can send you the spreadsheet showing the estimate I used if you like. Let me know if you need more information. I hope this helps.

Russ

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**From:** Satkamp, Mark  
**Sent:** Friday, October 14, 2011 3:38 PM  
**To:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Yes. Thank you.

---

**From:** Cloyd, Russ  
**Sent:** Friday, October 14, 2011 3:35 PM  
**To:** Satkamp, Mark  
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**Subject:** FW: Gas Regulator Facilities and Service Lines

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Mark

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**From:** Crescente, Angela  
**Sent:** Friday, October 14, 2011 2:25 PM  
**To:** Satkamp, Mark  
**Cc:** Wiseman, Sara  
**Subject:** Gas Regulator Facilities and Service Lines

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I would appreciate if you could provide an estimate to me **by October 28<sup>th</sup>**.

Please feel free to call me with any questions you may have.

Thanks,  
Angela



**Crescente, Angela**

---

**From:** Cloyd, Russ  
**Sent:** Tuesday, October 25, 2011 2:24 PM  
**To:** Satkamp, Mark  
**Cc:** Crescente, Angela  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

I believe in general the estimate I compiled would be reasonable for either pits or stations abandoned in place. Let me know if you need more information.

Thanks,

Russ

---

**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 9:55 AM  
**To:** Cloyd, Russ  
**Cc:** Crescente, Angela  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Russ,

As I think I understand, the ARO would only possibly apply to a regulator facility that is abandoned in place, due to the legal obligation to cut, cap and purge. If a regulator facility is removed, then there is no ARO due to no legal obligation to cut, cap and purge. I believe this is how this would break down for district regulator facilities:

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Would this also be a reasonable estimate for stations that were abandoned in place ?

Thanks,

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**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 7:29 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Angela,

We typically will retire only a handful (approx. half a dozen or less), of district regulator facilities each year. Regarding the service lines – we have an annual project to re-work existing HP commercial and industrial customer services. However, the work scope of this project typically involves the conversion of existing customer services from high pressure to medium pressure. As such, the retirement of service lines for this project typically is not applicable.

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**Sent:** Wednesday, October 19, 2011 10:11 AM  
**To:** Satkamp, Mark  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

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Russ, Let me know if I have mis-stated anything.

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Mark and Russ:

Thanks for the information. How much would it cost if we were to abandon all that we have of what you are referring to below? In other words, I am not aware of how many regulator pit facilities we have so that I could calculate the total liability. Does this estimate also include the service lines we spoke about before? I apologize if I am misunderstanding anything.

Thanks,  
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**Sent:** Wednesday, October 19, 2011 6:21 AM  
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**Cc:** Cloyd, Russ  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Angela,

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**Mark Satkamp**  
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[mark.satkamp@lge-ku.com](mailto:mark.satkamp@lge-ku.com)

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**To:** Satkamp, Mark  
**Subject:** RE: Gas Regulator Facilities and Service Lines

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Russ

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**From:** Satkamp, Mark  
**Sent:** Friday, October 14, 2011 3:38 PM  
**To:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Yes. Thank you.

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**Subject:** RE: Gas Regulator Facilities and Service Lines

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**From:** Crescente, Angela  
**Sent:** Friday, October 14, 2011 2:25 PM  
**To:** Satkamp, Mark  
**Cc:** Wiseman, Sara  
**Subject:** Gas Regulator Facilities and Service Lines

Mark,

Charnas

In regards to the questions you had for the above referenced items, is there any way you could send me an estimate as to how much you think it would cost to permanently cut, cap and purge (abandon) them in place if we were to do that today? Please correct me if I am misstating something, but if I remember correctly, the concerns you mentioned to me surrounded the abandonment of such pipe. I also remember discussing the possibility that the materiality of it would be very low. I thought it would be best if I could provide an estimate of these items to senior management in an effort to aid them in making the ultimate materiality decision. If there are any other concerns that have forgotten that we discussed would create the need to discuss AROs, please feel free to remind me so we talk more.

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I would appreciate if you could provide an estimate to me **by October 28<sup>th</sup>**.

Please feel free to call me with any questions you may have.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 11:39 AM  
**To:** Crescente, Angela; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Just to provide some additional clarification: Typically when pits or stations are retired we try to remove them. However, there have been some cases where pits (the one at the Louisville Skate Park, and the Dixie & Flintlock Pit in the middle of Bob Montgomery Chevrolet's parking lot) have been abandoned in place due to customer or other logistical issues. There have also been a few cases where stations (such as the 19<sup>th</sup> & Broadway facility) have been abandoned in place, but typically the stations are removed.

Russ, if you can help answer my previous questions below, I think this will clear up this issue:

"For the cost estimate that you provided previously, would this be applicable to pits that were abandoned in place? Would this also be a reasonable estimate for stations that were abandoned in place?"

Also, for the original question pertaining to whether or not any AROs exist associated with the District Regulator Upgrade and Regulator Capacity Upgrade projects – most of the time, the answer will be no as these facilities are usually removed rather than abandoned in place. For the HP commercial services project, most of the time, the answer will be no, because the service lines are typically not retired. For the few cases where these facilities are abandoned in place for these projects, this is probably not material because this seldom happens.

Thanks,

Mark

---

**From:** Crescente, Angela  
**Sent:** Tuesday, October 25, 2011 11:06 AM  
**To:** Satkamp, Mark; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Thanks Mark. We were also discussing the fact that it may not even be the \$12,432.00 each to cut, cap, purge and abandon because this cost may have originally assumed that it was including retirement costs for removing instead of abandoning in place. Am I understanding that correctly? In other words, now that we have a better idea of what the legal requirement is (regulator pits abandoned in place) how much would the cut, cap and purge for each pit if we were to abandon, not remove?

---

**From:** Satkamp, Mark  
**Sent:** Tuesday, October 25, 2011 10:16 AM  
**To:** Crescente, Angela; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

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**To:** Satkamp, Mark; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Russ and Mark,

Based on conversations with Mark, I also understand that only ones that are underground would apply since all above ground are removed. Is this also correct? If so, how many pits and stations are underground in total?

Thanks,  
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**Cc:** Crescente, Angela  
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Mark

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**Sent:** Tuesday, October 25, 2011 7:29 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

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**To:** Satkamp, Mark  
**Subject:** RE: Gas Regulator Facilities and Service Lines

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**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Tuesday, October 25, 2011 10:03 AM  
**To:** Satkamp, Mark; Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Russ and Mark,

Based on conversations with Mark, I also understand that only ones that are underground would apply since all above ground are removed. Is this also correct? If so, how many pits and stations are underground in total?

Thanks,  
Angela

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**Cc:** Crescente, Angela  
**Subject:** FW: Gas Regulator Facilities and Service Lines

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**Sent:** Wednesday, October 19, 2011 1:22 PM  
**To:** Satkamp, Mark; Crescente, Angela  
**Subject:** RE: Gas Regulator Facilities and Service Lines

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**To:** Satkamp, Mark  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark,

I have not forgotten about this. I came up with \$12,432 for a typical estimate to cut, cap and purge a regulator facility with four inch inlet piping and six inch outlet. This would be somewhat typical of a regulator pit retirement. I can send you the spreadsheet showing the estimate I used if you like. Let me know if you need more information. I hope this helps.

Russ

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**From:** Satkamp, Mark  
**Sent:** Friday, October 14, 2011 3:38 PM  
**To:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Yes. Thank you.

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**Subject:** RE: Gas Regulator Facilities and Service Lines

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Mark

---

**From:** Crescente, Angela  
**Sent:** Friday, October 14, 2011 2:25 PM  
**To:** Satkamp, Mark  
**Cc:** Wiseman, Sara  
**Subject:** Gas Regulator Facilities and Service Lines

Mark,

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I would appreciate if you could provide an estimate to me **by October 28<sup>th</sup>**.

Please feel free to call me with any questions you may have.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, October 19, 2011 10:11 AM  
**To:** Satkamp, Mark  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Satkamp, Mark	Read: 10/19/2011 10:29 AM
	Cloyd, Russ	Read: 10/19/2011 10:33 AM

Mark,

So, would it be correct to say we currently have about \$2,237,760.00 in expected dollars to permanently cut, cap, and purge 180 regulator pits at a today's cost of \$12,432.00 each if we were to retire them all now? Do many get added during the year? Would it also be possible to get an estimate for permanent cut, cap and purge of the service lines? I think you said these service lines are actually for commercial use and would have not been included in our numbers given to us by Paul Stratman as part of distribution. Please confirm.

Thanks,  
Angela

---

**From:** Satkamp, Mark  
**Sent:** Wednesday, October 19, 2011 9:40 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Angela, We have about 180 regulator pit facilities. Typically, only a handful or less of these are retired each year. This estimate would not apply to a service line, which would have less cost associated with retirement.

Russ, Let me know if I have mis-stated anything.

Thanks,

Mark

---

**From:** Crescente, Angela  
**Sent:** Wednesday, October 19, 2011 9:34 AM  
**To:** Satkamp, Mark  
**Cc:** Cloyd, Russ  
**Subject:** RE: Gas Regulator Facilities and Service Lines

Mark and Russ:

Thanks for the information. How much would it cost if we were to abandon all that we have of what you are referring to below? In other words, I am not aware of how many regulator pit facilities we have so that I could calculate the total

Charnas

liability. Does this estimate also include the service lines we spoke about before? I apologize if I am misunderstanding anything.

Thanks,  
Angela

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**From:** Satkamp, Mark  
**Sent:** Wednesday, October 19, 2011 6:21 AM  
**To:** Crescente, Angela  
**Cc:** Cloyd, Russ  
**Subject:** FW: Gas Regulator Facilities and Service Lines

Angela,

The cost estimate to cut, cap and purge a regulator pit facility with four inch inlet piping and six inch outlet piping is \$12,432. Please use this figure to assess the materiality of this portion of these projects.

Russ, Thank you for putting together this cost estimate.

**Mark Satkamp**  
Manager, Gas Control  
502-627-3135 Office  
[mark.satkamp@lge-ku.com](mailto:mark.satkamp@lge-ku.com)

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**Cc:** Wiseman, Sara  
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Thanks,  
Angela

**Crescente, Angela**

---

**From:** Porter, Janice  
**Sent:** Tuesday, October 18, 2011 9:27 AM  
**To:** Crescente, Angela  
**Cc:** Harper, Bill; Harshfield, Eddie  
**Subject:** FW: Gas Personnel

Angela,  
Please add Bill Harper.  
Thanks,  
Janice

---

**From:** Porter, Janice  
**Sent:** Tuesday, October 18, 2011 8:31 AM  
**To:** Crescente, Angela  
**Cc:** Harshfield, Eddie  
**Subject:** RE: Gas Personnel

Pete Clyde  
Tom Reith  
Mark Satkamp  
John Skaggs  
Glenn Sundheimer  
Eddie Harshfield

---

**From:** Crescente, Angela  
**Sent:** Friday, October 14, 2011 4:19 PM  
**To:** Porter, Janice; Wright, Sharon  
**Cc:** Allen, Lisa; Wiseman, Sara  
**Subject:** Gas Personnel

Janice/Sharon:

We are planning on doing a training session with gas folks in regards to AROs in November. Could you please provide me with a distribution list of those who should be invited to ensure that we try to capture everyone? If you could please send it to me as soon as you can that would be great so I can be looking at availability.

Thanks for your help,  
Angela

**Crescente, Angela**

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**Subject:** RE: Gas Personnel

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**Sent:** Friday, October 14, 2011 2:25 PM  
**To:** Satkamp, Mark  
**Cc:** Wiseman, Sara  
**Subject:** Gas Regulator Facilities and Service Lines

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Angela

**Clark, Ed**

---

**From:** Jim Ogilvie <jogilvie@pwrplan.com>  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Tables**

PowerPlant Table Maintenance

**Regulatory Entry Type**

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

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jogilvie@pwrplan.com  
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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see if \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Manual... Reports Quit Help Calc Print Win

**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add	Update
Add Like	
Delete	Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000- -

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000- -

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B)
LGE-134707-ARO Cost Other Prod (Eqp)

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**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

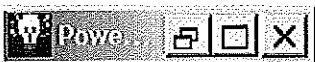
Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

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- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

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Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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Atlanta, GA 30339

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**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

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<<lgetestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

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ARO Details

ARO Details

ARO Asset Det

Description: Purc-CR Nuclear Sources

Company: LOUISVILLE GAS & ELECTRIC COMPANY

ARO Type: Site ARC Auto Ret: no

ARO Status: Inactive Rate Type: Standard

Status Date: 3/28/2011 Use Det. Rates: no

Liability Account: 230012-ASSET RETIREMENT OE

Accretion Acct: 411150-ACCRETION EXPENSE -

Gain Account: 421105-GAIN ON ARO SETTLEN

Loss Account: 421105-GAIN ON ARO SETTLEN

Book Summary: ARO

Long Description: Purc-CR Nuclear Sources

Settle Cost Elmnt: 0699: CORPORATE DEFAULT

ARO Rollup: Gen-Equip

Ext ARO Code

Asset Id: 30304493

Description: Purc-CR Nuclear

Business Segment: Electric

Asset GI Account: 101 - Plant in Ser

Utility Account: E317.07-ARO Cos

Sub Account: None

Retirement Unit: ARO - CHILD

Property Group: EON Default Prop

Asset Location: Land and AROs -

Subledger Type: ARO

End of Life: 12/2023

Asset Dollars: \$0.00

Long Description: Purc-CR Nuclear

Underlying Related Locations

Related Asset Locations

[Empty box for Related Asset Locations]

Ready

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**Clark, Ed**

---

**From:** Jim Ogilvie <jogilvie@pwrplan.com>  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

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ARO Regulatory Entry Maintenance

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update  
 Add Like  
 Delete Cancel

Entry Id: 11  
 Entry Name: Depreciation Neutrality -LGE- Gen  
 Entry Type: ARC Depreciation Expense  
 Factor (0 to 1): 1  
 Regulatory GI Account: 182317-OTHER REGULATORY  
 Offset GI Account: 407421-REGULATORY CREDIT  
 GI Je Code: ARO  
 Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-  
 Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-  
 Notes: Equip-Gen -LGE- Depreciation Neutrality

Selected AROs/Depreciation Groups

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp

< << > >>

Unselected AROs/Depreciation Groups

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
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Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
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Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
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		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

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**Sent:** Tuesday, March 29, 2011 10:34 AM  
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ARO Details

ARO Details		ARO Asset Det	
Description:	Purc-CR Nuclear Sources	Asset Id:	30304493
Company:	LOUISVILLE GAS & ELECTRIC COMPANY	Description:	Purc-CR Nuclear
ARO Type:	Site	ARC Auto Ret:	no
ARO Status:	Inactive	Business Segmer:	Electric
Status Date:	3/28/2011	Asset GI Account:	101 - Plant In Ser
Rate Type:	Standard	Utility Account:	E317.07-ARO Cos
Use Def. Rates:	no	Sub Account:	None
Liability Account:	230012-ASSET RETIREMENT OE	Retirement Unit:	ARO - CHILD
Accretion Acct:	411150-ACCRETION EXPENSE -	Property Group:	EON Default Prop
Gain Account:	421105-GAIN ON ARO SETTLEN	Asset Location:	Land and AROs -
Loss Account:	421105-GAIN ON ARO SETTLEN	Subledger Type:	ARO
Long Description:	Purc-CR Nuclear Sources	End of Life:	12/2023
Book Summary:	ARO	Asset Dollars:	\$0.00
Settle Cost Elmnt:	0699: CORPORATE DEFAULT	Long Description:	Purc-CR Nuclear
ARO Rollup:	Gen-Equip		
Ext ARO Code			

Underlying Related Locations

Related Asset Locations

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ARO Details

ARO Asset Det

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ARO Status:	Inactive	Rate Type:	Standard
Status Date:	3/28/2011	Use Det. Rates:	no
Liability Account:	230012-ASSET RETIREMENT OE		
Accretion Acct:	411150-ACCRETION EXPENSE -		
Gain Account:	421105-GAIN ON ARO SETTLEM	Book Summary:	
Loss Account:	421105-GAIN ON ARO SETTLEM		ARO
Long Description:	Purc-CR Nuclear Sources		
Settle Cost Elmnt:	0699: CORPORATE DEFAULT		
ARO Rollup:	Gen-Equip		
Ext ARO Code			

Asset Id:	30304493
Description:	Purc-CR Nuclear
Business Segment:	Electric
Asset GI Account:	101 - Plant In Ser
Utility Account:	E317.07-ARO Cos
Sub Account:	None
Retirement Unit:	ARO - CHILD
Property Group:	EON Default Prop
Asset Location:	Land and AROs
Subledger Type:	ARO
End of Life:	12/2023
Asset Dollars:	\$0.00
Long Description:	Purc-CR Nuclear

Underlying Related Locations

Related Asset Locations

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**Clark, Ed**

---

**From:** Leenerts, Patricia  
**Sent:** Monday, March 28, 2011 5:24 PM  
**To:** Crescente, Angela  
**Subject:** ARO retires - ASBESTOS only or also DISTRIBUTION MAINS

I just remembered to check...alas I did not push the button.

Angela, Diana reminded me that we may only be working toward settling only Asbestos AROs for March. Do you know if I need to continue working on the LSMR project? Diana thought that you might not be to the place you were hoping for processing main AROs. If mains aren't processing this month I want to stop working on the LSMR. I could certainly use the time for other projects.

Thanks,

Pat  
502-627-3811

**Clark, Ed**

---

**From:** Leenerts, Patricia  
**Sent:** Monday, March 28, 2011 9:48 AM  
**To:** Crescente, Angela  
**Subject:** Transfer ARO assets

Angela, I need to transfer plant accounts for 2 assets from 2352.50 to 2352.55. Do you care? Do I need to let you know, on a normal basis when I do this type of transfer? In this case these are for wells which we will not be working on until after March close, so there won't be confusion with these assets and the other AROs which we should be retiring in March.

Thanks,

Pat  
502-627-3811

**Clark, Ed**

---

**From:** Leenerts, Patricia  
**Sent:** Wednesday, March 23, 2011 10:11 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO - update...what is the plan?

Yep, I'm also working on getting some of my big projects in, so I am making plans. I will have the LSMR retirements ready for you. I am also working on PMR. Cut-off is March 30.

Thanks,

Pat  
502-627-3811

---

**From:** Crescente, Angela  
**Sent:** Wednesday, March 23, 2011 10:09 AM  
**To:** Leenerts, Patricia  
**Subject:** RE: ARO - update...what is the plan?

Working on it.....are you going to be here next week?

---

**From:** Leenerts, Patricia  
**Sent:** Wednesday, March 23, 2011 10:02 AM  
**To:** Crescente, Angela  
**Subject:** ARO - update...what is the plan?

**Clark, Ed**

---

**From:** Fackler, Andrea  
**Sent:** Tuesday, March 22, 2011 1:47 PM  
**To:** Crescente, Angela  
**Cc:** Pienaar, Lesley; Wiseman, Sara  
**Subject:** RE: Note 4 - ARO - Information Draft

Angela,

PPL does not disclose those amounts outside of the rollforward table of the balance sheet type accounts. As such, Lesley said we should be okay to remove the amounts from the paragraph and leave it as a general discussion of our accounting process. Here is an updated version of LKE's paragraph with the amounts removed for you to review.

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied; therefore, ARO net assets, ARO liabilities and regulatory asset balances do not net to zero.

I've removed the sentence in question in KU's document only, which is what you requested. You should be able to see all the updates on Sharepoint now. Let me know if you have any questions.

Thanks,  
Andrea

Andrea Fackler, CPA  
Accounting Analyst II  
LG&E and KU Energy, LLC  
220 W. Main Street, 9th Floor  
Louisville, KY 40202  
P. (502) 627-3442

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 22, 2011 11:37 AM  
**To:** Fackler, Andrea  
**Cc:** Pienaar, Lesley; Wiseman, Sara  
**Subject:** RE: Note 4 - ARO - Information Draft

Andrea:

Per our conversation, I will wait to hear from you as to whether or not the first point needs to be included for sure. As for point number 2, that sentence needs to be deleted because there is not enough cash value to not make them zero. However, there is for LG&E and LKE so that is why the sentence needs to stay for them. Please keep that sentence deleted on KU since they do net to zero (in millions). For point number 3, I think the changes you made hinge on whether or not we do point 1.

Thanks,  
Angela

---

**From:** Fackler, Andrea  
**Sent:** Tuesday, March 22, 2011 11:13 AM  
**To:** Crescente, Angela  
**Cc:** Pienaar, Lesley; Wiseman, Sara  
**Subject:** RE: Note 4 - ARO - Information Draft

Angela,

I am working on the updates you submitted for the ARO footnotes and have a few follow up items/questions.

- 1) We need to include the amount of ARO depr. and amort. for the 3 months ended 3/31/10 for all three companies. Can you provide me with this amount? No need to cut and paste into a new document as long as you maintain the support in your final tie-out.
- 2) In the KU file you sent, you deleted the last sentence of the paragraph directly below the table. You did not delete it from the LG&E or LKE files. Please confirm what you would like here.
- 3) I made some other updates to formatting and wording to help clean up some of the language surrounding all the amounts we had to report at yearend for predecessor and successor and also included some additional language from the yearend report, so please review the updated copies of the footnotes on Sharepoint and let me know if you have any questions.

Thanks,  
Andrea

---

**From:** Pienaar, Lesley  
**Sent:** Tuesday, March 22, 2011 9:39 AM  
**To:** Fackler, Andrea  
**Subject:** FW: Note 4 - ARO - Information Draft

---

**From:** Crescente, Angela  
**Sent:** Friday, March 18, 2011 5:08 PM  
**To:** Pienaar, Lesley  
**Cc:** Wiseman, Sara  
**Subject:** Note 4 - ARO - Information Draft

Lesley,

Here are my changes:

<< File: Note 4 - ARO - LKE Information Draft.docx >> << File: Note 4 - ARO - KU Information Draft.docx >> << File: Note 4 - ARO - LGE Information Draft.docx >>

Thanks,  
Angela



**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 22, 2011 11:37 AM  
**To:** Fackler, Andrea  
**Cc:** Pienaar, Lesley; Wiseman, Sara  
**Subject:** RE: Note 4 - ARO - Information Draft

Andrea:

Per our conversation, I will wait to hear from you as to whether or not the first point needs to be included for sure. As for point number 2, that sentence needs to be deleted because there is not enough cash value to not make them zero. However, there is for LG&E and LKE so that is why the sentence needs to stay for them. Please keep that sentence deleted on KU since they do net to zero (in millions). For point number 3, I think the changes you made hinge on whether or not we do point 1.

Thanks,  
Angela

---

**From:** Fackler, Andrea  
**Sent:** Tuesday, March 22, 2011 11:13 AM  
**To:** Crescente, Angela  
**Cc:** Pienaar, Lesley; Wiseman, Sara  
**Subject:** RE: Note 4 - ARO - Information Draft

Angela,

I am working on the updates you submitted for the ARO footnotes and have a few follow up items/questions.

- 1) We need to include the amount of ARO depr. and amort. for the 3 months ended 3/31/10 for all three companies. Can you provide me with this amount? No need to cut and paste into a new document as long as you maintain the support in your final tie-out.
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Thanks,  
Andrea

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**From:** Pienaar, Lesley  
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**To:** Fackler, Andrea  
**Subject:** FW: Note 4 - ARO - Information Draft

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**Sent:** Friday, March 18, 2011 5:08 PM  
**To:** Pienaar, Lesley  
**Cc:** Wiseman, Sara  
**Subject:** Note 4 - ARO - Information Draft

Lesley,

Here are my changes:

<< File: Note 4 - ARO - LKE Information Draft.docx >> << File: Note 4 - ARO - KU Information Draft.docx >> << File: Note 4 - ARO - LGE Information Draft.docx >>

Thanks,  
Angela

**Clark, Ed**

---

**From:** Fackler, Andrea  
**Sent:** Tuesday, March 22, 2011 11:13 AM  
**To:** Crescente, Angela  
**Cc:** Pienaar, Lesley; Wiseman, Sara  
**Subject:** RE: Note 4 - ARO - Information Draft

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- 1) We need to include the amount of ARO depr. and amort. for the 3 months ended 3/31/10 for all three companies. Can you provide me with this amount? No need to cut and paste into a new document as long as you maintain the support in your final tie-out.
- 2) In the KU file you sent, you deleted the last sentence of the paragraph directly below the table. You did not delete it from the LG&E or LKE files. Please confirm what you would like here.
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Thanks,  
Andrea

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**From:** Pienaar, Lesley  
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**To:** Fackler, Andrea  
**Subject:** FW: Note 4 - ARO - Information Draft

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**From:** Crescente, Angela  
**Sent:** Friday, March 18, 2011 5:08 PM  
**To:** Pienaar, Lesley  
**Cc:** Wiseman, Sara  
**Subject:** Note 4 - ARO - Information Draft

Lesley,

Here are my changes:

<< File: Note 4 - ARO - LKE Information Draft.docx >> << File: Note 4 - ARO - KU Information Draft.docx >> << File: Note 4 - ARO - LGE Information Draft.docx >>

Thanks,  
Angela

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Friday, March 18, 2011 5:08 PM  
**To:** Pienaar, Lesley  
**Cc:** Wiseman, Sara  
**Subject:** Note 4 - ARO - Information Draft

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Pienaar, Lesley	Read: 3/18/2011 5:24 PM
	Wiseman, Sara	

Lesley,

Here are my changes:



Note 4 - ARO - Note 4 - ARO - KU Note 4 - ARO -  
LKE Information... Information ... LGE Information...

Thanks,  
Angela

**Note 4 - Asset Retirement Obligations**

A summary of the Company's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	ARO Net <u>Assets</u>	ARO <u>Liabilities</u>	Regulatory <u>Assets</u>
As of December 31, 2010	\$ 97	\$ (103)	\$ 9
ARO accretion and depreciation	?	(?)	?
Reclassification for retired assets	?	?	?
ARO revaluation - change in estimates	?	?	?
ARO settlements	?	?	(?)
Removal cost incurred	?	?	?
As of <b>Error! Reference source not</b>	<u>\$ ?</u>	<u>\$ (??)</u>	<u>\$ ??</u>

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit was recorded in "Depreciation and amortization" in the Consolidated Statements of Income for \$X million for the 3 months ended March 31, 2011 the Successor of \$2 million in 2010 and \$4 million for the Predecessor for the ARO accretion and depreciation expense. The offsetting regulatory credit recorded was \$4 million in 2009 and 2008 for the ARO accretion and depreciation expense. The ARO liabilities are offset by cash settlements that have not yet been applied. Therefore, ARO net assets, ARO liabilities and regulatory assets balances do not net to zero.

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LKE's AROs are primarily related to the final retirement of assets associated with generating units and natural gas mains and wells. LKE transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

**Note 4 - Asset Retirement Obligations**

A summary of KU's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	ARO Net Assets	ARO Liabilities	Regulatory Assets
As of December 31, 2010	\$ 52	\$ (54)	\$ 2
ARO accretion and depreciation	?	(?)	?
Reclassification for retired assets	(?)	?	?
ARO revaluation - change in estimates	??	(??)	?
ARO settlements	(?)	-	(?)
Removal cost incurred	?	?	-
As of March 31, 2011	\$ ?	\$ (??)	\$ ?

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Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit was recorded in "Depreciation and amortization" in the Statements of Income for the Successor of \$1 million in 2010 and \$2 million for the Predecessor of \$X million, for the 3 months ended March 31, 2011 for the ARO accretion and depreciation expense. The offsetting regulatory credit recorded was \$2 million in 2009 and 2008 for the ARO accretion and depreciation expense. The ARO liabilities are offset by cash settlements that have not yet been applied. Therefore, ARO net assets, ARO liabilities and regulatory assets balances do not net to zero due to the cash settlements

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KU's AROs are primarily related to the final retirement of assets associated with generating units. KU transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

**Note 4 - Asset Retirement Obligations**

A summary of LG&E's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	ARO Net Assets	ARO Liabilities	Regulatory Assets
As of December 31, 2010	\$ 45	\$ (49)	\$ 7
ARO accretion and depreciation	?	(?)	?
Reclassification for retired assets			
ARO revaluation—change in estimates	?	?	?
ARO settlements	?	?	(?)
Removal cost incurred	?	?	?
As of <b>Error! Reference source not</b>	<u>\$ ?</u>	<u>\$ (??)</u>	<u>\$ ??</u>

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit was recorded in "Depreciation and amortization" in the Statements of Income of ~~\$X million for the 3 months ended March 31, 2011 for the Successor of \$1 million in 2010 and \$2 million for the Predecessor~~ for the ARO accretion and depreciation expense. The offsetting regulatory credit recorded was ~~\$2 million in 2009 and 2008 for the ARO accretion and depreciation expense.~~ The ARO liabilities are offset by cash settlements that have not yet been applied. Therefore, ARO net assets, ARO liabilities and regulatory assets balances do not net to zero.

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LG&E's AROs are primarily related to the final retirement of assets associated with generating units and natural gas mains and wells. LG&E transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

**Clark, Ed**

---

**From:** Leenerts, Patricia  
**Sent:** Wednesday, March 16, 2011 2:05 PM  
**To:** Wacker, Diana; Crescente, Angela  
**Subject:** ARO Projects - Asbestos

I have gotten 4 of the 5 asbestos related ARO folders prepared. I need to talk to you about the 120578 – Retire Main. Per Tom Reith “This was 75-feet of bare steel line replaced in 2006 with coated steel. This actually should not be ARO because I do not believe it had the coal tar coating. I confirmed through Oracle and Smallworld the pipe purchased was 4-inch, FBE [Fusion Bonded Epoxy] coated pipe.” I confirmed that it also did not have asbestos wrapping.

Let me know when you want to discuss these projects. Go ahead and setup a meeting realizing that I will be out Monday (21<sup>st</sup>) and Tuesday (22<sup>nd</sup>)... (with a very small possibility of being out on Wednesday).

Angela indicated that we would not be settling the Well projects in March. There is also some question as how to handle the retirements in that there are other plant accounts/depr groups than those of just the well parents. I cannot setup the estimates on the Well projects until I know if I need another task for the non-parent plant accounts/depr groups, which Angela was considering the way to go.

Thanks,

Pat  
502-627-3811



**Clark, Ed**

---

**From:** PowerPlantAlerts@eon-us.com  
**Sent:** Wednesday, March 16, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

Project 131113 has ARO

[login to powerplant](#)

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Monday, March 14, 2011 9:14 PM  
**To:** Cosby, David  
**Cc:** Crescente, Angela; Rose, Bruce  
**Subject:** RE: ARO discussion Thursday 3/17

David:

Early afternoon would be best. Unfortunately, I have not had as much time as I would like to prepare for this discussion, so it may not take long. Angela will be coming along. Bruce is off, but he can leave some comments for Angela to convey on his behalf. We can try to answers any other questions...

---

**From:** Cosby, David  
**Sent:** Monday, March 14, 2011 11:34 AM  
**To:** Wiseman, Sara; Crescente, Angela  
**Subject:** ARO discussion Thursday 3/17

Good morning. We are meeting with the plant Budget Analysts this Thursday and I was holding a time slot to discuss ARO items and any other Property Accounting things you would like to discuss. Are there time frames that work well for you? We can focus on mid morning or early afternoon if you like.

Also, are their specific topics on the ARO that you want to send out beforehand so folks can be prepared to talk about them? Thanks.

*David L. Cosby Jr.*  
**Manager - Fin. & Budgeting - Power Generation**  
**LG&E and KU Energy Services**  
**502-627-2499**  
[david.cosby@lge-ku.com](mailto:david.cosby@lge-ku.com)

**Clark, Ed**

---

**From:** Nitsche, John P <jpnitsche@pplweb.com>  
**Sent:** Monday, March 14, 2011 3:39 PM  
**To:** Crescente, Angela  
**Subject:** ARO Probability Factor  
**Attachments:** Book3.xls

Per our discussion, this is how we derived a probability factor.

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### ARO Probability Weighted Cash Flow Factor

<u>Cost Range</u>	<u>Probability</u>	<u>Weighted Factor</u>
-20%	10%	-2.00%
0%	30%	0.00%
20%	60%	12.00%
	100%	10% Probability Adjustment

Overview: 10% chance that costs will be under estimated costs  
30% chance that costs will equal estimated costs  
60% chance that costs will exceed estimated costs

**Clark, Ed**

---

**From:** Cosby, David  
**Sent:** Monday, March 14, 2011 11:34 AM  
**To:** Wiseman, Sara; Crescente, Angela  
**Subject:** ARO discussion Thursday 3/17

Good morning. We are meeting with the plant Budget Analysts this Thursday and I was holding a time slot to discuss ARO items and any other Property Accounting things you would like to discuss. Are there time frames that work well for you? We can focus on mid morning or early afternoon if you like.

Also, are their specific topics on the ARO that you want to send out beforehand so folks can be prepared to talk about them? Thanks.

*David L. Cosby Jr.*  
**Manager - Fin. & Budgeting - Power Generation**  
**LG&E and KU Energy Services**  
**502-627-2499**  
[david.cosby@lge-ku.com](mailto:david.cosby@lge-ku.com)

**Clark, Ed**

---

**From:** Benfield, Jonathan E <JEBenfield@pplweb.com>  
**Sent:** Wednesday, February 16, 2011 11:24 AM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** RE: AROs

Thank you - I'll let you know if we have any other questions.

---

**From:** Crescente, Angela [<mailto:Angela.Crescente@lge-ku.com>]  
**Sent:** Wednesday, February 16, 2011 10:32 AM  
**To:** Benfield, Jonathan E  
**Cc:** Wiseman, Sara L; Charnas, Shannon Lee; Elmore, Barry L; Nitsche, John P; Brusko, Susan M  
**Subject:** RE: AROs

Jon,

Please see the attached per your request.

Thanks,  
Angela

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, February 16, 2011 8:45 AM  
**To:** 'Benfield, Jonathan E'  
**Cc:** Charnas, Shannon; Elmore, Barry; Nitsche, John P; Brusko, Susan M; Crescente, Angela  
**Subject:** RE: AROs

Jon:

Angela Crescente will be sending a file shortly. Hopefully, the file will be helpful to Paul, but if something else is needed we will be glad to work on it.

---

**From:** Benfield, Jonathan E [<mailto:JEBenfield@pplweb.com>]  
**Sent:** Tuesday, February 15, 2011 5:59 PM  
**To:** Wiseman, Sara  
**Cc:** Charnas, Shannon; Elmore, Barry; Nitsche, John P; Brusko, Susan M  
**Subject:** AROs

Hi Sara - hope you're doing well.

Paul Farr (our CFO) has a meeting tomorrow that he's prepping for and he asked us up here if we had any details on the composition of LKE's AROs as of 12/31/10. All I had handy was your footnote disclosure, which gives a high level overview but not with a whole lot of detail. Can you provide me with a breakdown of the major components of the ARO liability balance at year-end and particularly what the underlying obligations relate to?

John/Susan - if either of you have these details, I'll take them from anyone that has them. My sense from Kindra was that this meeting was tomorrow, so I just figured I'd try anyone and everyone (sorry).

Thanks!  
Jon - X6498

Charnas

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***The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.***

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**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, February 16, 2011 10:32 AM  
**To:** 'Benfield, Jonathan E'  
**Cc:** Wiseman, Sara; Charnas, Shannon; Elmore, Barry; 'Nitsche, John P'; 'Brusko, Susan M'  
**Subject:** RE: AROs  
**Attachments:** LKE ARO Liabilities as of December 31, 2010.xlsx

Jon,

Please see the attached per your request.

Thanks,  
Angela

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, February 16, 2011 8:45 AM  
**To:** 'Benfield, Jonathan E'  
**Cc:** Charnas, Shannon; Elmore, Barry; Nitsche, John P; Brusko, Susan M; Crescente, Angela  
**Subject:** RE: AROs

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**Sent:** Tuesday, February 15, 2011 5:59 PM  
**To:** Wiseman, Sara  
**Cc:** Charnas, Shannon; Elmore, Barry; Nitsche, John P; Brusko, Susan M  
**Subject:** AROs

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ARO Description	Liability as of 12/31/2010
Asbestos	26,872,846.35
Gas Mains	12,110,213.80
Landfills, Ash Ponds	55,970,131.79
Coal Storage	1,436,040.04
Gypsum Stack	4,090,206.93
Other Miscellaneous Generation Assets	662,395.35
Gas Wells	5,490,261.06
	<hr/> 106,632,095.32
Less: Cash Payments not applied	(3,192,810.22)
<b>Total Ending Liability</b>	<hr/> <b>103,439,285.10</b> <hr/>

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, February 16, 2011 10:11 AM  
**To:** Crescente, Angela  
**Subject:** Re: LKE ARO Liabilities as of December 31, 2010.xls

Looks good to me. Pls send. Thx.  
Sent from my BlackBerry!

---

**From:** Crescente, Angela  
**Sent:** Wednesday, February 16, 2011 10:08 AM  
**To:** Wiseman, Sara  
**Subject:** LKE ARO Liabilities as of December 31, 2010.xls

Sara:

Let me know what you think about this.

<<LKE ARO Liabilities as of December 31, 2010.xls>>

Thanks,

Angela

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, February 16, 2011 10:09 AM  
**To:** Wiseman, Sara  
**Subject:** LKE ARO Liabilities as of December 31, 2010.xls

Sara:

Let me know what you think about this.



LKE ARO  
Liabilities as of ...

Thanks,  
Angela

ARO Description	Liability as of 12/31/2010
Asbestos	26,872,846.35
Gas Mains	12,110,213.80
Landfills, Ash Ponds	55,970,131.79
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**Clark, Ed**

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**From:** Wiseman, Sara  
**Sent:** Wednesday, February 16, 2011 8:45 AM  
**To:** 'Benfield, Jonathan E'  
**Cc:** Charnas, Shannon; Elmore, Barry; Nitsche, John P; Brusko, Susan M; Crescente, Angela  
**Subject:** RE: AROs

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**From:** Benfield, Jonathan E [<mailto:JEBenfield@pplweb.com>]  
**Sent:** Tuesday, February 15, 2011 5:59 PM  
**To:** Wiseman, Sara  
**Cc:** Charnas, Shannon; Elmore, Barry; Nitsche, John P; Brusko, Susan M  
**Subject:** AROs

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Jon - X6498

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**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, February 16, 2011 8:25 AM  
**To:** Crescente, Angela  
**Subject:** FW: AROs

---

**From:** Benfield, Jonathan E [<mailto:JEBenfield@pplweb.com>]  
**Sent:** Tuesday, February 15, 2011 5:59 PM  
**To:** Wiseman, Sara  
**Cc:** Charnas, Shannon; Elmore, Barry; Nitsche, John P; Brusko, Susan M  
**Subject:** AROs

Hi Sara - hope you're doing well.

Paul Farr (our CFO) has a meeting tomorrow that he's prepping for and he asked us up here if we had any details on the composition of LKE's AROs as of 12/31/10. All I had handy was your footnote disclosure, which gives a high level overview but not with a whole lot of detail. Can you provide me with a breakdown of the major components of the ARO liability balance at year-end and particularly what the underlying obligations relate to?

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Jon - X6498

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**Clark, Ed**

---

**From:** Ritchey, Stacy  
**Sent:** Tuesday, February 15, 2011 3:39 PM  
**To:** Crescente, Angela  
**Subject:** ARO Explanation

Angela,

One of our project managers has requested guidance to know when something qualifies for ARO and how to treat it. Rusty suggested you or someone in Property may have a white paper or a short description of ARO which details what it is so we can provide guidance to our managers for the future. Do you have anything that would work? Thanks,

Stacy Ritchey  
Sr Budget Analyst  
Project Engineering  
BOC Phone: (502) 627-4388  
EW Brown Phone (859) 748-4455  
Fax: (502) 217-4980

**Clark, Ed**

---

**From:** PowerPlantAlerts@eon-us.com  
**Sent:** Tuesday, February 15, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

Project 130510 has ARO

[login to powerplant](#)



**Clark, Ed**

---

**From:** PowerPlantAlerts@eon-us.com  
**Sent:** Friday, February 11, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - E.ON - AIP - ARO

Project 124382 has ARO

[login to powerplant](#)

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Friday, February 04, 2011 9:19 AM  
**To:** 'erin.m.schroering@us.pwc.com'  
**Cc:** Wiseman, Sara  
**Subject:** RE: ARO question

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	'erin.m.schroering@us.pwc.com'	
	Wiseman, Sara	Read: 2/4/2011 9:53 AM

Erin,

The actual calculation for the revaluation was performed in our automated system (PowerPlant) so there is no excel spreadsheet that can show you the calculation that was performed. What I can tell you is that I get a quote from someone in the field for how much it would cost in today's dollars to perform the obligation. I then input the inflation rate in the system to inflate the dollars to the future cost and then input a discount rate to discount the amount back to the present value. The inflation rate and the discount rate were provided to us by our Treasury Department.

Thanks,  
Angela

---

**From:** [erin.m.schroering@us.pwc.com](mailto:erin.m.schroering@us.pwc.com) [<mailto:erin.m.schroering@us.pwc.com>]  
**Sent:** Thursday, February 03, 2011 6:29 PM  
**To:** Crescente, Angela  
**Subject:** ARO question

Hi Angela,

I am working on closing out the testing relating to an ARO control and was wondering if I could get some support for your Q3 revaluation. The control I am testing is included below.

Could I obtain the necessary support from the revaluation at Q3 - the information you gathered in order to determine the need and the amount of the ARO and maybe just a brief explanation of how you ensure you're calculating the amount in line with the standards?

I believe in Q3 I obtained the JE from you, but maybe if I could come up there and walk through the process for your calculation that would help get me what I need.

Let me know what works for you at your earliest convenience.

Thanks,

Erin

Erin M Schroering  
Assurance Associate

PricewaterhouseCoopers LLP (pwc.com)  
500 West Main Street Suite 1800  
Louisville, KY 40202-4264  
Telephone: +1 502 585 7743  
Facsimile: +1 813 281 6504  
Mobile: +1 502 419 0288

[erin.m.schroering@us.pwc.com](mailto:erin.m.schroering@us.pwc.com)

Print less, think more.

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**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Friday, February 04, 2011 9:03 AM  
**To:** Crescente, Angela  
**Subject:** FW: ARO Ashpond Landfill Gypsum

---

**From:** Wiseman, Sara  
**Sent:** Friday, June 25, 2010 8:26 AM  
**To:** Heun, Jeff  
**Subject:** FW: ARO Ashpond Landfill Gypsum

Hi Jeff: FYI This is information for our meeting on Monday morning. This is how we valued our AROs in 2003.

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, June 23, 2010 4:25 PM  
**To:** Cosby, David; Welsh, Elaine; Dowd, Deborah  
**Cc:** Crescente, Angela; Rose, Bruce  
**Subject:** ARO Ashpond Landfill Gypsum

Hi all:

Here is the information we have for the ashpond, landfill and gypsum stacker.

---

**From:** Hilbert, Debbie  
**Sent:** Wednesday, June 23, 2010 3:45 PM  
**To:** Wiseman, Sara  
**Subject:** Ashpond



Ashpond.pdf

**Debbie Hilbert, CPS**  
Senior Secretary  
E.ON U.S. LLC  
502-627-4676

Relative Sizes for Current and Former Ash Treatment and Disposal Facilities  
LG&E Energy Corporation

Facility Type	Louisville Gas and Electric			Kentucky Utilities			
	Cane Run	Mill Creek	Trimble County	E.W. Brown	Ghent	Green River	Tyrone
Active ATB	27	50	95	116	150	38	9
Emergency Pond	16	4	20	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Former ATB	Not Applicable*	Not Applicable	Not Applicable	Not Applicable*	126 <sup>#</sup>	68 <sup>#</sup>	Not Applicable
Landfill <sup>§</sup>	110	98	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Gypsum Stack Out	Not Applicable	Not Applicable	Not Applicable	Not Applicable	10.1	Not Applicable	Not Applicable
Scrubber Sludge Lagoon	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	11	Not Applicable
Source Information:	Topographic Map	Topographic Map	Topographic Map	KPDES Calculations	Consultant Drawing	Aerial Photograph & KPDES Drawing	KPDES Calculations

**Notes:**

ATB - Ash Treatment Basin (also referred to as ash pond).

\* - Indicates that although the facility has one or more former ATBs, they ATBs are covered by areas already accounted for under this listing.

# - Indicates that the facility has more than one area included in the calculation of the area.

§ - All permitted landfills are bonded to cover closure costs for a "worst case" scenario.

Emergency Ponds, Gypsum Stack Out Areas, and Scrubber Sludge Lagoons would likely require closure procedures similar to those for an ATB.

**Summary of Ash Treatment and Disposal Facilities**

<u>Cane Run</u>	<u>Mill Creek</u>	<u>Trimble County</u>	<u>E.W. Brown</u>	<u>Ghent</u>	<u>Green River</u>	<u>Tyrone</u>
Includes former ATBs located beneath the northern portion of the existing landfill and an active ATB. Adjacent to the active ATB is an Emergency Pond.	Includes an active ATB, an active landfill, and three emergency pond areas.	Includes an active ATB and an Emergency Pond (both of which are "zero-discharge" facilities). Although the site has a landfill permit, no material has ever been landfilled at the site, nor or there plans to initiate such activities.	The active ATB at the site is built on top of the old ATB for the facility. The former ATB is therefore completely included within the surface area shown for the active ATB.	The ATB has been expanded into the nearby ravines. The former ATB is used in the current configuration. The Gypsum Stack-Out is a lined area used for gypsum recovery. A "walk away" scenario is unlikely for closure but requirements should be less stringent & costly due to the liner & market for gypsum.	The ATBs are located on the east side of the property and include one active and two former ATBs incorporated into the current layout. The Scrubber Sludge Lagoon is in the same area, but is a "zero-discharge" facility.	The life of the ATB has been extended many times over through beneficial reuse of reclaimed ash. As a result, there is only one ATB location for this site.

Supporting Information for Ponding Areas  
LG&E Energy Corporation

Facility	Basin Name	Approx. Measurements		Area (ft <sup>2</sup> )	Area (acres)	Area to Use (acres)	Notes
		Length	Width				
CaneRun	Active ATB	500	2,200	1,100,000	25.3	27	KPDES says active ATB = 27 acres
	Emergency Pond	700	1,000	700,000	16.1	16	
Mill Creek	Active ATB	2,000	1,100	2,200,000	50.5	50	KPDES says active ATB = 42.8 acres
	Emergency Pond	300	300	90,000	2.1	4	
		150	300	45,000	1.0		
		150	400	60,000	1.4		
TrimbleCounty	Active ATB	850	3,000	2,550,000	58.5	95	Plant Brochure said 95 acres
		450	1,200	540,000	12.4		
		900	1,000	900,000	20.7		
	Emergency Pond	1,100	850	935,000	21.5	20	Plant Brochure said 20 acres
EW Eown	Active ATB					116	KPDES says ATB=115 acres; Plant says 116 acres
Ghnt	Active ATB	2,900	2,050	5,945,000	136.5	150	KPDES says active ATB = 149.9 acres
	Former ATB	1,500	3,650	5,475,000	125.7	126	KPDES says former ATBs = 121.8 acres
	Gypsum Stack Out	1,100	400	440,000	10.1	10	
GreerRiver	Active ATB	2,320	720	1,670,400	38.3	38	KPDES says active ATB = 36.1 acres
	Former ATB	1,500	1,540	2,310,000	53.0	68	KPDES says former ATBs = 54 acres
		1,790	370	662,300	15.2		
	Scrubber Sludge Lagoon	610	630	384,300	8.8	11	KPDES says Scrubber Sludge Lagoon = 10.9 acres
250		300	75,000	1.7			
Tyrne	Active ATB					8	KPDES says ATB=7.8 acres; Plant says 9 acres

Clark, Ed

---

**From:** erin.m.schroering@us.pwc.com  
**Sent:** Thursday, February 03, 2011 6:29 PM  
**To:** Crescente, Angela  
**Subject:** ARO question

Hi Angela,

I am working on closing out the testing relating to an ARO control and was wondering if I could get some support for your Q3 revaluation. The control I am testing is included below.

Could I obtain the necessary support from the revaluation at Q3 - the information you gathered in order to determine the need and the amount of the ARO and maybe just a brief explanation of how you ensure you're calculating the amount in line with the standards?

I believe in Q3 I obtained the JE from you, but maybe if I could come up there and walk through the process for your calculation that would help get me what I need.

Let me know what works for you at your earliest convenience.

Thanks,

Erin

Erin M Schroering  
Assurance Associate

PricewaterhouseCoopers LLP (pwc.com)  
500 West Main Street Suite 1800  
Louisville, KY 40202-4264  
Telephone: +1 502 585 7743  
Facsimile: +1 813 281 6504  
Mobile: +1 502 419 0288

[erin.m.schroering@us.pwc.com](mailto:erin.m.schroering@us.pwc.com)

Print less, think more.

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**Clark, Ed**

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**From:** Charnas, Shannon  
**Sent:** Wednesday, February 02, 2011 8:04 PM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** ARO disclosure

Sara –

Jon Benfield asked me a question today that I think he has already asked you. He was asking about the reg liability for the AROs and what actually makes it up. I'd like to walk through that. I think this is actually the \$7M (at LKE) that was the previous note you were asking me about. Can we discuss tomorrow?

Thanks,

**Shannon Charnas**  
*Director, Utility Accounting & Reporting*  
*LG&E and KU*  
*(502) 627-4978*



**Clark, Ed**

---

**From:** PowerPlantAlerts@eon-us.com  
**Sent:** Thursday, January 27, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - E.ON - AIP - ARO

Project 130515 has ARO Project 132590 has ARO

[login to powerplant](#)

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, January 26, 2011 3:27 PM  
**To:** Leenerts, Patricia  
**Subject:** RE: Form 1 - ZORN ARO

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Leenerts, Patricia	Read: 1/26/2011 3:40 PM

It is in Steam in PowerPlant and on the Plant Report.

---

**From:** Leenerts, Patricia  
**Sent:** Wednesday, January 26, 2011 3:20 PM  
**To:** Crescente, Angela  
**Subject:** Form 1 - ZORN ARO

Did you mention a potential problem with Zorn...it is showing up in Steam not OP.

Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Tuesday, January 25, 2011 11:04 AM  
**To:** 'jeffrey.m.zoglmann@us.pwc.com'  
**Cc:** Wiseman, Sara  
**Subject:** RE: ARO's  
**Attachments:** Depreciation Study0001.pdf; New Energy0001.pdf

Jeff,

The person you need to talk to for the gas mains is Paul Stratman, and the person you need to talk to for Paddy's Run is Steve Legler.

The decommissioning date that was used for Paddy's Run ASB was in accordance with the long term budget plan – expected 12/2015.

The gas main date was developed using the 2006 depreciation study for account G376.00 which is 44 years (composite remaining life) less 4 years to get from 2006-2010 and add that to 2010 which will get you to 12/2050.

The dates for the ash ponds were determined by using an Economic Life Assessment of Generation Assets by New Energy Associates, L.L.C.

Please see the attached support.

Thanks,  
Angela

---

**From:** [jeffrey.m.zoglmann@us.pwc.com](mailto:jeffrey.m.zoglmann@us.pwc.com) [<mailto:jeffrey.m.zoglmann@us.pwc.com>]  
**Sent:** Wednesday, January 19, 2011 3:03 PM  
**To:** Crescente, Angela  
**Subject:** ARO's

Angela,

I was able to reach out to Jeff and David, and they are providing support. I have a few additional questions about other items:

- 1) Who would I reach out to in order to get support for the \$41M gas main and service abandons (LG&E)?
- 2) For the Paddy's Run ASB for \$4.6M, the support said this came from a quote received in April 2009. Who would I reach out to in order to get the support (LG&E)?
- 3) How was the decommissioning date calculated? I would need some sort of documentation for each item I selected (ash ponds, gas mains, and paddy's run ASB).

Thanks!

Jeff Zoglmann | PricewaterhouseCoopers LLP

500 West Main Street Suite 1800 | Louisville, KY 40202 | 電話: 502.585.7706 | 傳真: 813.281.6173 | 電子郵件: jeffrey.m.zoglmann@us.pwc.com

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LOUISVILLE GAS AND ELECTRIC  
GAS PLANTTABLE 2. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND  
CALCULATED ANNUAL DEPRECIATION RATES AS OF DECEMBER 31, 2006

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL		COMPOSITE REMAINING LIFE (8)/(6)/(7)	
						ACCRUAL AMOUNT (7)	ACCRUAL RATE (8)=(7)/(4)		
DEPRECIABLE PLANT									
<u>PRODUCTION PLANT</u>									
350.20	RIGHTS OF WAY	55-R4	0	63,678.14	70,451	(6,773)	0	-	-
351.20	COMPRESSOR STATION STRUCTURES	50-R2.5	(5)	1,696,319.20	743,281	1,037,855	28,509	1.68	36.4
351.30	MEASURING AND REGULATING STATION STRUCTURES	55-R2.5	(5)	10,879.81	14,474	(3,050)	0	-	-
351.40	OTHER STRUCTURES	50-R3	(5)	1,236,356.49	807,089	491,085	13,172	1.07	37.3
352.10	STORAGE LEASEHOLDS AND RIGHTS	65-R4	0	548,241.14	569,590	(21,349)	0	-	-
352.20	RESERVOIRS	55-R4	0	400,511.40	448,270	(48,759)	0	-	-
352.30	NONRECOVERABLE NATURAL GAS	50-S0	0	9,648,855.00	7,165,705	2,483,150	88,298	0.92	28.1
352.40	WELL DRILLING	55-R2.5	(20)	2,622,897.61	2,710,350	437,125	11,504	0.44	38.0
352.50	WELL EQUIPMENT	50-R2.5	(20)	6,142,762.54	723,355	6,642,963	248,732	4.05	26.7
353.00	LINES	45-S1	(10)	12,786,744.73	6,643,582	7,421,838	271,652	2.12	27.3
354.00	COMPRESSOR STATION EQUIPMENT	50-R3	(5)	13,961,769.92	6,978,446	7,681,418	205,495	1.47	37.4
355.00	MEASURING AND REGULATING EQUIPMENT	40-R1	(5)	387,809.47	252,799	154,402	6,677	1.72	23.1
356.00	PURIFICATION EQUIPMENT	45-R2	(15)	9,934,256.85	4,093,652	7,330,742	241,956	2.44	30.3
357.00	OTHER EQUIPMENT	40-R2	0	1,039,211.58	298,738	783,476	29,031	2.81	26.3
	TOTAL PRODUCTION PLANT			60,474,293.68	31,493,780	34,367,123	1,145,026	1.89	30.0
<u>TRANSMISSION PLANT</u>									
365.20	RIGHTS OF WAY	65-S3	0	220,659.05	199,377	21,282	655	0.30	32.5
367.00	MAINS	65-R2.5	(10)	12,673,432.30	11,578,244	2,362,536	56,156	0.44	42.1
	TOTAL TRANSMISSION PLANT			12,894,091.35	11,777,621	2,383,818	56,811	0.44	42.0
<u>DISTRIBUTION PLANT</u>									
374.22	OTHER DISTRIBUTION LAND RIGHTS	65-S3	0	74,018.23	72,775	1,242	28	0.04	44.4
375.10	STRUCTURES & IMPROVEMENTS - CITY GATE STATION	55-R3	(5)	224,018.51	112,776	122,443	2,764	1.23	44.3
375.20	STRUCTURES & IMPROVEMENTS - OTHER DISTRIBUTION	30-L1	(5)	505,354.95	96,496	434,109	38,955	7.71	11.1
376.00	MAINS	65-R2.5	(30)	262,334,573.57	92,672,522	248,362,426	5,656,026	2.16	43.9
378.00	MEASURING AND REGULATING STATION EQUIP - GENERAL	41-S0	(10)	7,853,390.14	1,861,538	6,777,193	288,766	3.58	23.5
379.00	MEASURING AND REGULATING STATION EQUIP - CITY GATE SERVICES	45-S1	(15)	3,846,544.97	1,301,803	3,121,721	113,941	2.96	27.4
380.00	SERVICES	42-S0	(55)	125,368,090.71	47,057,089	147,260,348	6,308,119	5.03	23.3
381.00	METERS	31-R1.5	0	21,171,719.50	3,872,688	17,299,033	1,103,358	5.21	15.7
382.00	METER INSTALLATIONS	20-L0	0	9,136,341.11	(817,817)	9,954,158	1,020,340	11.17	9.8
383.00	HOUSE REGULATORS	45-R3	(10)	4,598,091.61	1,202,930	3,625,064	119,212	2.59	30.4
384.00	HOUSE REGULATOR INSTALLATIONS	45-R2	(5)	4,707,358.65	513,259	4,429,471	149,262	3.17	29.7
385.00	MEASURING AND REGULATING STATION EQUIPMENT	40-S2.5	0	159,361.88	114,537	44,825	1,699	1.07	26.4
387.00	OTHER EQUIPMENT	40-S2	0	51,112.34	10,802	40,311	2,038	3.99	19.6
	TOTAL DISTRIBUTION PLANT			440,027,976.17	148,071,386	441,472,374	14,804,508	3.36	28.8

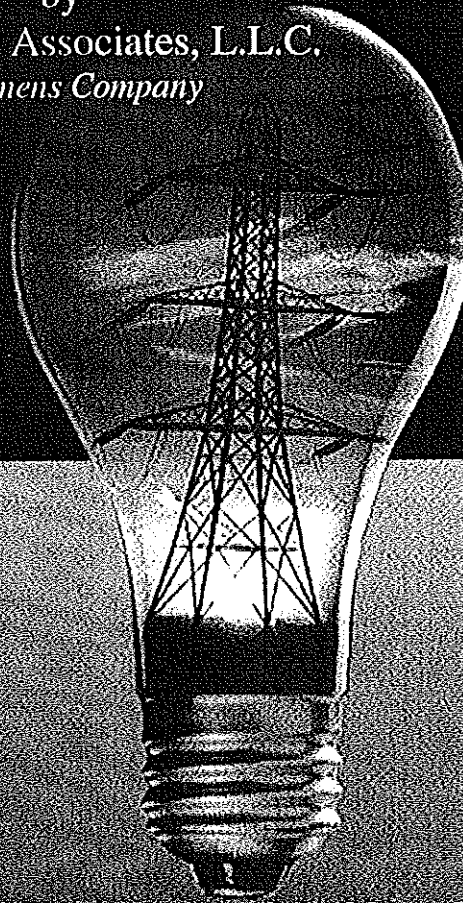
An Economic Life Assessment of Generation Assets  
of KU and LG&E  
Performed for

**e-on** | u.s.

E.ON U.S.

by

NewEnergy Associates, L.L.C.  
*A Siemens Company*



*A Siemens Company*

NewEnergy Associates, LLC performed a Life Assessment of E.ON U.S.'s generating assets to determine the effective useful economic lives of these assets. Figure 12 summarizes the results of this Life Assessment study and shows the projected end of useful economic life for E.ON U.S.'s coal fired steam assets. The assessment of the economics of continuing to operate E.ON U.S.'s combustion turbine assets; the Haefling units, Cane Run 11, Paddy's Run 11 & 12 and Zorn 1, indicates that these assets should continue to be economic throughout the time horizon of the study (through 2035).

**Figure 12:**  
**End of Economic Life**

Unit Name	Projected End of Economic Life
Brown 1	2026
Brown 2	2026
Brown 3	2026
Cane Run 4	2018
Cane Run 5	2022
Cane Run 6	2023
Ghent 1	2026
Ghent 2	2027
Green River 3	2018
Green River 4	2018
Mill Creek 1	2026
Mill Creek 2	2026
Tyrone 3	2018

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, January 25, 2011 9:15 AM  
**To:** Griffin, Sharon; Leenerts, Patricia  
**Cc:** Clark, Lynda; Wacker, Diana; Riggs, Eric; Crescente, Angela  
**Subject:** FW: ARO revaluations and the Form 1

I think we will need to move the revaluation amounts around on page 204.

---

**From:** Nitsche, John P [<mailto:jpnitsche@pplweb.com>]  
**Sent:** Tuesday, January 25, 2011 9:07 AM  
**To:** Wiseman, Sara  
**Subject:** RE: ARO revaluations and the Form 1

Since we don't have any AROs for our US regulated operations, the issue hasn't come up. When I read the wording of instruction #4, I do think it's referring to AROs; you could always note that this is what you did in some type of Supplemental Note Information.

---

**From:** Wiseman, Sara [<mailto:Sara.Wiseman@lge-ku.com>]  
**Sent:** Monday, January 24, 2011 8:57 PM  
**To:** Nitsche, John P  
**Subject:** ARO revaluations and the Form 1

John:

We are working on the FORM 1 and trying to decide which columns to put various adjustments in. I was wondering which columns you have put ARO revaluation amounts in? I looked at the instructions at the top of page 204 and noticed no. 4. This instruction talks about asset retirement costs and wondering if that meant AROs.

Any ideas?

Thanks....

*Sara Wiseman*

*Manager, Property Accounting*

*Office 502.627.3189*

*Cell 502.338.0886*

---

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**Clark, Ed**

---

**From:** jeffrey.m.zoglmann@us.pwc.com  
**Sent:** Wednesday, January 19, 2011 3:03 PM  
**To:** Crescente, Angela  
**Subject:** ARO's

Angela,

I was able to reach out to Jeff and David, and they are providing support. I have a few additional questions about other items:

- 1) Who would I reach out to in order to get support for the \$41M gas main and service abandons (LG&E)?
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- 3) How was the decommissioning date calculated? I would need some sort of documentation for each item I selected (ash ponds, gas mains, and paddy's run ASB).

Thanks!

---

**Jeff Zoglmann** | PricewaterhouseCoopers LLP

500 West Main Street Suite 1800 | Louisville, KY 40202 | ☎: 502.585.7706 | ☎: 813.281.6173 | ✉: jeffrey.m.zoglmann@us.pwc.com

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Clark, Ed

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, January 19, 2011 9:13 AM  
**To:** Crescente, Angela  
**Subject:** FW: ARO Ashpond Landfill Gypsum

---

**From:** Heun, Jeff  
**Sent:** Tuesday, September 14, 2010 12:02 PM  
**To:** Wiseman, Sara  
**Subject:** RE: ARO Ashpond Landfill Gypsum

Sara,

I looked over the Stantec(FMSM) closure cost estimate and updated it based on pricing attained from current ongoing projects as well as escalating the 2002 numbers to 2010 numbers. I came up with an estimate of \$120K per acre to close a pond using Tyrone as the basis, see attached spreadsheet. Also looking over the list of active Ash Pond a new one needs to be added for Brown as the Aux Pond was placed into service in 2008 and is approximately 40 acres in size. I would double check with David Millay to make sure all the CCP storage ponds are accounted for as I believe the Aux Pond was the only one missing.

JBH



Pond Closure  
Costs.xlsx

---

**From:** Wiseman, Sara  
**Sent:** Friday, June 25, 2010 8:26 AM  
**To:** Heun, Jeff  
**Subject:** FW: ARO Ashpond Landfill Gypsum

Hi Jeff: FYI This is information for our meeting on Monday morning. This is how we valued our AROs in 2003.

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, June 23, 2010 4:25 PM  
**To:** Cosby, David; Welsh, Elaine; Dowd, Deborah  
**Cc:** Crescente, Angela; Rose, Bruce  
**Subject:** ARO Ashpond Landfill Gypsum

Hi all:

Here is the information we have for the ashpond, landfill and gypsum stacker.

---

**From:** Hilbert, Debbie  
**Sent:** Wednesday, June 23, 2010 3:45 PM  
**To:** Wiseman, Sara  
**Subject:** Ashpond

<< File: Ashpond.pdf >>

*Debbie Hilbert, CPS*  
Senior Secretary  
E.ON U.S. LLC  
502-627-4676

Activity	2002	2010			Units	Total Cost
	Cost	Escalated Cost	Actual Cost	Adjusted Costs		
Engineering	\$0	\$0	\$250,000	\$250,000	1	\$250,000
Construction						
<i>Mobilization</i>	\$21,000	\$33,471		\$33,471	1	\$33,471
<i>Site Grading</i>	\$225,000	\$358,616		\$358,616	1	\$358,616
<i>1' Clay Cover</i>	\$0	\$0	\$8	\$8	18000	\$144,000
<i>1' Vegetative Cover</i>	\$0	\$0	\$6	\$6	18000	\$108,000
<i>Drainage Ditches</i>	\$25	\$40		\$40	3500	\$139,462
<i>Seeding &amp; Mulching</i>	\$0	\$0	\$2,000	\$2,000	11	\$22,000
<i>Demolition</i>	\$20,000	\$31,877		\$31,877	1	\$31,877
Post Closure Care						
<i>Ground Water Monitoring</i>	\$2,480	\$3,953		\$3,953	1	\$3,953
<i>Maintenace</i>	\$3,000	\$4,782		\$4,782	1	\$4,782

Sub-Total \$1,096,160

Bond \$8,221

Contingency 20% \$219,232

**Total for 11 acres \$1,323,613**

**Total Per Acre \$120,328.43**

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, January 18, 2011 3:41 PM  
**To:** Crescente, Angela  
**Subject:** FW: ARO's

---

**From:** Sneed, Lydia  
**Sent:** Tuesday, January 18, 2011 3:40 PM  
**To:** Wiseman, Sara  
**Cc:** Elmore, Barry; McDaniels, Jason  
**Subject:** ARO's

Sara,

Below is PPL again; I did not finding anything different. You may not need to include all the assumptions listed below; leave out any assumption who likelihood of changing is minor or the impact of the change would be minor.

The sensitivities below reflect an evaluation of the change based solely on a change in that assumption.

	<u>Change in Assumption</u>	<u>Impact on ARO Liability</u>
Retirement Cost	10%/(10)%	\$32/\$32
Discount Rate	0.25%/(0.25)%	\$(31)/\$34
Inflation Rate	0.25%/(0.25)%	\$41/\$37

---

**From:** Elmore, Barry  
**Sent:** Tuesday, January 18, 2011 2:56 PM  
**To:** Wiseman, Sara  
**Cc:** Sneed, Lydia; Crescente, Angela  
**Subject:** RE: Hello Again

Sara,

I think we probably need something similar to PPL's unless you have a better suggestion. We will pull another competitor or two and send it down your way to give you another viewpoint to see if it may give you an easier method/process. Lydia is looking at that now.

**Barry Elmore**

Manager, Financial Accounting and Reporting  
LG&E and KU Energy LLC  
502-627-3580

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, January 18, 2011 2:47 PM  
**To:** Elmore, Barry  
**Cc:** Sneed, Lydia; Crescente, Angela  
**Subject:** RE: Hello Again

Depends on what exactly you are looking for. Angela does need clarification on that. If it looks like the table in PPL's report it is not very likely that you receive it today. Depending on what is decided, it might be lengthy process to run the calculations in the system.

---

**From:** Elmore, Barry  
**Sent:** Tuesday, January 18, 2011 2:18 PM  
**To:** Wiseman, Sara  
**Cc:** Sneed, Lydia  
**Subject:** Hello Again

Hi Sara,

Do you think we will be able to get the Sensitivity Analysis around the ARO's today to complete that section of the note?

I know that is probably a sore subject☺ Nobody likes sensitivity analysis.

**Barry Elmore**

Manager, Financial Accounting and Reporting  
LG&E and KU Energy LLC  
502-627-3580

**Clark, Ed**

---

**From:** PowerPlantAlerts@eon-us.com  
**Sent:** Tuesday, January 18, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - E.ON - AIP - ARO

Project 130511 has ARO

[login to powerplant](#)



**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Monday, January 17, 2011 8:49 AM  
**To:** Crescente, Angela  
**Subject:** FW: ARO question

---

**From:** Nitsche, John P [[mailto:jp\\_nitsche@pplweb.com](mailto:jp_nitsche@pplweb.com)]  
**Sent:** Monday, January 17, 2011 8:07 AM  
**To:** Wiseman, Sara  
**Subject:** RE: ARO question

Sara,  
I'm thinking it's the PPL general ledger account number being used....the account number that shows on the Nvision balance sheet statements. For PPL we use 23000 for the long term portion of the ARO and 23001 for the current portion of the ARO liability.

---

**From:** Wiseman, Sara [<mailto:Sara.Wiseman@lge-ku.com>]  
**Sent:** Sunday, January 16, 2011 4:15 PM  
**To:** Nitsche, John P  
**Cc:** Crescente, Angela Michelle  
**Subject:** ARO question

### **ARO liability (INSERT PPL account #)**

John:

We are trying to finish up the reporting package. The above line is at the top of the ARO tab. Do you know what is needed for this? Any help would be appreciated.

*Sara Wiseman*

*Manager, Property Accounting*

*Office 502.627.3189*

*Cell 502.338.0886*

---

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Charnas

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**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 3:09 PM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela; Pienaar, Lesley  
**Subject:** RE: ARO tab of reporting package

LG&E and KU didn't tie out to the consolidation file from Greg.

Yes, last comment is on mapping.

**Shannon Charnas**

*Director, Utility Accounting & Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Sunday, January 16, 2011 3:02 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela; Pienaar, Lesley  
**Subject:** RE: ARO tab of reporting package

Shannon:

I will work with Angela to add FCD on Monday morning. Additionally, if Lesley can provide more direction on the PPL account numbers, we will also take care of that. We can contact someone at PPL to find out about if we need to—I'm copying Lesley on this so maybe she can advise.

I'm not sure what is meant by LGE and KU not matching the supporting documentation, but I will try to catch you early tomorrow so you can show me.

I'm guessing your last comment has to do with the mapping as opposed to the dollar amounts. Once Angela's schedule included FCD it will tie in total to the amounts that Greg is showing in his file (on 2 different lines).

---

**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 1:54 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** ARO tab of reporting package

It looks like FCD is not included in this information. Also, it looks like the LG&E and KU numbers do not tie to the supporting documentation. Also, the instructions indicate PPL account numbers should be listed. Please make appropriate updates in the Final version and let me know when updated (by noon tomorrow).

It looks like you and Greg do not have the same ARO accounts and RWIP accounts rolling up to the balance. Difference appears to be on LG&E and FCD.

**Shannon Charnas**

*Director, Utility Accounting & Reporting  
LG&E and KU  
(502) 627-4978*

**Clark, Ed**

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Wednesday, March 30, 2011 6:02 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Settlements

I found the problem.

Please go to Depreciation, Select.

Select depr group = LGE-131707-ARO Cost Steam (Eqp).

Go to the GroupRate window.

Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting?

The problem is that is the only one that has effective dated rates for 10/2010.

The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Can you call me when you get this email?

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 5:36 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO Settlements

OK, it's out there with JE Code ARO RETIREMENT for LGE. The asset is Purc-CR Ash Pond.

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 5:27 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Settlements

Angela,

I reviewed the data and everything looks fine.

I have a theory on why the gain loss posted in the gain loss column, and I think it's a Post program issue.

Can you create another URGL transaction for an asset where the gain loss default = Depr Exp and let me Post it in Dev or if you'd like I could search the CPR for an asset like the one you posted and create a retirement on it. Let me know if you want me to find an asset on my own or if you want to create the retirement for me in dev database.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 5:16 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO Settlements

OK, thanks.

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 4:30 PM  
**To:** Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Angela,  
I'll get connected to your database right now and investigate further and get back to you.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database Charms

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cost Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Dep Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrievs: Copy ALL Methods

Audits: Copy Single Method

Delete Row

UoP Details: Audit Row

Default Eff Date: 04/2011

Default Rate Used: No Recalc

Blend Rates: No Recalc

Update

Cancel

Comments

Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Salvag. Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain Loss Default
LGE-131600-Tribble Cr	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131600-Tribble Cr	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	Financial	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database** Charnas

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$23</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$2</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		

Power... [Min] [Max] [Close]



**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid-Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid-Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$23,796.53</b>		



arrow!

Thanks,  
Angela

Charnas

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Tables**

**PowerPlant Table Maintenance**

**Regulatory Entry Type**

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Manual... Reports Quit Help Calc Print Win

**ARO** **Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B)
LGE-134707-ARO Cost Other Prod (Eqp)

<

<<

>

>>

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela



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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**ARO Details**

ARO Details		ARO Asset Det	
Description:	Purc-CR Nuclear Sources	Asset Id:	30304493
Company:	LOUISVILLE GAS & ELECTRIC COMPANY	Description:	Purc-CR Nuclear
ARO Type:	Site ARC Auto Ret: no	Business Segmer:	Electric
ARO Status:	Inactive Rate Type: Standard	Asset GI Account:	101 - Plant In Ser
Status Date:	3/28/2011 Use Det. Rates: no	Utility Account:	E317.07-ARO Cos
Liability Account:	230012-ASSET RETIREMENT OE	Sub Account:	None
Accretion Acct:	411150-ACCRETION EXPENSE -	Retirement Unit:	ARO - CHILD
Gain Account:	421105-GAIN ON ARO SETTLEN	Property Group:	EON Default Prop
Loss Account:	421105-GAIN ON ARO SETTLEN	Asset Location:	Land and AROs
Long Description:	Purc-CR Nuclear Sources	Subledger Type:	ARO
Settle Cost Elmnt:	0699: CORPORATE DEFAULT	End of Life:	12/2023
ARO Rollup:	Gen-Equip	Asset Dollars:	\$0.00
Ext ARO Code:		Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

[Empty Table Area]

Ready

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Clark, Ed

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Wednesday, March 30, 2011 5:39 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Settlements

I'll post this in debug mode and get back to you shortly.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 5:36 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO Settlements

OK, it's out there with JE Code ARO RETIREMENT for LGE. The asset is Purc-CR Ash Pond.

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 5:27 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Settlements

Angela,  
I reviewed the data and everything looks fine.  
I have a theory on why the gain loss posted in the gain loss column, and I think it's a Post program issue.

Can you create another URGL transaction for an asset where the gain loss default = Depr Exp and let me Post it in Dev or if you'd like I could search the CPR for an asset like the one you posted and create a retirement on it. Let me know if you want me to find an asset on my own or if you want to create the retirement for me in dev database.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 5:16 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO Settlements

OK, thanks.

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 4:30 PM  
**To:** Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Angela,  
I'll get connected to your database right now and investigate further and get back to you.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ----- PTAXDEV Database

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Unit Cost Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Dep Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retirevs Copy ALL Methods

Audits Copy Single Method

Delete flow

Audit flow

Default Eff Date: 01/2011

Default Rate Used: Blend Rates, No Recalc, Recalc

Update

Cancel

Comments

Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Salvage %	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain Loss Default
LGE-131600-Trimble Cc	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble Cc	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.800000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	Financial	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$2</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$2</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Aud</b>
		*Ending Reserve:	<b>\$0.00</b>		

PowerPlant [ ] [X]



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Aud
		*Ending Reserve:	<b>\$23,796.53</b>		

PowerPlant [ ] [X]

arrow!

Thanks,  
Angela

Charnas

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

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File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Manual... Reports Quit Help Calc Print Win

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**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

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**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj.</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Aud</b>
		*Ending Reserve:	<b>\$0.00</b>		

PowerPlant [ ] [X]

Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela



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**ARO Details**

**ARO Details**

**ARO Asset Det**

Description:	Purc-CR Nuclear Sources		
Company:	LOUISVILLE GAS & ELECTRIC COMPANY		
ARO Type:	Site	ARC Auto Ret:	no
ARO Status:	Inactive	Rate Type:	Standard
Status Date:	3/28/2011	Use Det. Rates:	no
Liability Account:	230012-ASSET RETIREMENT OE		
Accretion Acct:	411150-ACCRETION EXPENSE -		
Gain Account:	421105-GAIN ON ARO SETTLEM	Book Summary:	
Loss Account:	421105-GAIN ON ARO SETTLEM		ARO
Long Description:	Purc-CR Nuclear Sources		
Settle Cost Elmnt:	0699: CORPORATE DEFAULT		
ARO Rollup:	Gen-Equip		
Ext ARO Code			

Asset Id:	30304493
Description:	Purc-CR Nuclear
Business Segment:	Electric
Asset GI Account:	101 - Plant In Ser
Utility Account:	E317.07-ARO Cos
Sub Account:	None
Retirement Unit:	ARO - CHILD
Property Group:	EON Default Prop
Asset Location:	Land and AROs -
Subledger Type:	ARO
End of Life:	12/2023
Asset Dollars:	\$0.00
Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

--

Ready

Charnas

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Clark, Ed

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Wednesday, March 30, 2011 5:27 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Settlements

Angela,  
I reviewed the data and everything looks fine.  
I have a theory on why the gain loss posted in the gain loss column, and I think it's a Post program issue.

Can you create another URGL transaction for an asset where the gain loss default = Depr Exp and let me Post it in Dev or if you'd like I could search the CPR for an asset like the one you posted and create a retirement on it. Let me know if you want me to find an asset on my own or if you want to create the retirement for me in dev database.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 5:16 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO Settlements

OK, thanks.

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 4:30 PM  
**To:** Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Angela,  
I'll get connected to your database right now and investigate further and get back to you.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt

Cc: Wiseman, Sara; Wacker, Diana  
 Subject: RE: ARO Settlements

The default already is "Depr Exp":

**Depreciation**  
**Depr Method Rates Edit**

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrieva Copy ALL Methods Update  
 Audits Copy Single Method Cancel  
 Delete Row Comments  
 UoP Details Audit Row Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over / Depr. Check	Salvag. Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain/Loss Default Code
LGE-131600-Tribble Ct	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	No
LGE-131600-Tribble Ct	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	Financial	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

From: Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
 Sent: Wednesday, March 30, 2011 9:19 AM  
 To: Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
 Cc: Wiseman, Sara; Wacker, Diana; Kinder, Debra  
 Subject: RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

Charnas

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$2</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$2</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		

PowerPlant [ ] [ ] [X]



PowerPlant PTAXDEV Database

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Asset Management

CPR Ledger Detail

CPR Depreciation

Set of Books: Financial

Asset Id: 10082296 Eng In Service Year: 01/1974

Asset Description: Cane Run Unit 4 - ASB

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Depr Group: LGE-131707-ARO Cost Steam (Eqp)

Accounting Month:	09/2009	Depreciation Base:	\$35,458.72	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$24,600.24	Mid Period Conv.:	
Remaining Life:	627	Current Depr Expense:	\$56.55	Depreciation Method:	<none>
Monthly Calc Rate:	0.1595%	Input Expense Adj:	\$1,262.05	Begin Year Reserve:	\$24
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	
Beginning Value:	\$60,689.98	Reserve Adj:	\$0.00	YTD Expense Adj:	\$1
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$2,122.31)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Data	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$58,567.67	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$23,796.53		

PowerPlant [Close] [Maximize] [Minimize]

arrow!

Thanks,  
Angela



Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant ----- PTAXDEV Database	
File Edit Subsystem Batch Admin Preferences Window Help	
Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win	
Tables	
PowerPlant Table Maintenance	
Regulatory Entry Type	
Please Select A Record	
Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000- -

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000- -

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**GPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<|getestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**ARO Details**

**ARO Details**

**ARO Asset Det**

Description:	Purc-CR Nuclear Sources		
Company:	LOUISVILLE GAS & ELECTRIC COMPANY		
ARO Type:	Site	ARC Auto Ret:	no
ARO Status:	Inactive	Rate Type:	Standard
Status Date:	3/28/2011	Use Det. Rates:	no
Liability Account:	230012-ASSET RETIREMENT OE		
Accretion Acct:	411150-ACCRETION EXPENSE -		
Gain Account:	421105-GAIN ON ARO SETTLEM	Book Summary:	
Loss Account:	421105-GAIN ON ARO SETTLEM		ARO
Long Description:	Purc-CR Nuclear Sources		
Settle Cost Elmnt:	0699: CORPORATE DEFAULT		
ARO Rollup:	Gen-Equip		
Ext ARO Code			

Asset Id:	30304493
Description:	Purc-CR Nuclear
Business Segment:	Electric
Asset GI Account:	101 - Plant In Ser
Utility Account:	E317.07-ARO Cos
Sub Account:	None
Retirement Unit:	ARO - CHILD
Property Group:	EON Default Prop
Asset Location:	Land and AROs -
Subledger Type:	ARO
End of Life:	12/2023
Asset Dollars:	\$0.00
Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

--

Ready



Charnas

*NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.*

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**Clark, Ed**

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Wednesday, March 30, 2011 4:30 PM  
**To:** Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Angela,  
I'll get connected to your database right now and investigate further and get back to you.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database

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Unit Cost Projects Assets Depr Tables CR Admin MyPPLink Help Calc Print Win

Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Buttons: Relieve, Copy ALL Methods, Default Eff Date (04/2011), Update, Audits, Copy Single Method, Default Rate Used (Blend Rates, No Recalc, Recalc), Cancel, Delete Row, Comments, UoP Details, Audit Row, Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Salvag. Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used Code	Gain Loss Default
LGE-131600-Trimble Ct	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble Ct	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2000	Financial	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2000	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2000	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2000	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

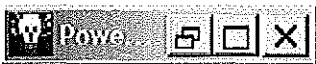
Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	11/2010	Depreciation Base:	\$0.00	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$26,796.42	Mid Period Conv.:	
Remaining Life:	493	Current Depr Expense:	\$0.00	Depreciation Method:	<none>
Monthly Calc Rate:	0.2028%	Input Expense Adj:	\$774,058.96	Begin Year Reserve:	\$2
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	\$2
Beginning Value:	\$800,855.38	Reserve Adj:	\$0.00	YTD Expense Adj:	\$774
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$800,855.38)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	\$1
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Deta	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$0.00	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$0.00		



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	
		*Ending Reserve:	<b>\$23,796.53</b>	<b>Audi</b>	

arrow!

Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.



**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Tables**

**PowerPlant Table Maintenance**

**Regulatory Entry Type**

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Manual... Reports Quit Help Calc Print Win

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**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

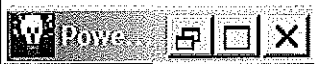
Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The **New Address** is:

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<|getestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**ARO Details**

ARO Details		ARO Asset Det	
Description:	Purc-CR Nuclear Sources	Asset Id:	30304493
Company:	LOUISVILLE GAS & ELECTRIC COMPANY	Description:	Purc-CR Nuclear
ARO Type:	Site ARC Auto Ret: no	Business Segmer:	Electric
ARO Status:	Inactive Rate Type: Standard	Asset GI Account:	101 - Plant In Ser
Status Date:	3/28/2011 Use Det. Rates: no	Utility Account:	E317.07-ARO Cos
Liability Account:	230012-ASSET RETIREMENT OE	Sub Account:	None
Accretion Acct:	411150-ACCRETION EXPENSE -	Retirement Unit:	ARO - CHILD
Gain Account:	421105-GAIN ON ARO SETTLEN	Property Group:	EON Default Prop
Loss Account:	421105-GAIN ON ARO SETTLEN	Asset Location:	Land and AROs -
Long Description:	Purc-CR Nuclear Sources	Subledger Type:	ARO
Settle Cost Elmnt:	0699: CORPORATE DEFAULT	End of Life:	12/2023
ARO Rollup:	Gen-Equip	Asset Dollars:	\$0.00
Ext ARO Code		Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

--

Ready

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Clark, Ed

From: Kinder, Debra  
 Sent: Wednesday, March 30, 2011 11:24 AM  
 To: 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
 Cc: Wiseman, Sara; Wacker, Diana  
 Subject: RE: ARO Settlements

The default already is "Depr Exp":

**PowerPlant** ..... PTAXDEV Database

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Unit Calc Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

**Depreciation**

**Depr Method Rates Edit**

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrievse Copy ALL Methods Default Eff Date: 04/2011 Update

Audits Copy Single Method Default Rate Used: Blend Rates No Recalc Recalc Cancel

Delete Row Audit Row Comments

UoP Details Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COB Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over / Under	Salvage Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain Loss Default
LGE-131600-Tribble Cc	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	No
LGE-131600-Tribble Cc	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
<b>LGE-131707-ARO Cost</b>	<b>DEC/200</b>	<b>Financial</b>	<b>0.000000%</b>	<b>0.000000%</b>	<b>0.000000%</b>	<b>Gross</b>	<b>No</b>	<b>0000%</b>	<b>0.000000%</b>	<b>0000/00</b>	<b>Used</b>	<b>Depr Exp</b>
LGE-131707-ARO Cost	DEC/200	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	0000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

From: Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
 Sent: Wednesday, March 30, 2011 9:19 AM  
 To: Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
 Cc: Wiseman, Sara; Wacker, Diana; Kinder, Debra  
 Subject: RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The **New Address** is:

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200 Galleria Parkway, Ste. 1300  
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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

Charnas

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$2</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$23,796.53</b>		



arrow!

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant PTAXDEV Database

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela



Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database** Charnas

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**ARO** \_ □ X

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type	Add	Update
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	Add Like	
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense	Delete	Cancel
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense		

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000- -

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000- -

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

< << > >>

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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Atlanta, GA 30339

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**ARO Details**

ARO Details		ARO Asset Det	
Description:	Purc-CR Nuclear Sources	Asset Id:	30304493
Company:	LOUISVILLE GAS & ELECTRIC COMPANY	Description:	Purc-CR Nuclear
ARO Type:	Site	ARC Auto Ref:	no
ARO Status:	Inactive	Rate Type:	Standard
Status Date:	3/28/2011	Use Det. Rates:	no
Liability Account:	230012-ASSET RETIREMENT OE	Business Segmer:	Electric
Accretion Acct:	411150-ACCRETION EXPENSE -	Asset GI Account:	101 - Plant In Ser
Gain Account:	421105-GAIN ON ARO SETTLEW	Utility Account:	E317.07-ARO Cos
Loss Account:	421105-GAIN ON ARO SETTLEW	Sub Account:	None
Long Description:	Purc-CR Nuclear Sources	Retirement Unit:	ARO - CHILD
Settle Cost Elmnt:	0699: CORPORATE DEFAULT	Property Group:	EON Default Prop
ARO Rollup:	Gen-Equip	Asset Location:	Land and AROs
Ext ARO Code:		Subledger Type:	ARO
		End of Life:	12/2023
		Asset Dollars:	\$0.00
		Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

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Clark, Ed

---

**From:** Jim Ogilvie <jogilvie@pwrplan.com>  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	11/2010	Depreciation Base:	\$0.00	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$26,796.42	Mid Period Conv.:	
Remaining Life:	493	Current Depr Expense:	\$0.00	Depreciation Method:	<none>
Monthly Calc Rate:	0.2028%	Input Expense Adj:	\$774,058.96	Begin Year Reserve:	\$2
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	\$
Beginning Value:	\$800,855.38	Reserve Adj:	\$0.00	YTD Expense Adj:	\$77
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$800,855.38)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	\$1
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Deta	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$0.00	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$0.00		



**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

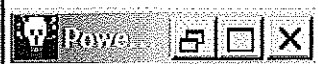
Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eq)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$23,796.53</b>		



arrow!

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

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Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AC
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

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**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000- -

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000- -

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B)
LGE-134707-ARO Cost Other Prod (Eqp)

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv



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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$0.00</b>		

PowerPlant [Min] [Max] [Close]

Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

PowerPlant PTAXDEV Database

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

ARO Details

ARO Details

ARO Asset Det

Description:	Purc-CR Nuclear Sources	
Company:	LOUISVILLE GAS & ELECTRIC COMPANY	
ARO Type:	Site	ARC Auto Ret: no
ARO Status:	Inactive	Rate Type: Standard
Status Date:	3/28/2011	Use Det. Rates: no
Liability Account:	230012-ASSET RETIREMENT OE	
Accretion Acct:	411150-ACCRETION EXPENSE -	
Gain Account:	421105-GAIN ON ARO SETTLEM	Book Summary:
Loss Account:	421105-GAIN ON ARO SETTLEM	ARO
Long Description:	Purc-CR Nuclear Sources	
Settle Cost Elmnt:	0699: CORPORATE DEFAULT	
ARO Rollup:	Gen-Equip	
Ext ARO Code		

Asset Id:	30304493
Description:	Purc-CR Nuclear
Business Segmer:	Electric
Asset GI Account:	101 - Plant In Ser
Utility Account:	E317.07-ARO Cos
Sub Account:	None
Retirement Unit:	ARO - CHILD
Property Group:	EON Default Prop
Asset Location:	Land and AROs -
Subledger Type:	ARO
End of Life:	12/2023
Asset Dollars:	\$0.00
Long Description:	Purc-CR Nuclear

Underlying Related Locations

Related Asset Locations

--

*NOTE: The extension for all E.ON U.S. e-mail addresses <sup>Charnas</sup> has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.*

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**Clark, Ed**

---

**From:** Richardson, Ralph  
**Sent:** Monday, April 04, 2011 8:47 AM  
**To:** Kinder, Debra  
**Cc:** Wacker, Diana; Crescente, Angela; Duce, John  
**Subject:** RE: ARO Settlements

This has been ran in DEV.

---

**From:** Kinder, Debra  
**Sent:** Monday, April 04, 2011 8:33 AM  
**To:** Richardson, Ralph  
**Cc:** Wacker, Diana; Crescente, Angela  
**Subject:** FW: ARO Settlements

Please run the script below in *DEV*.

---

**From:** Kinder, Debra  
**Sent:** Thursday, March 31, 2011 2:16 PM  
**To:** Richardson, Ralph; Duce, John  
**Cc:** Crescente, Angela; Wacker, Diana  
**Subject:** FW: ARO Settlements

Please run the attached SQL in PP *DEV*.

Thanks

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From depr_method_rates
    Where set_of_books_id <> 5 and to_char(effective_date,'yyyy') <2011
    And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
And effective_date = to_date('201010', 'yyyymm')
;

Commit;
```

Sunjin Cone  
PowerPlant Support

770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database Charms

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Unit Cost Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrieva Copy ALL Methods Default Eff Date: 04/2011 Update

Audits Copy Single Method Default Rate Used: No Recalc Cancel

Delete Row Recalc Comments

UoP Details Audit Row Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Salvage Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain Loss Default
LGE-131600-Trimble Ct	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble Ct	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	Financial	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.



Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The New Address is:

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	11/2010	Depreciation Base:	\$0.00	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$26,796.42	Mid Period Conv.:	
Remaining Life:	493	Current Depr Expense:	\$0.00	Depreciation Method:	<none>
Monthly Calc Rate:	0.2028%	Input Expense Adj:	\$774,058.96	Begin Year Reserve:	\$2
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	\$2
Beginning Value:	\$800,855.38	Reserve Adj:	\$0.00	YTD Expense Adj:	\$774
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$800,855.38)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	\$1
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Deta	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$0.00	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$0.00		



**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eq)**

Accounting Month:	09/2009	Depreciation Base:	\$35,458.72	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$24,600.24	Mid Period Conv.:	
Remaining Life:	627	Current Depr Expense:	\$56.55	Depreciation Method:	<none>
Monthly Calc Rate:	0.1595%	Input Expense Adj:	\$1,262.05	Begin Year Reserve:	\$24
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	
Beginning Value:	\$60,689.98	Reserve Adj:	\$0.00	YTD Expense Adj:	\$1
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$2,122.31)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Deta	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$58,567.67	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$23,796.53		



arrow!

Thanks,  
Angela

Charnas

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant PTAXDEV Database

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Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

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**ARO** **Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected ARDs/Depreciation Groups**

Depreciation Group
LGE-131707-ARD Cost Steam (Eqp)
LGE-133707-ARD Cost Hydro Prod (Eqp)
LGE-134705-ARD Cost Other Prod (L/B
LGE-134707-ARD Cost Other Prod (Eqp)

<

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**Unselected ARDs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit.Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		





Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

PowerPlant PTAXDEV Database

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

ARO Details

ARO Details

Description: **Purc-CR Nuclear Sources**

Company: LOUISVILLE GAS & ELECTRIC COMPANY

ARO Type: Site ARC Auto Ret: no

ARO Status: Inactive Rate Type: Standard

Status Date: 3/28/2011 Use Det. Rates: no

Liability Account: 230012-ASSET RETIREMENT OE

Accretion Acct: 411150-ACCRETION EXPENSE -

Gain Account: 421105-GAIN ON ARO SETTLEM

Loss Account: 421105-GAIN ON ARO SETTLEM

Long Description: Purc-CR Nuclear Sources

Settle Cost Elmnt: 0699: CORPORATE DEFAULT

ARO Rollup: Gen-Equip

Ext ARO Code

Book Summary: ARO

ARO Asset Det

Asset Id: 30304493

Description: Purc-CR Nuclear

Business Segment: Electric

Asset GI Account: 101 - Plant In Ser

Utility Account: E317.07-ARO Cos

Sub Account: None

Retirement Unit: ARO - CHILD

Property Group: EON Default Prop

Asset Location: Land and AROs

Subledger Type: ARO

End of Life: 12/2023

Asset Dollars: \$0.00

Long Description: Purc-CR Nuclear

Underlying Related Locations

Related Asset Locations

[Empty box for Related Asset Locations]

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**Clark, Ed**

---

**From:** Kinder, Debra  
**Sent:** Monday, April 04, 2011 8:33 AM  
**To:** Richardson, Ralph  
**Cc:** Wacker, Diana; Crescente, Angela  
**Subject:** FW: ARO Settlements

Please run the script below in **DEV**.

---

**From:** Kinder, Debra  
**Sent:** Thursday, March 31, 2011 2:16 PM  
**To:** Richardson, Ralph; Duce, John  
**Cc:** Crescente, Angela; Wacker, Diana  
**Subject:** FW: ARO Settlements

Please run the attached SQL in PP **DEV**.

Thanks

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From depr_method_rates
    Where set_of_books_id <> 5 and to_char(effective_date,'yyyy') <2011
    And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
And effective_date = to_date('201010', 'yyyymm')
;

Commit;
```

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –

Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.

Select depr group = LGE-131707-ARO Cost Steam (Eqp).

Go to the GroupRate window.

Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.

The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database

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Unk Cal Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrievals: Copy ALL Methods

Audits: Copy Single Method

Delete Row

UoP Details: Audit Row

Default Eff Date: 04/2011

Default Rate Used: No Recalc

Blend Rates: No Recalc

Recalc

Update

Cancel

Comments

Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Salvage Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain Loss Default
LGE-131600-Trimble Cc	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble Cc	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	Financial	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--



Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	11/2010	Depreciation Base:	\$0.00	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$26,796.42	Mid Period Conv.:	
Remaining Life:	493	Current Depr Expense:	\$0.00	Depreciation Method:	<none>
Monthly Calc Rate:	0.2028%	Input Expense Adj:	\$774,058.96	Begin Year Reserve:	\$2
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	\$2
Beginning Value:	\$800,855.38	Reserve Adj:	\$0.00	YTD Expense Adj:	\$774
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$800,855.38)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	\$1
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	<b>Account Distribution Deta</b>	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$0.00	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$0.00		

Power... [Icons]

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eq)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid-Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid-Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$23,796.53</b>		



arrow!

Thanks,  
 Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Tables**

**PowerPlant Table Maintenance**

**Regulatory Entry Type**

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARD Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARD Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AC
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARD Accretion (curr mo	ACCREDITED
Transition ARD Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela

Charnas

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

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**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

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**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv



**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$0.00</b>		





Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

PowerPlant PTAXDEV Database  
File Edit Subsystem Batch Admin Preferences Window Help  
Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

ARO Details

ARO Details

ARO Asset Det

Description: **Purc-CR Nuclear Sources**  
Company: LOUISVILLE GAS & ELECTRIC COMPANY  
ARO Type: Site ARC Auto Ret: no  
ARO Status: Inactive Rate Type: Standard  
Status Date: 3/28/2011 Use Def. Rates: no  
Liability Account: 230012-ASSET RETIREMENT OE  
Accretion Acct: 411150-ACCRETION EXPENSE -  
Gain Account: 421105-GAIN ON ARO SETTLEM Book Summary:  
Loss Account: 421105-GAIN ON ARO SETTLEM ARO  
Long Description: Purc-CR Nuclear Sources  
Settle Cost Elmnt: 0699: CORPORATE DEFAULT  
ARO Rollup: Gen-Equip  
Ext ARO Code

Asset Id: 30304493  
Description: Purc-CR Nuclear  
Business Segment: Electric  
Asset GI Account: 101 - Plant In Ser  
Utility Account: E317.07-ARO Cos  
Sub Account: None  
Retirement Unit: ARO - CHILD  
Property Group: EON Default Prop  
Asset Location: Land and AROs  
Subledger Type: ARO  
End of Life: 12/2023  
Asset Dollars: \$0.00  
Long Description: Purc-CR Nuclear

Underlying Related Locations

Related Asset Locations

--

*NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.*

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*persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.*

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Clark, Ed

---

**From:** Puckett, Paul  
**Sent:** Friday, April 01, 2011 9:26 AM  
**To:** Crescente, Angela  
**Subject:** RE: Mill Creek Landfill ARO Discussion

Angela,  
Happy to help.

*W. Paul Puckett*

Engineer - Environmental Affairs Department  
LG&E and KU Energy (Louisville Gas & Electric, Kentucky Utilities, and Old Dominion Power)  
220 West Main Street  
P.O. Box 32010  
Louisville, KY 40232  
(502) 627-4659  
(502) 217-4836 (facsimile)  
(502) 648-7842 (mobile)

Please note the recent change in e-mail address: [paul.puckett@lge-ku.com](mailto:paul.puckett@lge-ku.com)

---

**From:** Crescente, Angela  
**Sent:** Friday, April 01, 2011 9:13 AM  
**To:** Puckett, Paul  
**Subject:** RE: Mill Creek Landfill ARO Discussion

Thanks Paul for sending this. I had plans to draft an email about our discussion yesterday, but you did a much better job than I would have, so thanks for doing that.

---

**From:** Puckett, Paul  
**Sent:** Thursday, March 31, 2011 4:34 PM  
**To:** Crescente, Angela; Love, K J; Pence, Mark; Rose, Bruce; Van Winkle, Don; Wacker, Diana  
**Cc:** Winkler, Michael  
**Subject:** Mill Creek Landfill ARO Discussion

To all,  
Earlier today, we met at the Mill Creek site to discuss Accounting Retirement Obligations related to the landfill at the Mill Creek Station. After overview discussions and some back and forth to establish perspective, the discussions of substance were centered on determining the total landfill acreage, the active portions of the total acreage, and the retired portions of the landfill and the time periods (2003 and after) in which the retirements occurred. At the close of our discussions, the following information was understood by me to be the most important.

	<u>Acres</u>	
Currently ARO Area	142	
Active Area in excess of current ARO	<u>15</u>	(add)
Adjusted ARO Area	157	This will require an accounting adjustment by Angela (et al.)
Areas closed/retired:		
In 2008:	6.1 acres	
In 2009:	2.9 acres	
<u>In 2010:</u>	<u>5.2 acres</u>	
	14.2 acres	<u>14</u> (subtract)

143

Areas currently active:

At/Near top 10 acres  
At/Near top 8 acres  
NE slope at levee 3 acres  
Cell at former Drive In 15 acres

143

36 acres

36

(subtract)

107

**End of meeting conclusion: 107 Acres of landfill were**

**closed/retired prior to 2007.**

After getting back to the office and researching this a bit more, it appears that there was a slight error in the course of our discussions. We inadvertently referenced Landfill Site B (within the railroad loop) as being approximately 75-85 acres and Landfill Site A as being approximately 50 acres. The acreages should have been reversed; that is to say Landfill Site A is the larger site and Landfill Site B (within the railroad loop) is the smaller site.

Feel free to contact me if you want to discuss this further or if you have any questions.

*W. Paul Puckett*

Engineer - Environmental Affairs Department  
LG&E and KU Energy (Louisville Gas & Electric, Kentucky Utilities, and Old Dominion Power)  
220 West Main Street  
P.O. Box 32010  
Louisville, KY 40232  
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(502) 648-7842 (mobile)

**Please note the recent change in e-mail address: [paul.puckett@lge-ku.com](mailto:paul.puckett@lge-ku.com)**

Clark, Ed

---

**From:** Puckett, Paul  
**Sent:** Thursday, March 31, 2011 4:34 PM  
**To:** Crescente, Angela; Love, K J; Pence, Mark; Rose, Bruce; Van Winkle, Don; Wacker, Diana  
**Cc:** Winkler, Michael  
**Subject:** Mill Creek Landfill ARO Discussion

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Active Area in excess of current ARO	<u>15</u>	(add)
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In 2008:	6.1 acres	
In 2009:	2.9 acres	
<u>In 2010:</u>	<u>5.2 acres</u>	157
	14.2 acres	<u>14</u> (subtract)
		143
Areas currently active:		
At/Near top	10 acres	
At/Near top	8 acres	
NE slope at levee	3 acres	
<u>Cell at former Drive In</u>	<u>15 acres</u>	143
	36 acres	<u>36</u> (subtract)
		107

**End of meeting conclusion: 107 Acres of landfill were**

**closed/retired prior to 2007.**

After getting back to the office and researching this a bit more, it appears that there was a slight error in the course of our discussions. We inadvertently referenced Landfill Site B (within the railroad loop) as being approximately 75-85 acres and Landfill Site A as being approximately 50 acres. The acreages should have been reversed; that is to say Landfill Site A is the larger site and Landfill Site B (within the railroad loop) is the smaller site.

Feel free to contact me if you want to discuss this further or if you have any questions.

*W. Paul Puckett*

Engineer - Environmental Affairs Department  
LG&E and KU Energy (Louisville Gas & Electric, Kentucky Utilities, and Old Dominion Power)  
220 West Main Street  
P.O. Box 32010  
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**Please note the recent change in e-mail address: [paul.puckett@lge-ku.com](mailto:paul.puckett@lge-ku.com)**



Clark, Ed

---

**From:** Richardson, Ralph  
**Sent:** Thursday, March 31, 2011 3:03 PM  
**To:** Kinder, Debra; Duce, John  
**Cc:** Crescente, Angela; Wacker, Diana  
**Subject:** RE: ARO Settlements

I'll run this in DEV.

The code should be updated to be (see below). It updated 742 rows.

```
update pwrplant.depr_method_rates z
set effective_date =
(
select max(effective_date)
from pwrplant.depr_method_rates
where set_of_books_id <> 5
      and to_char(effective_date, 'yyyy') <2011
      and depr_method_id = z.depr_method_id
)
where set_of_books_id = 5
and effective_date = to_date('201010', 'yyyymm')
;
```

Commit;

---

**From:** Kinder, Debra  
**Sent:** Thursday, March 31, 2011 2:16 PM  
**To:** Richardson, Ralph; Duce, John  
**Cc:** Crescente, Angela; Wacker, Diana  
**Subject:** FW: ARO Settlements

Please run the attached SQL in PP DEV.

Thanks

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
  Select max(effective_date)
  From depr_method_rates
  Where set_of_books_id <> 5 and to_char(effective_date, 'yyyy') <2011
  And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
```

And effective\_date = to\_date('201010', 'yyyymm')

;

Commit;

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

**Depr Method Rates Edit**

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrieval: Retrieve, Copy ALL Methods, Copy Single Method, Delete flow, Audit flow, UoP Details

Default Eff Date: 04/2011

Default Rate Used: Blend Rates, No Recalc, Recalc

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	CCR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Over Salvag. Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain Loss Default
LGE-131600-Trimble C	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble C	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	Financial	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No

Rows: 519 to 526 of 1705. Row Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$2</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$2</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Aud
		*Ending Reserve:	<b>\$0.00</b>		



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

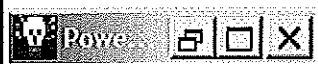
Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$23,796.53</b>		



arrow!

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant PTAXDEV Database

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Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela



Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

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Manual... Reports Quit Help Calc Print Win

**ARO** **Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type	Add	Update
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	Add Like	
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense	Delete	Cancel
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense		

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

< << > >>

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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200 Galleria Parkway, Ste. 1300  
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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

~~Charnas~~

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

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**ARO Details**

ARO Details		ARO Asset Det	
Description:	Purc-CR Nuclear Sources	Asset Id:	30304493
Company:	LOUISVILLE GAS & ELECTRIC COMPANY	Description:	Purc-CR Nuclear
ARO Type:	Site ARC Auto Ret: no	Business Segment:	Electric
ARO Status:	Inactive Rate Type: Standard	Asset GI Account:	101 - Plant In Ser
Status Date:	3/28/2011 Use Det. Rates: no	Utility Account:	E317.07-ARO Cos
Liability Account:	230012-ASSET RETIREMENT OE	Sub Account:	None
Accretion Acct:	411150-ACCRETION EXPENSE -	Retirement Unit:	ARO - CHILD
Gain Account:	421105-GAIN ON ARO SETTLEM	Property Group:	EON Default Prop
Loss Account:	421105-GAIN ON ARO SETTLEM	Asset Location:	Land and AROs
Long Description:	Purc-CR Nuclear Sources	Subledger Type:	ARO
Settle Cost Elmnt:	0699: CORPORATE DEFAULT	End of Life:	12/2023
ARO Rollup:	Gen-Equip	Asset Dollars:	\$0.00
Ext ARO Code:		Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

Ready

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Clark, Ed

---

**From:** Kinder, Debra  
**Sent:** Thursday, March 31, 2011 2:16 PM  
**To:** Richardson, Ralph; Duce, John  
**Cc:** Crescente, Angela; Wacker, Diana  
**Subject:** FW: ARO Settlements

Please run the attached SQL in PP DEV.

Thanks

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From depr_method_rates
    Where set_of_books_id <> 5 and to_char(effective_date,'yyyy') <2011
    And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
And effective_date = to_date('201010', 'yyyymm')
;

Commit;
```

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database

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Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrieves: Copy ALL Methods

Default Eff Date: 04/2011

Update

KENTUCKY UTILITIES COMPANY

Audits: Copy Single Method

Default Rate Used: Blend Rates

Cancel

LOUISVILLE GAS & ELECTRIC COMPANY

Delete Row

No Recalc

Comments

IFRS - ARGENTINA III

Use Details: Audit Row

Recalc

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Dep. Check	Salvage Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used Code	Gain Loss Default
LGE-131600-Tribble Ct	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131600-Tribble Ct	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	Financial	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/200	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The **New Address** is:

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$2</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$2</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Aud
		*Ending Reserve:	<b>\$23,796.53</b>		



arrow!

Thanks,  
Angela

Charnas

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant ----- PTAXDEV Database

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela



Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Manual... Reports Quit Help Calc Print Win

**ARO** **Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

<

<<

>

>>

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

~~Charnas~~

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**ARO Details**

**ARO Details**

**ARO Asset Det**

<b>Description:</b>	Purc-CR Nuclear Sources		
<b>Company:</b>	LOUISVILLE GAS & ELECTRIC COMPANY		
<b>ARO Type:</b>	Site	<b>ARC Auto Ret:</b>	no
<b>ARO Status:</b>	Inactive	<b>Rate Type:</b>	Standard
<b>Status Date:</b>	3/28/2011	<b>Use Def. Rates:</b>	no
<b>Liability Account:</b>	230012-ASSET RETIREMENT OE		
<b>Accretion Acct:</b>	411150-ACCRETION EXPENSE -		
<b>Gain Account:</b>	421105-GAIN ON ARO SETTLEM	<b>Book Summary:</b>	
<b>Loss Account:</b>	421105-GAIN ON ARO SETTLEM		ARO
<b>Long Description:</b>	Purc-CR Nuclear Sources		
<b>Settle Cost Elmnt:</b>	0699: CORPORATE DEFAULT		
<b>ARO Rollup:</b>	Gen-Equip		
<b>Ext ARO Code</b>			

<b>Asset Id:</b>	30304493
<b>Description:</b>	Purc-CR Nuclear
<b>Business Segmer</b>	Electric
<b>Asset GI Account:</b>	101 - Plant In Ser
<b>Utility Account:</b>	E317.07-ARO Cos
<b>Sub Account:</b>	None
<b>Retirement Unit:</b>	ARO - CHILD
<b>Property Group:</b>	EON Default Prop
<b>Asset Location:</b>	Land and AROs
<b>Subledger Type:</b>	ARO
<b>End of Life:</b>	12/2023
<b>Asset Dollars:</b>	\$0.00
<b>Long Description:</b>	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

Empty table for related asset locations
---

Charnas

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Clark, Ed

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From depr_method_rates
    Where set_of_books_id <> 5 and to_char(effective_date,'yyyy') <2011
    And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
And effective_date = to_date('201010', 'yyyymm')
;

Commit;
```

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ----- PTAXDEV Database  
Charnas

File Edit Subsystem Batch Admin Preferences Window Help

Link Calc Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY  
 KENTUCKY UTILITIES COMPANY  
 LOUISVILLE GAS & ELECTRIC COMPANY  
 IFRS - ARGENTINA III

Reliays Copy ALL Methods  
 Audits Copy Single Method  
 UoP Details Delete Row  
 Audit Row

Default Eff Date: 04/2011  
 Default Rate Used: Blend Rates  
 No Recalc  
 Recalc

Update  
 Cancel  
 Comments  
 Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Dep. Check	Salvage Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used Code	Gain Loss Default
LGE-131600-Trimble Cc	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble Cc	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	Financial	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eq)**

Accounting Month:	11/2010	Depreciation Base:	\$0.00	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$26,796.42	Mid Period Conv.:	
Remaining Life:	493	Current Depr Expense:	\$0.00	Depreciation Method:	<none>
Monthly Calc Rate:	0.2028%	Input Expense Adj:	\$774,058.96	Begin Year Reserve:	\$2
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	\$2
Beginning Value:	\$800,855.38	Reserve Adj:	\$0.00	YTD Expense Adj:	\$774
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$800,855.38)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	\$1
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Deta	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$0.00	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$0.00		



PowerPlant ----- PTAXDEV Database

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Asset Management

CPR Ledger Detail

CPR Depreciation

Set of Books: Financial

Asset Id: 10082296 Eng In Service Year: 01/1974

Asset Description: Cane Run Unit 4 - ASB

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Depr Group: LGE-131707-ARD Cost Steam (Eqp)

Accounting Month:	09/2009	Depreciation Base:	\$35,458.72	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$24,600.24	Mid Period Conv.:	
Remaining Life:	627	Current Depr Expense:	\$56.55	Depreciation Method:	<none>
Monthly Calc Rate:	0.1595%	Input Expense Adj:	\$1,262.05	Begin Year Reserve:	\$24
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	
Beginning Value:	\$60,689.98	Reserve Adj:	\$0.00	YTD Expense Adj:	\$1
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$2,122.31)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Deta	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$58,567.67	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$23,796.53		



arrow!

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant PTAXDEV Database

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Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARD Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_/
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela



Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Manual... Reports Quit Help Calc Print Win

**ARO** **Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type	Add	Update
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	Add Like	Delete
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense		
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense		

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

<

<<

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>>

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARD Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Clear

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**ARO Details**

**ARO Details**

**ARO Asset Det**

Description:	Purc-CR Nuclear Sources		
Company:	LOUISVILLE GAS & ELECTRIC COMPANY		
ARO Type:	Site	ARC Auto Ret:	no
ARO Status:	Inactive	Rate Type:	Standard
Status Date:	3/28/2011	Use Def. Rates:	no
Liability Account:	230012-ASSET RETIREMENT OE		
Accretion Acct:	411150-ACCRETION EXPENSE -		
Gain Account:	421105-GAIN ON ARO SETTLEW	Book Summary:	
Loss Account:	421105-GAIN ON ARO SETTLEW		ARO
Long Description:	Purc-CR Nuclear Sources		
Settle Cost Elmnt:	0699: CORPORATE DEFAULT		
ARO Rollup:	Gen-Equip		
Ext ARO Code			

Asset Id:	30304493
Description:	Purc-CR Nuclear
Business Segment:	Electric
Asset GI Account:	101 - Plant In Ser
Utility Account:	E317.07-ARO Cos
Sub Account:	None
Retirement Unit:	ARO - CHILD
Property Group:	EON Default Prop
Asset Location:	Land and AROs -
Subledger Type:	ARO
End of Life:	12/2023
Asset Dollars:	\$0.00
Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

--

Ready

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**Clark, Ed**

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Wednesday, March 30, 2011 6:25 PM  
**To:** Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database Charnas

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Unit Cost Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retriever: Copy ALL Methods

Default Eff Date: 04/2011

Update

KENTUCKY UTILITIES COMPANY

Audits: Copy Single Method

Default Rate Used: Blend Rates

Cancel

LOUISVILLE GAS & ELECTRIC COMPANY

Delete Row

Blend Rates: No Recalc

Comments

IFRS - ARGENTINA III

Up? Details: Audit Row

Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Over Salvag. Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used	Gain Loss Default
LGE-131600-Tribble Cc	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131600-Tribble Cc	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	Financial	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	1000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database** Charnas

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books:

Asset Id:  Eng In Service Year:

Asset Description:

Company:

Depr Group:

Accounting Month:	<input type="text" value="11/2010"/>	Depreciation Base:	<input type="text" value="\$0.00"/>	Mid Period Method:	<input type="text" value="Strai"/>
Initial Life(mo):	<input type="text" value="1055"/>	Beginning Reserve:	<input type="text" value="\$26,796.42"/>	Mid Period Conv.:	<input type="text"/>
Remaining Life:	<input type="text" value="493"/>	Current Depr Expense:	<input type="text" value="\$0.00"/>	Depreciation Method:	<input type="text" value="&lt;none&gt;"/>
Monthly Calc Rate:	<input type="text" value="0.2028%"/>	Input Expense Adj:	<input type="text" value="\$774,058.96"/>	Begin Year Reserve:	<input type="text" value="\$23"/>
Est. Salvage Pct:	<input type="text" value="0.0000%"/>	Calc Expense Adj:	<input type="text" value="\$0.00"/>	YTD Depr Exp:	<input type="text" value="\$2"/>
Beginning Value:	<input type="text" value="\$800,855.38"/>	Reserve Adj:	<input type="text" value="\$0.00"/>	YTD Expense Adj:	<input type="text" value="\$774"/>
Net Add / Adj:	<input type="text" value="\$0.00"/>	Reserve Trans In:	<input type="text" value="\$0.00"/>	Prior YTD Depr Exp:	<input type="text"/>
Retirements:	<input type="text" value="(\$800,855.38)"/>	Reserve Trans Out:	<input type="text" value="\$0.00"/>	Prior YTD Expense Adj:	<input type="text" value="\$1"/>
Transfers In:	<input type="text" value="\$0.00"/>	Other Credits / Adj:	<input type="text" value="\$0.00"/>	Account Distribution Deta	
Transfers Out:	<input type="text" value="\$0.00"/>	Cost of Removal:	<input type="text" value="\$0.00"/>	<input type="text" value="403111"/>	
Current Value:	<input type="text" value="\$0.00"/>	Salvage Proceeds:	<input type="text" value="\$0.00"/>	<input type="text" value="True-Up Reserve"/>	<input type="text" value="Depr Adj"/>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<input type="text" value="\$0.00"/>	<input type="text" value="Adjustment History"/>	<input type="text" value="Audi"/>
		*Ending Reserve:	<input type="text" value="\$0.00"/>		



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

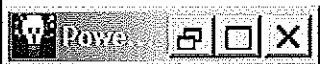
Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	09/2009	Depreciation Base:	\$35,458.72	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$24,600.24	Mid Period Conv.:	
Remaining Life:	627	Current Depr Expense:	\$56.55	Depreciation Method:	<none>
Monthly Calc Rate:	0.1595%	Input Expense Adj:	\$1,262.05	Begin Year Reserve:	\$24
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	
Beginning Value:	\$60,689.98	Reserve Adj:	\$0.00	YTD Expense Adj:	\$1
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$2,122.31)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	<b>Account Distribution Data</b>	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$58,567.67	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Aud
		*Ending Reserve:	\$23,796.53		



arrow!

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant PTAXDEV Database Charms

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
Angela

Charnas

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The **New Address** is:

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.



**PowerPlant** ----- **PTAXDEV Database** Charnas

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

Manual... Reports Quit Help Calc Print Win

---

**ARO**

**Regulatory Entry Maintenance** \_ □ X

Entry Name	Regulatory Entry Type		Add	Update
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	▲		
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense		Add Like	
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense	▼	Delete	Cancel

Entry Id:

Entry Name:

Entry Type:

Factor (0 to 1):

Regulatory GI Account:

Offset GI Account:

GI Je Code:

Regulatory GI Account String:  -

Offset GI Account String:  -

Notes:

Selected AROs/Depreciation Groups		Unselected AROs/Depreciation Groups										
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depreciation Group</th> </tr> </thead> <tbody> <tr><td>LGE-131707-ARO Cost Steam (Eqp)</td></tr> <tr><td>LGE-133707-ARO Cost Hydro Prod (Eqp)</td></tr> <tr><td>LGE-134705-ARO Cost Other Prod (L/B</td></tr> <tr><td>LGE-134707-ARO Cost Other Prod (Eqp)</td></tr> </tbody> </table>	Depreciation Group	LGE-131707-ARO Cost Steam (Eqp)	LGE-133707-ARO Cost Hydro Prod (Eqp)	LGE-134705-ARO Cost Other Prod (L/B	LGE-134707-ARO Cost Other Prod (Eqp)	<input type="button" value="←"/> <input type="button" value="&lt;&lt;"/> <input type="button" value="&gt;"/> <input type="button" value="&gt;&gt;"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depreciation Group</th> </tr> </thead> <tbody> <tr><td>CC-NR303.00-Misc Intangible Plant</td></tr> <tr><td>CC-NR311.00 Structures</td></tr> <tr><td>CC-NR311.00 Structures &amp; Improv</td></tr> <tr><td>CC-NR390.10 Structures &amp; Improv</td></tr> </tbody> </table>	Depreciation Group	CC-NR303.00-Misc Intangible Plant	CC-NR311.00 Structures	CC-NR311.00 Structures & Improv	CC-NR390.10 Structures & Improv
Depreciation Group												
LGE-131707-ARO Cost Steam (Eqp)												
LGE-133707-ARO Cost Hydro Prod (Eqp)												
LGE-134705-ARO Cost Other Prod (L/B												
LGE-134707-ARO Cost Other Prod (Eqp)												
Depreciation Group												
CC-NR303.00-Misc Intangible Plant												
CC-NR311.00 Structures												
CC-NR311.00 Structures & Improv												
CC-NR390.10 Structures & Improv												

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

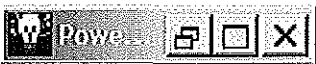
Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

ARO Details

ARO Details

ARO Asset Det

Description:	Purc-CR Nuclear Sources		
Company:	LOUISVILLE GAS & ELECTRIC COMPANY		
ARO Type:	Site	ARC Auto Ret:	no
ARO Status:	Inactive	Rate Type:	Standard
Status Date:	3/28/2011	Use Def. Rates:	no
Liability Account:	230012-ASSET RETIREMENT OE		
Accretion Acct:	411150-ACCRETION EXPENSE -		
Gain Account:	421105-GAIN ON ARO SETTLEN	Book Summary:	
Loss Account:	421105-GAIN ON ARO SETTLEN	ARO	
Long Description:	Purc-CR Nuclear Sources		
Settle Cost Elmnt:	0699: CORPORATE DEFAULT		
ARO Rollup:	Gen-Equip		
Ext ARO Code			

Asset Id:	30304493
Description:	Purc-CR Nuclear
Business Segment:	Electric
Asset GI Account:	101 - Plant In Ser
Utility Account:	E317.07-ARO Cos
Sub Account:	None
Retirement Unit:	ARO - CHILD
Property Group:	EON Default Prop
Asset Location:	Land and AROs
Subledger Type:	ARO
End of Life:	12/2023
Asset Dollars:	\$0.00
Long Description:	Purc-CR Nuclear

Underlying Related Locations

Related Asset Locations


*NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.*

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**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, April 26, 2011 9:09 PM  
**To:** Leichty, Doug  
**Cc:** Crescente, Angela  
**Subject:** VASCC site visit ARO entry.docx



VASCC site visit  
ARO entry.doc...

Doug:

Would you take a look at this response and see if it looks OK? If so, we will pass it by Shannon.

Thanks.



**KENTUCKY UTILITIES COMPANY  
D/B/A OLD DOMINION POWER COMPANY**

**CASE NO. PUE 2011-00013**

**Response to SCC Data Requests (2<sup>nd</sup> Set)  
Dated: April 21, 2011**

**Responding Witness: Shannon L. Charnas**

- Q. Provide December 2010 ARO journal entry activity.
- A. See below.

<b>Account</b>	<b>Debit</b>	<b>Credit</b>
Depreciation Expense (403)	242,198.00	
Accretion Expense (411)	223,682.00	
Accumulated Depreciation (108)		242,198.00
ARO Liability (230)		223,682.00
Regulatory Credit (407)		466,346.00
Regulatory Asset (182)	466,346.00	
<b>Total</b>	<b>932,226.00</b>	<b>932,226.00</b>

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Tuesday, April 26, 2011 4:20 PM  
**To:** Koellner, Corey  
**Subject:** RE: ARO Regulatory Assets

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Koellner, Corey	Read: 4/26/2011 4:21 PM
	Wiseman, Sara	Read: 4/26/2011 4:50 PM

Corey,

These entries were performed as reclassifications from the ARO Asset and Accumulated Depreciation accounts to the Regulatory Asset account.

Thanks,  
Angela

---

**From:** Koellner, Corey  
**Sent:** Tuesday, April 26, 2011 4:15 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Regulatory Assets

OK...thanks, Angela. I'll net these with the debits and, therefore, will have no credits included on the report.

For my reference, do you know why we net these?

---

**From:** Crescente, Angela  
**Sent:** Tuesday, April 26, 2011 4:08 PM  
**To:** Koellner, Corey  
**Subject:** RE: ARO Regulatory Assets

Corey,

The ones that you have listed below should be considered as offsets to the debits.

Thanks,  
Angela

---

**From:** Koellner, Corey  
**Sent:** Tuesday, April 26, 2011 11:26 AM  
**To:** Crescente, Angela  
**Subject:** FW: ARO Regulatory Assets

Spoke briefly with Karen when she came down to speak with me regarding another issue. We can talk with her again if you like, but I gathered that Sarah has historically known whether we should present the credits as credits on the Form 3 filing, or if they should be treated as offsets to the debits (due to the nature of the entry). We can discuss with Karen or Sarah after lunch.

Thanks,

Corey

---

**From:** Koellner, Corey  
**Sent:** Thursday, April 21, 2011 5:12 PM  
**To:** Crescente, Angela  
**Subject:** ARO Regulatory Assets

Angela –

I'm preparing the Regulatory Asset/Liab information that will be included in the Form 3 filing. Karen previously completed this information and during our transition she indicated I should reach out to you to assist if I identify any ARO assets with credit activity. That being said, the four items below have credit activity during 1Q11:

Account	Account	Je Name	Line Description	Debits
182317	OTHER REGULATORY ASSETS ARO - GENERATION	J309-0100-0111 Adjustment USD 01- JAN-11	Journal Import Created	0.00
182317	OTHER REGULATORY ASSETS ARO - GENERATION	J315-0100-0211 Adjustment USD 01- FEB-11	Journal Import Created	0.00

182317	OTHER REGULATORY ASSETS ARO - GENERATION	J319-0100-0311 Adjustment USD 01-MAR-11	Journal Import Created	0.00
182317	OTHER REGULATORY ASSETS ARO - GENERATION	PP ARO USD 01-MAR-11	Journal Import Created	6,347,740.

If you could let me know if these items are accurately included as credits, it would be appreciated. I'm assuming you provided Karen similar information in the past and this email will make sense – if it doesn't, however, please let me know.

Thanks!

Corey Koellner  
 Regulatory Accounting & Reporting  
 LG&E and KU Energy LLC  
 Direct: (502) 627-2965  
[corey.koellner@lge-ku.com](mailto:corey.koellner@lge-ku.com)

**Clark, Ed**

---

**From:** Leichty, Doug  
**Sent:** Tuesday, April 26, 2011 10:16 AM  
**To:** Wiseman, Sara; Crescente, Angela  
**Subject:** FW: ARO Accretion and Depreciation.xls

I think we should provide at least whole dollars and dress up the formatting with Q. and A. and table cosmetics. Also, Shannon will need to see response if she hasn't already.

Q. Provide December 2010 ARO journal entry activity.

---

**From:** Crescente, Angela  
**Sent:** Tuesday, April 26, 2011 9:41 AM  
**To:** Leichty, Doug  
**Cc:** Wiseman, Sara  
**Subject:** ARO Accretion and Depreciation.xls

Doug,

Here is the information requested from our meeting yesterday.



ARO Accretion  
and Depreciatio...

Thanks,  
Angela

ARO Depreciation and Accretion  
In Thousands  
December Activity

Account	Debit	Credit	
403	242		Depreciation Expense
411	224		Accretion Expense
108		242	Accumulated Depreciation
230		224	ARO Liability
407		466	Regulatory Credit
182	466		Regulatory Asset
	932	932	

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Tuesday, April 26, 2011 9:41 AM  
**To:** Leichty, Doug  
**Cc:** Wiseman, Sara  
**Subject:** ARO Accretion and Depreciation.xls

Doug,

Here is the information requested from our meeting yesterday.



ARO Accretion  
and Depreciatio...

Thanks,  
Angela

ARO Depreciation and Accretion  
In Thousands  
December Activity

Account	Debit	Credit	
403	242		Depreciation Expense
411	224		Accretion Expense
108		242	Accumulated Depreciation
230		224	ARO Liability
407		466	Regulatory Credit
182	466		Regulatory Asset
	932	932	



**Clark, Ed**

---

**From:** Richardson, Ralph  
**Sent:** Tuesday, April 26, 2011 8:38 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Settlements

I ran this in PTAXDEV. 743 rows were changed.

```
--743 rows updated in dev
Update pwrplant.depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From pwrplant.depr_method_rates
    Where set_of_books_id <> 5
        And to_char(effective_date,'yyyy') <2011
        And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
    And effective_date = to_date('201010', 'yyyymm')
;

Commit;
```

---

**From:** Crescente, Angela  
**Sent:** Tuesday, April 26, 2011 8:36 AM  
**To:** Richardson, Ralph  
**Subject:** FW: ARO Settlements

Ralph,

Please run the attached SQL in PP DEV.

Thanks!

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From depr_method_rates
    Where set_of_books_id <> 5 and to_char(effective_date,'yyyy') <2011
        And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
And effective_date = to_date('201010', 'yyyymm')
;
```

Commit;

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database Charnas

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Unit Cost Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Retrievs Copy ALL Methods Default Eff Date: 04/2011 Update

Audits Copy Single Method Default Rate Used: Blend Rates No Recalc No Recalc Cancel

UoP Details Delete Row Audit Row Comments Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	CDR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Depr. Check	Salvage Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used Code	Gain Loss Default
LGE-131600-Trimble Cc	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble Cc	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	Financial	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2001	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eq)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$23</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$2</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		

PowerPlant [Min] [Max] [Close]

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Unit-Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	09/2009	Depreciation Base:	\$35,458.72	Mid Period Method:	Strai
Initial Life(mo):	1055	Beginning Reserve:	\$24,600.24	Mid Period Conv.:	
Remaining Life:	627	Current Depr Expense:	\$56.55	Depreciation Method:	<none>
Monthly Calc Rate:	0.1595%	Input Expense Adj:	\$1,262.05	Begin Year Reserve:	\$24
Est. Salvage Pct:	0.0000%	Calc Expense Adj:	\$0.00	YTD Depr Exp:	
Beginning Value:	\$60,689.98	Reserve Adj:	\$0.00	YTD Expense Adj:	\$1
Net Add / Adj:	\$0.00	Reserve Trans In:	\$0.00	Prior YTD Depr Exp:	
Retirements:	(\$2,122.31)	Reserve Trans Out:	\$0.00	Prior YTD Expense Adj:	
Transfers In:	\$0.00	Other Credits / Adj:	\$0.00	Account Distribution Deta	
Transfers Out:	\$0.00	Cost of Removal:	\$0.00	403111	
Current Value:	\$58,567.67	Salvage Proceeds:	\$0.00	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	\$0.00	Adjustment History	Audi
		*Ending Reserve:	\$23,796.53		



arrow!

Thanks,  
Angela

Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

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Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela



Charnas

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

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**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

---

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000- -

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000- -

Notes: Equip-Gen -LGE- Depreciation Neutrality

---

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B
LGE-134707-ARO Cost Other Prod (Eqp)

<

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**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

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**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>>      <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela

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**ARO Details**

**ARO Details**

**ARO Asset Det**

Description:	Purc-CR Nuclear Sources		
Company:	LOUISVILLE GAS & ELECTRIC COMPANY		
ARO Type:	Site	ARC Auto Ret:	no
ARO Status:	Inactive	Rate Type:	Standard
Status Date:	3/28/2011	Use Def. Rates:	no
Liability Account:	230012-ASSET RETIREMENT OE		
Accretion Acct:	411150-ACCRETION EXPENSE -		
Gain Account:	421105-GAIN ON ARO SETTLEM	Book Summary:	
Loss Account:	421105-GAIN ON ARO SETTLEM		ARO
Long Description:	Purc-CR Nuclear Sources		
Settle Cost Elmnt:	0699: CORPORATE DEFAULT		
ARO Rollup:	Gen-Equip		
Ext ARO Code			

Asset Id:	30304493
Description:	Purc-CR Nuclear
Business Segment:	Electric
Asset GI Account:	101 - Plant In Ser
Utility Account:	E317.07-ARO Cos
Sub Account:	None
Retirement Unit:	ARO - CHILD
Property Group:	EON Default Prop
Asset Location:	Land and AROs -
Subledger Type:	ARO
End of Life:	12/2023
Asset Dollars:	\$0.00
Long Description:	Purc-CR Nuclear

**Underlying Related Locations**

**Related Asset Locations**

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Ready

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Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Friday, April 15, 2011 9:26 AM  
**To:** 'Brett.Wemer@ey.com'  
**Cc:** Wiseman, Sara  
**Subject:** FW: ARO liability account analyses for March 2011  
**Attachments:** 230 Account Reconciliation.pdf

Brett,

The 230022 for LG&E and KU and the 230026 for LG&E are accounts used to reclass estimated current year budget dollars to the short-term liability. This is performed as a top-side adjustment only. Please see the attached account reconciliations.

Thanks,  
Angela

---

**From:** [Brett.Wemer@ey.com](mailto:Brett.Wemer@ey.com) [<mailto:Brett.Wemer@ey.com>]  
**Sent:** Thursday, April 14, 2011 5:27 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** ARO liability account analyses for March 2011

Angela,

I received the ARO 1000 liability reports within SharePoint for LG&E and KU and wanted to thank you for providing that. Ultimately, we would like to tie this ARO information into the trial balance that we have been provided for these entities. There were a few g/l accounts for both LG&E and KU that I could not tie to the G/L. I was hoping for these, you would be able to provide the account analysis to aid in my tying out.

For LG&E, the accounts are 230012 and 230016. For 230012, the ARO 1000 report has a balance of \$34,688,796 while the G/L has a balance of \$34,478,796. Account 230016 has an ARO 1000 report balance of \$18,010,655 and a G/L balance of \$17,243,453. For KU the account is 230012. For this account, the ARO 1000 report balance is \$54,275,053 and the G/L balance is \$54,123,077.

So if you would be able to provide the account analyses for LG&E of 230012 and 230016 in March 2011 and the account of 230012 for KU in March 2011, that would be great. If you think providing the analyses will not allow me to tie these amounts to the G/L, please let me know and we can discuss another option.

Thanks,  
Brett



**Brett M. Wemer** | Assurance Services

Ernst & Young, LLP  
400 West Market Street, Suite 2400, Louisville, KY 40202, United States of America  
Office: 502.585.6463 | Fax: 866.672.6541 | [brett.wemer@ey.com](mailto:brett.wemer@ey.com)  
EY/Comm: 5129363  
Website: [www.ey.com](http://www.ey.com)

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Charnas

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Notice required by law: This e-mail may constitute an advertisement or solicitation under U.S. law, if its primary purpose is to advertise or promote a commercial product or service. You may choose not to receive advertising and promotional messages from Ernst & Young LLP (except for Ernst & Young Online and the ey.com website, which track e-mail preferences through a separate process) at this e-mail address by forwarding this message to [no-more-mail@ey.com](mailto:no-more-mail@ey.com). If you do so, the sender of this message will be notified promptly. Our principal postal address is 5 Times Square, New York, NY 10036. Thank you. Ernst & Young LLP

LOUISVILLE GAS AND ELECTRIC COMPANY  
Trial Balance Account Reconciliation  
March 31, 2011

Department Name: Property Accounting  
Account Name: 230 Asset Retirement Obligation

		Source A Oracle <u>Trial Balance</u>	Source B PowerPlant <u>Balance</u>	<u>Difference</u>
230012	ASSET RETIREMENT OBLIGATIONS - STEAM	(34,478,795.60)		
230022	ASSET RETIREMENT OBLIGATIONS - STEAM - ST	(210,000.00)		
		<u>(34,688,795.60)</u>	(34,688,795.60)	-
230013	ASSET RETIREMENT OBLIGATIONS - TRANSMISSION	(14,078.98)		
230023	ASSET RETIREMENT OBLIGATIONS - TRANSMISSION - ST	-		
		<u>(14,078.98)</u>	(14,078.98)	-
230015	ASSET RETIREMENT OBLIGATIONS - DISTRIBUTION	(492,335.43)		
230025	ASSET RETIREMENT OBLIGATIONS - DISTRIBUTION - ST	-		
		<u>(492,335.43)</u>	(492,335.43)	-
230016	ASSET RETIREMENT OBLIGATIONS - GAS	(17,243,452.83)		
230026	ASSET RETIREMENT OBLIGATIONS - GAS - ST	(767,202.00)		
		<u>(18,010,654.83)</u>	(18,010,654.83)	-
230017	ASSET RETIREMENT OBLIGATIONS - COMMON	(103,734.67)		
230027	ASSET RETIREMENT OBLIGATIONS - COMMON - ST	-		
		<u>(103,734.67)</u>	(103,734.67)	-
		<u>(53,309,599.51)</u>	<u>(53,309,599.51)</u>	

Kentucky Utilities Company  
 Trial Balance Account Reconciliation  
 March 31, 2011

Department Name: Property Accounting  
 Account Name: 230 Asset Retirement Obligation

		Source A Oracle <u>Trial Balance</u>	Source B PowerPlant <u>Balance</u>	<u>Difference</u>
230012	ASSET RETIREMENT OBLIGATIONS - STEAM	(54,123,077.31)		
230022	ASSET RETIREMENT OBLIGATIONS - STEAM - ST	(151,976.00)		
		<u>(54,275,053.31)</u>	(54,275,053.31)	-
230013	ASSET RETIREMENT OBLIGATIONS - TRANSMISSION	(88,962.48)		
230023	ASSET RETIREMENT OBLIGATIONS - TRANSMISSION - ST	-		
		<u>(88,962.48)</u>	(88,962.48)	-
230015	ASSET RETIREMENT OBLIGATIONS - DISTRIBUTION	(294,022.13)		
230025	ASSET RETIREMENT OBLIGATIONS - DISTRIBUTION - ST	-		
		<u>(294,022.13)</u>	(294,022.13)	-
		<u>(54,658,037.92)</u>	<u>(54,658,037.92)</u>	

Clark, Ed

---

**From:** Brett.Wemer@ey.com  
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**Cc:** Wiseman, Sara  
**Subject:** ARO liability account analyses for March 2011

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Thanks,  
Brett



**ERNST & YOUNG**

**Brett M. Wemer** | Assurance Services

Ernst & Young, LLP

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Clark, Ed

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Wednesday, April 13, 2011 11:22 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

I create new versions of each report and sent them to Nick to be included in the next rebuild. Whenever this new rebuild is made available, let me know, and I'll help you modify the report setup in Powerplant to point to the new reports so you can test the new reports.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 13 April, 2011 9:35 AM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Sure thing, you go to Assets>ARO>Reg Entry>Reports and it is report number ARO-4005.

By the way, I remembered on the way home last night that I have this same problem on report "Reg-1001" so the asset adjustment that I did is not showing up on this report by asset either. I'm sorry, I should of thought of that sooner. This report is in the same location as the one above.

Also, Nick Alexander is here today and tomorrow working on some things for us including simple formatting tweaks on my reports, but he doesn't want to send them to the build until you are finished so he doesn't cause you any trouble. So he wanted me to keep him posted of when you are completed with your changes.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, April 13, 2011 9:26 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,

Can you tell me where in Powerplant you go to get to this report? I've lost my notes on how to find this report again.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 12 April, 2011 8:32 AM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Any word on the progress of the report? Just checking on it because I will be using it for my monthly account reconciliations.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 3:09 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Report change won't be a quick turn around.  
It will likely be next week before you'll get the report changed.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 1:48 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

I need to post these asset adjustments today since we have to close first thing in the morning. Are you expecting the report modification to happen today or can I go ahead and post these transactions and fix the report later? Is there anything else I can do to help?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 9:35 AM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela called and provided clarification. I still had journal entries on the brain. The report can be modified to include asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Tuesday, 05 April, 2011 9:16 AM  
**To:** 'Crescente, Angela'; Jim Ogilvie

**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

No, there is no way this report can show the asset\_id information for the entry you are asking about. You could run a query using the CPR Query tool window if you wanted to reconcile the asset adjustments dollars for the depr group.

Sunjin Cone  
PowerPlant Support  
770-937-3000

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 8:33 AM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
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Sunjin,

I am OK with the entry including both assets. Is there some way I can modify the report to show what happened by asset?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Monday, April 04, 2011 5:00 PM  
**To:** Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,  
The entry for \$ 9,754,171.05 that includes the two assets is a one line transaction due to both assets being in the same depr group, and the entry information is setup to pull from the depr\_ledger table, which is a table where the dollars are by depr group, and it doesn't appear that the setup can be changed to retain asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Monday, 04 April, 2011 4:11 PM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO reclass to 182 regulatory entries  
**Importance:** High

OK, accidentally told a lie (I'm sorry, it's Monday). I kept looking and now I can see where the reg entries fired, but since there was more than one done on LGE, it combined them which makes sense. However, my report does not reflect this activity by asset. Any ideas on how to make that work? I thought it worked before, but I must be mistaken. The other asset was Purc-MC Ash Pond for \$4,696,835.38.



PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cot Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Bank type	GL Account	ACCOUNT Balance
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET REYNEMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARO	\$76,573.91
- Depreciation Neutr	182317-OTHER REGULATORY ASSETS ARO	\$-31,807.14
- Transition ARC Deq	182317-OTHER REGULATORY ASSETS ARO	\$31,807.14
- Transition ARO Act	182317-OTHER REGULATORY ASSETS ARO	\$18,965.01
	Balance:	\$-5,057,335.67

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Save Rows  
Save As  
Mail...

Display Report Bitmap

Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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Charnas

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**Clark, Ed**

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Sunjin Cone  
PowerPlant Support  
770-937-3000

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Balance:		<u>\$-5,057,335.67</u>

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 Save Rows  
 Save As  
 Mail...

Display Report Bitmap

Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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**Clark, Ed**

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Tuesday, April 12, 2011 9:07 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

I'll work on it this week.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 12 April, 2011 8:32 AM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Any word on the progress of the report? Just checking on it because I will be using it for my monthly account reconciliations.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 3:09 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Report change won't be a quick turn around.  
It will likely be next week before you'll get the report changed.

Sunjin Cone  
PowerPlant Support  
770-937-3000

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**Sent:** Tuesday, 05 April, 2011 1:48 PM  
**To:** PowerPlant Support  
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Sunjin,

I need to post these asset adjustments today since we have to close first thing in the morning. Are you expecting the report modification to happen today or can I go ahead and post these transactions and fix the report later? Is there anything else I can do to help?

Thanks,  
Angela

Charnas

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**From:** PowerPlant Support [mailto:support@pwrplan.com]  
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**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela called and provided clarification. I still had journal entries on the brain. The report can be modified to include asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

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**To:** 'Crescente, Angela'; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

No, there is no way this report can show the asset\_id information for the entry you are asking about. You could run a query using the CPR Query tool window if you wanted to reconcile the asset adjustments dollars for the depr group.

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Angela

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**Sent:** Monday, April 04, 2011 5:00 PM  
**To:** Crescente, Angela; Jim Ogilvie  
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**Subject:** RE: ARO reclass to 182 regulatory entries

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Sunjin Cone  
PowerPlant Support  
770-937-3000

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Monday, 04 April, 2011 4:11 PM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO reclass to 182 regulatory entries  
**Importance:** High

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PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cost Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Account type	GL Account	Account Balance
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARO	\$76,573.91
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Balance:		\$-5,057,335.67

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 Mail...

Display Report Bitmap

Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Monday, April 11, 2011 5:20 PM  
**To:** Trenary, Samara  
**Cc:** Wiseman, Sara  
**Subject:** RE: ARO footnote

Samara:

Please see the attached footnote updates:



Note 4 - Asset Retirement Obl...    Note 4 - Asset Retirement Obl...    Note 4 - Asset Retirement Obl...

Thanks,  
Angela

---

**From:** Trenary, Samara  
**Sent:** Monday, April 11, 2011 1:35 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** ARO footnote

Angela

Will you let me know when you have the reporting package complete? Also, will you provide the updated numbers to the footnote? I believe I need all of this by 8am tomorrow. Let me know if you have any questions. Thanks!

**Note 4 - Asset Retirement Obligations**

A summary of LKE's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	<u>ARO Net Assets</u>	<u>ARO Liabilities</u>	<u>Regulatory Assets</u>
As of December 31, 2010	\$ 97	\$ (103)	\$ 9
ARO accretion and depreciation	-	(2)	2
ARO settlements	-	-	-
Removal cost incurred	-	-	-
	<u>97</u>	<u>(105)</u>	<u>11</u>
As of <b>Error! Reference source not found.</b> , 2011	<u>\$ 97</u>	<u>\$ (105)</u>	<u>\$ 11</u>

At March 31, 2011, AROs totaling \$105 million were recorded on the Balance Sheet, of which \$1 million is included in "Other current liabilities."

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Condensed Consolidated Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied; therefore, ARO net assets, ARO liabilities and regulatory asset balances do not net to zero.

LKE's AROs are primarily related to the final retirement of assets associated with generating units and natural gas mains and wells. LKE's transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

**Note 4 - Asset Retirement Obligations**

A summary of KU's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	<u>ARO Net Assets</u>	<u>ARO Liabilities</u>	<u>Regulatory Assets</u>
As of December 31, 2010	\$ 52	\$ (54)	\$ 2
ARO accretion and depreciation	-	(1)	1
ARO settlements	-	-	-
Removal cost incurred	-	-	-
As of <b>Error! Reference source not found.</b> , 2011	<u>\$ 52</u>	<u>\$ (55)</u>	<u>\$ 3</u>

At March 31, 2011, AROs totaling \$55 million were recorded on the Balance Sheet, of which less than \$1 million is included in "Other current liabilities."

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Condensed Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied.

KU's AROs are primarily related to the final retirement of assets associated with generating units. KU's transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.



**Note 4 - Asset Retirement Obligations**

A summary of LG&E's net ARO assets, ARO liabilities and regulatory assets established under the asset retirement and environmental obligations guidance of the FASB ASC follows:

	<u>ARO Net Assets</u>	<u>ARO Liabilities</u>	<u>Regulatory Assets</u>
As of December 31, 2010	\$ 45	\$ (49)	\$ 7
ARO accretion and depreciation	-	(1)	1
ARO settlements	-	-	-
Removal cost incurred	-	-	-
	<hr/>	<hr/>	<hr/>
As of <b>Error! Reference source not found.</b> , 2011	<u>\$ 45</u>	<u>\$ (50)</u>	<u>\$ 8</u>

Pursuant to regulatory treatment prescribed under the regulated operations guidance of the FASB ASC, an offsetting regulatory credit for the ARO accretion and depreciation expense was recorded in "Depreciation and amortization" in the Condensed Statements of Income. As such, there is no impact on net income for the ARO accretion and depreciation. The ARO liabilities are offset by cash settlements that have not yet been applied; therefore, ARO net assets, ARO liabilities and regulatory asset balances do not net to zero.

LG&E's AROs are primarily related to the final retirement of assets associated with generating units and natural gas mains and wells. LG&E's transmission and distribution lines largely operate under perpetual property easement agreements which do not generally require restoration upon removal of the property. Therefore, under the asset retirement and environmental obligations guidance of the FASB ASC, no material asset retirement obligations are recorded for transmission and distribution assets.

Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Monday, April 11, 2011 4:59 PM  
**To:** Trenary, Samara  
**Cc:** Wiseman, Sara  
**Subject:** RE: ARO footnote

Samara:

The reporting package is complete for the ARO tab. I will be sending you the footnote updates shortly.

Thanks,  
Angela

---

**From:** Trenary, Samara  
**Sent:** Monday, April 11, 2011 1:35 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** ARO footnote

Angela

Will you let me know when you have the reporting package complete? Also, will you provide the updated numbers to the footnote? I believe I need all of this by 8am tomorrow. Let me know if you have any questions. Thanks!

**Clark, Ed**

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Tuesday, April 05, 2011 3:19 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

No harm.

The report changes are independent of the journal entries that were made.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 3:11 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

So, is it OK for me to go ahead and push the adjustments through. Will that hurt the changing of the report process?

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 3:09 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Report change won't be a quick turn around.  
It will likely be next week before you'll get the report changed.

Sunjin Cone  
PowerPlant Support  
770-937-3000

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 1:48 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

I need to post these asset adjustments today since we have to close first thing in the morning. Are you expecting the report modification to happen today or can I go ahead and post these transactions and fix the report later? Is there anything else I can do to help?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 9:35 AM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela called and provided clarification. I still had journal entries on the brain. The report can be modified to include asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

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**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

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Sunjin Cone  
PowerPlant Support  
770-937-3000

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**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 8:33 AM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

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Thanks,  
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**Sent:** Monday, April 04, 2011 5:00 PM  
**To:** Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,  
The entry for \$ 9,754,171.05 that includes the two assets is a one line transaction due to both assets being in the same depr group, and the entry information is setup to pull from the depr\_ledger table, which is a table where the dollars are by depr group, and it doesn't appear that the setup can be changed to retain asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

Charnas

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]

**Sent:** Monday, 04 April, 2011 4:11 PM

**To:** PowerPlant Support; Jim Ogilvie

**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra

**Subject:** ARO reclass to 182 regulatory entries

**Importance:** High

OK, accidentally told a lie (I'm sorry, it's Monday). I kept looking and now I can see where the reg entries fired, but since there was more than one done on LGE, it combined them which makes sense. However, my report does not reflect this activity by asset. Any ideas on how to make that work? I thought it worked before, but I must be mistaken. The other asset was Purc-MC Ash Pond for \$4,696,835.38.

**Report Details**

Account type	GL account	Account balance
Pond		
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
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	<b>Balance:</b>	<b>\$-5,057,335.67</b>

Page 1 of 1

Thanks,

Angela

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Print...  
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Save Rows  
Save As  
Mail...

Display Report Bitmap

Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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Clark, Ed

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Tuesday, April 05, 2011 9:35 AM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela called and provided clarification. I still had journal entries on the brain. The report can be modified to include asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Tuesday, 05 April, 2011 9:16 AM  
**To:** 'Crescente, Angela'; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

No, there is no way this report can show the asset\_id information for the entry you are asking about. You could run a query using the CPR Query tool window if you wanted to reconcile the asset adjustments dollars for the depr group.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [<mailto:Angela.Crescente@lge-ku.com>]  
**Sent:** Tuesday, 05 April, 2011 8:33 AM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

I am OK with the entry including both assets. Is there some way I can modify the report to show what happened by asset?

Thanks,  
Angela

---

**From:** PowerPlant Support [<mailto:support@pwrplan.com>]  
**Sent:** Monday, April 04, 2011 5:00 PM  
**To:** Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,

The entry for \$ 9,754,171.05 that includes the two assets is a one line transaction due to both assets being in the same depr group, and the entry information is setup to pull from the depr\_ledger table, which is a table where the dollars are by depr group, and it doesn't appear that the setup can be changed to retain asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [<mailto:Angela.Crescente@lge-ku.com>]  
**Sent:** Monday, 04 April, 2011 4:11 PM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO reclass to 182 regulatory entries  
**Importance:** High

OK, accidentally told a lie (I'm sorry, it's Monday). I kept looking and now I can see where the reg entries fired, but since there was more than one done on LGE, it combined them which makes sense. However, my report does not reflect this activity by asset. Any ideas on how to make that work? I thought it worked before, but I must be mistaken. The other asset was Purc-MC Ash Pond for \$4,696,835.38.

PowerPlant PTAXDEV Database Charms

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cot Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Account type	GL Account	Account Balance
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARO	\$76,573.91
- Depreciation Neutr	182317-OTHER REGULATORY ASSETS ARO	\$-31,807.14
- Transition ARC Dej	182317-OTHER REGULATORY ASSETS ARO	\$31,807.14
- Transition ARO Act	182317-OTHER REGULATORY ASSETS ARO	\$18,965.01
Balance:		<u>\$-5,057,335.67</u>

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Display Report Bitmap

Page 1 of 1 <|<|>|>

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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Clark, Ed

---

**From:** PowerPlant Support <support@pwrplan.com>  
**Sent:** Tuesday, April 05, 2011 9:20 AM  
**To:** Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

No, there is no way this report can show the asset\_id information for the entry you are asking about. You could run a query using the CPR Query tool window if you wanted to reconcile the asset adjustments dollars for the depr group.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [<mailto:Angela.Crescente@lge-ku.com>]  
**Sent:** Tuesday, 05 April, 2011 8:33 AM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

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Angela

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**Sent:** Monday, April 04, 2011 5:00 PM  
**To:** Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,  
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Sunjin Cone  
PowerPlant Support  
770-937-3000

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**From:** Crescente, Angela [<mailto:Angela.Crescente@lge-ku.com>]  
**Sent:** Monday, 04 April, 2011 4:11 PM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO reclass to 182 regulatory entries  
**Importance:** High



OK, accidentally told a lie (I'm sorry, it's Monday). I kept looking and now I can see where the reg entries fired, but since there was more than one done on LGE, it combined them which makes sense. However, my report does not reflect this activity by asset. Any ideas on how to make that work? I thought it worked before, but I must be mistaken. The other asset was Purc-MC Ash Pond for \$4,696,835.38.

PowerPlant PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cot Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Unit type	GL Account	Account Balance
Pond		
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARD	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARD	\$76,573.91
- Depreciation Neutr	182317-OTHER REGULATORY ASSETS ARD	\$-31,807.14
- Transition ARC Dej	182317-OTHER REGULATORY ASSETS ARD	\$31,807.14
- Transition ARD Act	182317-OTHER REGULATORY ASSETS ARD	\$18,965.01
	Balance:	\$-5,057,335.67

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Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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Clark, Ed

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PowerPlant Support  
770-937-3000

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PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cot Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Account Type	GL Account	Account Balance
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutrali	182317-OTHER REGULATORY ASSETS ARO	\$76,573.91
- Depreciation Neutr	182317-OTHER REGULATORY ASSETS ARO	\$-31,807.14
- Transition ARC Dej	182317-OTHER REGULATORY ASSETS ARO	\$31,807.14
- Transition ARO Acc	182317-OTHER REGULATORY ASSETS ARO	\$18,965.01
Balance:		\$-5,057,335.67

Display Report Bitmap

Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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**Clark, Ed**

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PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cost Projects Budgets Assets DeprStdy Depr Tables PropTax FvwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Account Type	GL Account	Account Balance
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARO	\$76,573.91
- Depreciation Neutr	182317-OTHER REGULATORY ASSETS ARO	\$-31,807.14
- Transition ARC Dej	182317-OTHER REGULATORY ASSETS ARO	\$31,807.14
- Transition ARO Aci	182317-OTHER REGULATORY ASSETS ARO	\$18,965.01
Balance:		\$-5,057,335.67

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Page 1 of 1

Ready



lge reg entry rows  
march test....

Thanks,  
Angela









0100-131-006250-006250-407406-0000-0699-0000	(13.83)	407406	3/1/2011	00:00:00	ARO	100	Pure-Muldraugh 237520-Dist-ASB	Accretion Neutrality -LGE- GAS	Accretion Expense	1
0100-503-006250-006250-182326-0000-0699-0000	6.14	182326	3/1/2011	00:00:00	ARO	100	Pure-Muldraugh 237520-Dist-ASB	Depreciation Neutrality -LGE-GAS	ARC Depreciation Expense	1
0100-131-006250-006250-407426-0000-0699-0000	(6.14)	407426	3/1/2011	00:00:00	ARO	100	Pure-Muldraugh 237520-Dist-ASB	Depreciation Neutrality -LGE-GAS	ARC Depreciation Expense	1
0100-503-006250-006250-182326-0000-0699-0000	2,573.48	182326	3/1/2011	00:00:00	ARO	100	Pure-Muldraugh GSF UGS (Wells)	Accretion Neutrality -LGE- GAS	Accretion Expense	1
0100-131-006250-006250-407406-0000-0699-0000	(2,573.48)	407406	3/1/2011	00:00:00	ARO	100	Pure-Muldraugh GSF UGS (Wells)	Accretion Neutrality -LGE- GAS	Accretion Expense	1
0100-503-006250-006250-182326-0000-0699-0000	2,016.51	182326	3/1/2011	00:00:00	ARO	100	Pure-Muldraugh GSF UGS (Wells)	Depreciation Neutrality -LGE-GAS	ARC Depreciation Expense	1
0100-131-006250-006250-407426-0000-0699-0000	(2,016.51)	407426	3/1/2011	00:00:00	ARO	100	Pure-Muldraugh GSF UGS (Wells)	Depreciation Neutrality -LGE-GAS	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	483.27	182317	3/1/2011	00:00:00	ARO	100	Pure-Ohio Falls-ASB	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(483.27)	407401	3/1/2011	00:00:00	ARO	100	Pure-Ohio Falls-ASB	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	145.71	182317	3/1/2011	00:00:00	ARO	100	Pure-Ohio Falls-ASB	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(145.71)	407421	3/1/2011	00:00:00	ARO	100	Pure-Ohio Falls-ASB	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	9,946.08	182317	3/1/2011	00:00:00	ARO	100	Pure-Paddy's Run-ASB	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(9,946.08)	407401	3/1/2011	00:00:00	ARO	100	Pure-Paddy's Run-ASB	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	72,829.13	182317	3/1/2011	00:00:00	ARO	100	Pure-Paddy's Run-ASB	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(72,829.13)	407421	3/1/2011	00:00:00	ARO	100	Pure-Paddy's Run-ASB	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-503-006250-006250-182326-0000-0699-0000	45.92	182326	3/1/2011	00:00:00	ARO	100	Pure-Riggs June 235120-UGS-ASB	Accretion Neutrality -LGE- GAS	Accretion Expense	1
0100-131-006250-006250-407406-0000-0699-0000	(45.92)	407406	3/1/2011	00:00:00	ARO	100	Pure-Riggs June 235120-UGS-ASB	Accretion Neutrality -LGE- GAS	Accretion Expense	1
0100-503-006250-006250-182326-0000-0699-0000	12.57	182326	3/1/2011	00:00:00	ARO	100	Pure-Riggs June 235120-UGS-ASB	Depreciation Neutrality -LGE-GAS	ARC Depreciation Expense	1
0100-131-006250-006250-407426-0000-0699-0000	(12.57)	407426	3/1/2011	00:00:00	ARO	100	Pure-Riggs June 235120-UGS-ASB	Depreciation Neutrality -LGE-GAS	ARC Depreciation Expense	1
0100-131-006250-006250-411157-0000-0699-0000	127.79	411157	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion -LGE-Common Split	Accretion Expense	0.29
0100-141-006250-006250-411157-0000-0699-0000	(127.79)	411157	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion -LGE-Common Split	Accretion Expense	0.29
0100-122-006250-006250-411157-0000-0699-0000	345.49	411157	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion -LGE-Common Split	Accretion Expense	0.71
0100-141-006250-006250-411157-0000-0699-0000	(345.49)	411157	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion -LGE-Common Split	Accretion Expense	0.71
0100-703-006250-006250-182327-0000-0699-0000	345.49	182327	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion Neutrality -LGE-Comm/Elec	Accretion Expense	0.71
0100-122-006250-006250-407407-0000-0699-0000	(345.49)	407407	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion Neutrality -LGE-Comm/Elec	Accretion Expense	0.71
0100-703-006250-006250-182327-0000-0699-0000	127.79	182327	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion Neutrality -LGE-Comm/Gas	Accretion Expense	0.29
0100-131-006250-006250-407407-0000-0699-0000	(127.79)	407407	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Accretion Neutrality -LGE-Comm/Gas	Accretion Expense	0.29
0100-703-006250-006250-182327-0000-0699-0000	121.91	182327	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense	0.71
0100-122-006250-006250-407427-0000-0699-0000	(121.91)	407427	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense	0.71
0100-703-006250-006250-182327-0000-0699-0000	49.79	182327	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense	0.29
0100-131-006250-006250-407427-0000-0699-0000	(49.79)	407427	3/1/2011	00:00:00	ARO	100	Pure-Seventh&O-ComGenPin-ASB	Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense	0.29
0100-303-006250-006250-182317-0000-0699-0000	30,484.93	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Ash Pond	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(30,484.93)	407401	3/1/2011	00:00:00	ARO	100	Pure-TC Ash Pond	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	21,157.06	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Ash Pond	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(21,157.06)	407421	3/1/2011	00:00:00	ARO	100	Pure-TC Ash Pond	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	50.59	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Chemical Storage	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(50.59)	407401	3/1/2011	00:00:00	ARO	100	Pure-TC Chemical Storage	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	35.11	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Chemical Storage	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(35.11)	407421	3/1/2011	00:00:00	ARO	100	Pure-TC Chemical Storage	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	1,219.23	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Coal Storage	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(1,219.23)	407401	3/1/2011	00:00:00	ARO	100	Pure-TC Coal Storage	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	846.16	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Coal Storage	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(846.16)	407421	3/1/2011	00:00:00	ARO	100	Pure-TC Coal Storage	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	1,537.06	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Environmental Ponds	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(1,537.06)	407401	3/1/2011	00:00:00	ARO	100	Pure-TC Environmental Ponds	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	1,066.74	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Environmental Ponds	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(1,066.74)	407421	3/1/2011	00:00:00	ARO	100	Pure-TC Environmental Ponds	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	69.35	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Nuclear Sources	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(69.35)	407401	3/1/2011	00:00:00	ARO	100	Pure-TC Nuclear Sources	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	48.13	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Nuclear Sources	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(48.13)	407421	3/1/2011	00:00:00	ARO	100	Pure-TC Nuclear Sources	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	55.60	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Sewage Treatment Plant	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(55.60)	407401	3/1/2011	00:00:00	ARO	100	Pure-TC Sewage Treatment Plant	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	38.59	182317	3/1/2011	00:00:00	ARO	100	Pure-TC Sewage Treatment Plant	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(38.59)	407421	3/1/2011	00:00:00	ARO	100	Pure-TC Sewage Treatment Plant	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-303-006250-006250-182317-0000-0699-0000	179.38	182317	3/1/2011	00:00:00	ARO	100	Pure-Zorn-ASB	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-111-006250-006250-407401-0000-0699-0000	(179.38)	407401	3/1/2011	00:00:00	ARO	100	Pure-Zorn-ASB	Accretion Neutrality -LGE- Eq-Gen	Accretion Expense	1
0100-303-006250-006250-182317-0000-0699-0000	48.22	182317	3/1/2011	00:00:00	ARO	100	Pure-Zorn-ASB	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-111-006250-006250-407421-0000-0699-0000	(48.22)	407421	3/1/2011	00:00:00	ARO	100	Pure-Zorn-ASB	Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense	1
0100-141-006250-006250-404401-0000-0698-0000	(117,727.42)	404401	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #1	Depreciation Expense	0.33
0100-141-006250-006250-404401-0000-0698-0000	(93,113.18)	404401	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #1	Depreciation Expense	0.33
0100-111-006250-006250-404402-0000-0698-0000	117,727.42	404402	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #1	Depreciation Expense	0.33
0100-111-006250-006250-404402-0000-0698-0000	93,113.18	404402	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #1	Depreciation Expense	0.33
0100-141-006250-006250-404401-0000-0698-0000	(8,464.83)	404401	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #2	Depreciation Expense	0.03
0100-121-006250-006250-404401-0000-0698-0000	8,464.83	404401	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #2	Depreciation Expense	0.03
0100-121-006250-006250-404401-0000-0698-0000	10,702.49	404401	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #2	Depreciation Expense	0.03
0100-141-006250-006250-404401-0000-0698-0000	(10,702.49)	404401	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #2	Depreciation Expense	0.03
0100-122-006250-006250-404401-0000-0698-0000	124,862.41	404401	3/1/2011	00:00:00	DEPR EXPENSE	100		Alloc Amort to E/G by Product - #3	Depreciation Expense	0.35



Attachment to Response to LGE AG-1 Question No. 244  
 Page 1877 of 2028  
 Charnas

0100-304-006250-006250-108416-0000-0697-0000-	(28.29)	108416 3/1/2011 00:00:00	ARO	100	PSAL - REG LIAB LGE GEN (312/315)	Salvage Depredation Expense	1 LGE-131201-AROP MC4 SO2 Boiler Plt
0100-304-006250-006250-254014-0000-0697-0000-	27.45	254014 3/1/2011 00:00:00	ARO	100	PSAL - REG LIAB LGE GEN (312/315)	Salvage Depredation Expense	1 LGE-131201-AROP MC3 Boiler Plt Equip
0100-304-006250-006250-254014-0000-0697-0000-	28.29	254014 3/1/2011 00:00:00	ARO	100	PSAL - REG LIAB LGE GEN (312/315)	Salvage Depredation Expense	1 LGE-131201-AROP MC4 SO2 Boiler Plt
0100-122-006250-006250-403016-0000-0697-0000-	2,076.41	403016 3/1/2011 00:00:00	DEPR EXPENSE	100	Reclass Common Product Code to E	Depredation Expense	1 LGE-139220-Transportation - Traile
0100-122-006250-006250-403016-0000-0697-0000-	15,832.55	403016 3/1/2011 00:00:00	DEPR EXPENSE	100	Reclass Common Product Code to E	Depredation Expense	1 LGE-139400-Tools, Shop, and Garage
0100-122-006250-006250-403016-0000-0697-0000-	327.89	403016 3/1/2011 00:00:00	DEPR EXPENSE	100	Reclass Common Product Code to E	Depredation Expense	1 LGE-139620-Power Op Equip-Other
0100-122-006250-006250-403016-0000-0697-0000-	(2,076.41)	403016 3/1/2011 00:00:00	DEPR EXPENSE	100	Reclass Common Product Code to E	Depredation Expense	1 LGE-139220-Transportation - Traile
0100-122-006250-006250-403016-0000-0697-0000-	(15,832.55)	403016 3/1/2011 00:00:00	DEPR EXPENSE	100	Reclass Common Product Code to E	Depredation Expense	1 LGE-139400-Tools, Shop, and Garage
0100-122-006250-006250-403016-0000-0697-0000-	(327.89)	403016 3/1/2011 00:00:00	DEPR EXPENSE	100	Reclass Common Product Code to E	Depredation Expense	1 LGE-139620-Power Op Equip-Other

**Clark, Ed**

---

**From:** Nick Alexander <nalexander@pwrplan.com>  
**Sent:** Monday, May 02, 2011 4:51 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Haha unfortunately the latter that I can't do it, but I like the positive notation that you give to no!

Nick Alexander

[NALEXANDER@PWRPLAN.COM](mailto:NALEXANDER@PWRPLAN.COM)  
POWERPLAN CONSULTANTS, INC.  
(404) 217-7379

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Monday, 02 May, 2011 4:45 PM  
**To:** Nick Alexander  
**Subject:** RE: ARO reclass to 182 regulatory entries

OK, that's fine. I appreciate you getting back to me. So, you mean "no" as in "no problem" or "no" as in "can't do it"?

---

**From:** Nick Alexander [mailto:nalexander@pwrplan.com]  
**Sent:** Monday, May 02, 2011 4:40 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela –

Sorry about the delay. I will be connecting in tomorrow to do a couple of other items on the list and I will definitely take a look at the downstream effects it might have. The answer I have been hearing is no if it is a depr group level reg entry.

Hope you had a great vacation!

Nick Alexander

[NALEXANDER@PWRPLAN.COM](mailto:NALEXANDER@PWRPLAN.COM)  
POWERPLAN CONSULTANTS, INC.  
(404) 217-7379

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 27 April, 2011 10:04 AM  
**To:** Nick Alexander  
**Subject:** RE: ARO reclass to 182 regulatory entries

Nick,

I'm back from vacation and I hope you guys have gotten settled into your new office!

Please let me know if you have any updates on if we can run a script to fix ARO-4005, Reg-1001 and Reg-1001B for those two assets on LGE and the one on KU without messing anything else up.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, April 13, 2011 11:22 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

I create new versions of each report and sent them to Nick to be included in the next rebuild. Whenever this new rebuild is made available, let me know, and I'll help you modify the report setup in Powerplant to point to the new reports so you can test the new reports.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 13 April, 2011 9:35 AM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Sure thing, you go to Assets>ARO>Reg Entry>Reports and it is report number ARO-4005.

By the way, I remembered on the way home last night that I have this same problem on report "Reg-1001" so the asset adjustment that I did is not showing up on this report by asset either. I'm sorry, I should of thought of that sooner. This report is in the same location as the one above.

Also, Nick Alexander is here today and tomorrow working on some things for us including simple formatting tweaks on my reports, but he doesn't want to send them to the build until you are finished so he doesn't cause you any trouble. So he wanted me to keep him posted of when you are completed with your changes.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Wednesday, April 13, 2011 9:26 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,  
Can you tell me where in Powerplant you go to get to this report? I've lost my notes on how to find this report again.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 12 April, 2011 8:32 AM

**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Any word on the progress of the report? Just checking on it because I will be using it for my monthly account reconciliations.

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 3:09 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Report change won't be a quick turn around.  
It will likely be next week before you'll get the report changed.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 1:48 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

I need to post these asset adjustments today since we have to close first thing in the morning. Are you expecting the report modification to happen today or can I go ahead and post these transactions and fix the report later? Is there anything else I can do to help?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Tuesday, April 05, 2011 9:35 AM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela called and provided clarification. I still had journal entries on the brain. The report can be modified to include asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Tuesday, 05 April, 2011 9:16 AM



**To:** 'Crescente, Angela'; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

No, there is no way this report can show the asset\_id information for the entry you are asking about. You could run a query using the CPR Query tool window if you wanted to reconcile the asset adjustments dollars for the depr group.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 8:33 AM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

I am OK with the entry including both assets. Is there some way I can modify the report to show what happened by asset?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Monday, April 04, 2011 5:00 PM  
**To:** Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,  
The entry for \$ 9,754,171.05 that includes the two assets is a one line transaction due to both assets being in the same depr group, and the entry information is setup to pull from the depr\_ledger table, which is a table where the dollars are by depr group, and it doesn't appear that the setup can be changed to retain asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Monday, 04 April, 2011 4:11 PM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO reclass to 182 regulatory entries  
**Importance:** High

OK, accidentally told a lie (I'm sorry, it's Monday). I kept looking and now I can see where the reg entries fired, but since there was more than one done on LGE, it combined them which makes sense. However, my report does not reflect this activity by asset. Any ideas on how to make that work? I thought it worked before, but I must be mistaken. The other asset was Purc-MC Ash Pond for \$4,696,835.38.

PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cost Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Unit type	GL ACCOUNT	ACCOUNT BALANCE
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	108107-ACCUM. DEPR. - ELECTRIC ARD	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARD	\$76,573.91
- Depreciation Neutr	182317-OTHER REGULATORY ASSETS ARD	\$-31,807.14
- Transition ARC Dej	182317-OTHER REGULATORY ASSETS ARD	\$31,807.14
- Transition ARD Act	182317-OTHER REGULATORY ASSETS ARD	\$18,965.01
	Balance:	\$-5,057,335.67

Close  
 Add Title  
 Add Footer  
 Move Bitmap  
 Filter  
 Print Filter  
 Print...  
 Zoom...  
 Save Rows  
 Save As  
 Mail...

Display Report Bitmap

Page 11 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

**NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.**

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*The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.*

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Charnas

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**Clark, Ed**

---

**From:** Nick Alexander <nalexander@pwrplan.com>  
**Sent:** Monday, May 02, 2011 4:40 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela –

Sorry about the delay. I will be connecting in tomorrow to do a couple of other items on the list and I will definitely take a look at the downstream effects it might have. The answer I have been hearing is no if it is a depr group level reg entry.

Hope you had a great vacation!

Nick Alexander

[NALEXANDER@PWRPLAN.COM](mailto:NALEXANDER@PWRPLAN.COM)  
POWERPLAN CONSULTANTS, INC.  
(404) 217-7379

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 27 April, 2011 10:04 AM  
**To:** Nick Alexander  
**Subject:** RE: ARO reclass to 182 regulatory entries

Nick,

I'm back from vacation and I hope you guys have gotten settled into your new office!

Please let me know if you have any updates on if we can run a script to fix ARO-4005, Reg-1001 and Reg-1001B for those two assets on LGE and the one on KU without messing anything else up.

Thanks,  
Angela

---

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I create new versions of each report and sent them to Nick to be included in the next rebuild. Whenever this new rebuild is made available, let me know, and I'll help you modify the report setup in Powerplant to point to the new reports so you can test the new reports.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

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**Sent:** Wednesday, 13 April, 2011 9:35 AM

**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Sure thing, you go to Assets>ARO>Reg Entry>Reports and it is report number ARO-4005.

By the way, I remembered on the way home last night that I have this same problem on report "Reg-1001" so the asset adjustment that I did is not showing up on this report by asset either. I'm sorry, I should of thought of that sooner. This report is in the same location as the one above.

Also, Nick Alexander is here today and tomorrow working on some things for us including simple formatting tweaks on my reports, but he doesn't want to send them to the build until you are finished so he doesn't cause you any trouble. So he wanted me to keep him posted of when you are completed with your changes.

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**Subject:** RE: ARO reclass to 182 regulatory entries

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Sunjin Cone  
PowerPlant Support  
770-937-3000

---

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**Sent:** Tuesday, 12 April, 2011 8:32 AM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

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**Sent:** Tuesday, April 05, 2011 3:09 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO reclass to 182 regulatory entries

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Sunjin Cone

PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 1:48 PM  
**To:** PowerPlant Support  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

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Angela

---

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**Sent:** Tuesday, April 05, 2011 9:35 AM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Angela called and provided clarification. I still had journal entries on the brain. The report can be modified to include asset\_id information.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Tuesday, 05 April, 2011 9:16 AM  
**To:** 'Crescente, Angela'; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

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Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 05 April, 2011 8:33 AM  
**To:** PowerPlant Support; Jim Ogilvie  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO reclass to 182 regulatory entries

Sunjin,

Charnas

I am OK with the entry including both assets. Is there some way I can modify the report to show what happened by asset?

Thanks,  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]

**Sent:** Monday, April 04, 2011 5:00 PM

**To:** Crescente, Angela; Jim Ogilvie

**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra

**Subject:** RE: ARO reclass to 182 regulatory entries

Angela,

The entry for \$ 9,754,171.05 that includes the two assets is a one line transaction due to both assets being in the same depr group, and the entry information is setup to pull from the depr\_ledger table, which is a table where the dollars are by depr group, and it doesn't appear that the setup can be changed to retain asset\_id information.

Sunjin Cone

PowerPlant Support

770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]

**Sent:** Monday, 04 April, 2011 4:11 PM

**To:** PowerPlant Support; Jim Ogilvie

**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra

**Subject:** ARO reclass to 182 regulatory entries

**Importance:** High

OK, accidentally told a lie (I'm sorry, it's Monday). I kept looking and now I can see where the reg entries fired, but since there was more than one done on LGE, it combined them which makes sense. However, my report does not reflect this activity by asset. Any ideas on how to make that work? I thought it worked before, but I must be mistaken. The other asset was Purc-MC Ash Pond for \$4,696,835.38.



PowerPlant ----- PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cost Projects Budgets Assets DeprStdy Depr Tables PropTax PwrTax Provision CR Admin MyPPlant Help Calc Print Win

Report Details

Account Type	GL Account	Account Balance
ASSET	101 - Plant In Service - PowerPlant	\$0,000.00
RESERVE	100107-ACCUM. DEPR. - ELECTRIC ARO	\$0,000.00
LIABILITY	230012-ASSET RETIREMENT OBLIGATIONS	\$-5,152,874.59
- Accretion Neutralit	182317-OTHER REGULATORY ASSETS ARO	\$76,573.91
- Depreciation Neutr	182317-OTHER REGULATORY ASSETS ARO	\$-31,807.14
- Transition ARC Dej	182317-OTHER REGULATORY ASSETS ARO	\$31,807.14
- Transition ARO Act	182317-OTHER REGULATORY ASSETS ARO	\$10,965.01
Balance:		\$-5,057,335.67

Close  
Add Title  
Add Footer  
Move Bitmap  
Filter  
Print Filter  
Print...  
Zoom...  
Save Rows  
Save As  
Mail...

Display Report Bitmap

Page 1 of 1

Ready

<<lge reg entry rows march test.xlsx>>

Thanks,

Angela

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**Clark, Ed**

---

**From:** Richardson, Ralph  
**Sent:** Monday, May 02, 2011 7:30 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Settlements

This was run in PP production Friday so you should see it in Dev.

---

**From:** Crescente, Angela  
**Sent:** Friday, April 29, 2011 2:13 PM  
**To:** Richardson, Ralph  
**Subject:** RE: ARO Settlements

Can you call me real quick please, I am getting ready to leave x2524.

---

**From:** Richardson, Ralph  
**Sent:** Friday, April 29, 2011 1:52 PM  
**To:** Crescente, Angela  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** Re: ARO Settlements

Explain to me what the issue is so I can put it in the incident and what will be fixed

---

**From:** Crescente, Angela  
**Sent:** Friday, April 29, 2011 01:48 PM  
**To:** Richardson, Ralph  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Ralph,

Please run the attached SQL in PP **PROD**.

Thanks!  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From depr_method_rates
    Where set_of_books_id <> 5 and to_char(effective_date,'yyyy') <2011
    And depr_method_id = z.depr_method_id
```

)  
Where set\_of\_books\_id = 5  
And effective\_date = to\_date('201010', 'yyyymm')  
;

Commit;

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt

Cc: Wiseman, Sara; Wacker, Diana  
 Subject: RE: ARO Settlements

The default already is "Depr Exp":

**Depr Method Rates Edit**

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Default Eff Date: 04/2011

Default Rate Used: No Recalc

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	CDR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Dep. Check	Avag. Percen	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used Code	Gain Loss Default
LGE-131600-Trimble Co	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used No	
LGE-131600-Trimble Co	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used No	
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used Depr Exp	
LGE-131707-ARO Cost	DEC/200	Financial	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used Depr Exp	
LGE-131707-ARO Cost	DEC/200	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used Depr Exp	
LGE-131707-ARO Cost	DEC/200	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used Depr Exp	
LGE-131707-ARO Cost	DEC/200	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used Depr Exp	
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used No	

Rows 519 to 526 of 1705. Rows Selected: 1

From: Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
 Sent: Wednesday, March 30, 2011 9:19 AM  
 To: Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
 Cc: Wiseman, Sara; Wacker, Diana; Kinder, Debra  
 Subject: RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$23</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$2</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$1</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$0.00</b>		

PowerPlant [Icons]



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$2</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$23,796.53</b>		

arrow!

Thanks,  
 Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

PowerPlant PTAXDEV Database

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Tables

PowerPlant Table Maintenance

Regulatory Entry Type

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expense	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Manual... Reports Quit Help Calc Print Win

**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B)
LGE-134707-ARO Cost Other Prod (Eqp)

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**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

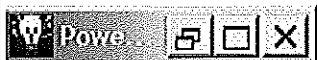
Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adju
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela



**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**ARO Details**

**ARO Details**

**ARO Asset Det**

Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

ARO Type: **Site** ARC Auto Ret: **no**

ARO Status: **Inactive** Rate Type: **Standard**

Status Date: **3/28/2011** Use Def. Rates: **no**

Liability Account: **230012-ASSET RETIREMENT OE**

Accretion Acct: **411150-ACCRETION EXPENSE -**

Gain Account: **421105-GAIN ON ARO SETTLEM** Book Summary:

Loss Account: **421105-GAIN ON ARO SETTLEM** **ARO**

Long Description: **Purc-CR Nuclear Sources**

Settle Cost Elmnt: **0699: CORPORATE DEFAULT**

ARO Rollup: **Gen-Equip**

Ext ARO Code

Asset Id: **30304493**

Description: **Purc-CR Nuclear**

Business Segment: **Electric**

Asset GI Account: **101 - Plant In Ser**

Utility Account: **E317.07-ARO Cos**

Sub Account: **None**

Retirement Unit: **ARO - CHILD**

Property Group: **EON Default Prop**

Asset Location: **Land and AROs**

Subledger Type: **ARO**

End of Life: **12/2023**

Asset Dollars: **\$0.00**

Long Description: **Purc-CR Nuclear**

**Underlying Related Locations**

**Related Asset Locations**

[Empty box for Related Asset Locations]

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**Clark, Ed**

---

**From:** Richardson, Ralph  
**Sent:** Friday, April 29, 2011 1:52 PM  
**To:** Crescente, Angela  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** Re: ARO Settlements

Explain to me what the issue is so I can put it in the incident and what will be fixed

---

**From:** Crescente, Angela  
**Sent:** Friday, April 29, 2011 01:48 PM  
**To:** Richardson, Ralph  
**Cc:** Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Ralph,

Please run the attached SQL in PP PROD.

Thanks!  
Angela

---

**From:** PowerPlant Support [mailto:support@pwrplan.com]  
**Sent:** Thursday, March 31, 2011 2:11 PM  
**To:** PowerPlant Support; Crescente, Angela; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

Please have the sql script below run to fix the effective dated rates problem described below.

```
Update depr_method_rates z
Set effective_date = (
    Select max(effective_date)
    From depr_method_rates
    Where set_of_books_id <> 5 and to_char(effective_date,'yyyy') <2011
    And depr_method_id = z.depr_method_id
)
Where set_of_books_id = 5
And effective_date = to_date('201010', 'yyyymm')
;
```

Commit;

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** PowerPlant Support  
**Sent:** Wednesday, 30 March, 2011 6:20 PM  
**To:** 'Crescente, Angela'; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt

**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** RE: ARO Settlements

FYI –  
Angela and I found the cause of the problem with the gain loss postings. It's related to the effective dated rates on the Depreciation Methods. Currently, I am running additional queries to identify other depr groups where this might be a problem and will provide a mass update to address those data problems.

Here is a sample you can look at in Production (for testing purposes the data problem has been fixed in Dev for this Depreciation Methods).

Please go to Depreciation, Select.  
Select depr group = LGE-131707-ARO Cost Steam (Eqp).  
Go to the GroupRate window.  
Notice how you have effective dated rate for 10/2010 for set of books = PPL Purchase Accounting.

The problem is that is the only one that has effective dated rates for 10/2010.  
The other rates for the set of books that actually matter for this asset all have effective date of 12/2006, and those are being ignored, which causes Post to get confused and use the wrong gain loss default.

Sunjin Cone  
PowerPlant Support  
770-937-3000

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 3:06 PMe  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Kinder, Debra; Wacker, Diana  
**Subject:** FW: ARO Settlements

Hey Jim,

What's plan B?

---

**From:** Kinder, Debra  
**Sent:** Wednesday, March 30, 2011 11:24 AM  
**To:** 'Jim Ogilvie'; Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana  
**Subject:** RE: ARO Settlements

The default already is "Depr Exp":

PowerPlant ..... PTAXDEV Database

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Unit Cal. Projects Assets Depr Tables CR Admin MyPlant Help Calc Print Win

Depreciation

Depr Method Rates Edit

Company: LOUISVILLE GAS & ELECTRIC COMPANY

Rate type: Audits

Copy ALL Methods

Copy Single Method

Delete Row

Audit Row

Default Eff Date: 04/2011

Default Rate Used: Blend Rates, No Recalc, Recalc

Update

Cancel

Comments

Blend Books

Depreciation Method	Effective Date	Set of Books	Life Rate (Annual)	COR Rate (Annual)	Salvage Rate (Annual)	Net / Gross	Over Dep. Check	Over Salvag. Percent	Cost Of Removal Percent	End Of Life (YYYY/MM)	Rate Used Code	Gain Loss Default
LGE-131600-Trimble Co	SEP/2011	IFRS Offset	2.780000%	0.220000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131600-Trimble Co	SEP/2011	PPL Purchas	2.780000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No
LGE-131707-ARO Cost	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2011	Financial	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2011	IFRS	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2011	IFRS Offset	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-131707-ARO Cost	DEC/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	Depr Exp
LGE-133100-Ohio Falls	OCT/2011	PPL Purchas	0.000000%	0.000000%	0.000000%	Gross	No	3000%	0.000000%	0000/00	Used	No

Rows 519 to 526 of 1705. Rows Selected: 1

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Wednesday, March 30, 2011 9:19 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

You need to change the "gain loss default" option assigned to this depr group (via the depr method's rates) to "Depr Exp". Then the system will book the remaining NBV of the asset as depreciation expense instead of gain/loss for the ARO child assets.

You may want to use the Depr >> Methods screen to ensure this option is set correctly for all ARO depr methods. You will have to add a "new rate" to make this change as the system will not let you edit the data used in previous months' calculations.

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Wednesday, 30 March, 2011 8:58 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** FW: ARO Settlements

Jim,

Have you come up with anything yet? We were hoping to get some settlements done this month so we wanted to check and see what you were thinking.

Thanks,  
Angela

---

**From:** Crescente, Angela  
**Sent:** Tuesday, March 29, 2011 12:01 PM  
**To:** 'Jim Ogilvie'; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

OK, it looks like on a full retirement (November 2010), it used to put the difference in the input expense adjustment field and now it is putting it in the gain/loss field. Is it because they are transitions?

On a partial retirement (September 2009), it put the difference in the input expense adjustment field and included the current depr expense as it should. Also, this appears to be how the reg entry type was written to look at it.

I have attached both screenshots for you to look at and included the reg entry spreadsheets for both transactions.

So, I don't know why it is putting it in the gain/loss field now. How do we change it?

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPPlant Help Calc Print Win

**Asset Management**

**GPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>11/2010</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$26,796.42</b>	Mid Period Conv.:	
Remaining Life:	<b>493</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.2028%</b>	Input Expense Adj:	<b>\$774,058.96</b>	Begin Year Reserve:	<b>\$2</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	<b>\$</b>
Beginning Value:	<b>\$800,855.38</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$774</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$800,855.38)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	<b>\$</b>
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adj</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		





**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

Asset Id: **10082296** Eng In Service Year: **01/1974**

Asset Description: **Cane Run Unit 4 - ASB**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>09/2009</b>	Depreciation Base:	<b>\$35,458.72</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>1055</b>	Beginning Reserve:	<b>\$24,600.24</b>	Mid Period Conv.:	
Remaining Life:	<b>627</b>	Current Depr Expense:	<b>\$56.55</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.1595%</b>	Input Expense Adj:	<b>\$1,262.05</b>	Begin Year Reserve:	<b>\$24</b>
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$60,689.98</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	<b>\$1</b>
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$2,122.31)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Data</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>40311</b>	
Current Value:	<b>\$58,567.67</b>	Salvage Proceeds:	<b>\$0.00</b>	True-Up Reserve	Depr Adj.
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$0.00</b>	Adjustment History	Audi
		*Ending Reserve:	<b>\$23,796.53</b>		



arrow!

Thanks,  
 Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:40 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

I can't speak to what may have changed. If you can point out the same information you just provided (ARO, Depr group, Reg Entry, Amounts, etc) for the previous case that you believe worked, then we can compare it to your current configuration.

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

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---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 11:14 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

I see what you are saying, but it always worked before so I don't know why it would be different now ( in my first email I attached the spreadsheet from a settlement from 2009).

I do have a gain/loss reg entry type, but that is for the liability side, not the retirement side. The gain/loss on the liability worked. We can add a new one for retirements if you think that is better, I am just confused as to why it used to work. Please see the attached reg entry type table screenshot. The ARC Depr Expense reg entry type has not been modified since 11/2007 on the time stamp.

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Tables**

**PowerPlant Table Maintenance**

**Regulatory Entry Type**

Please Select A Record

Description	Column Expression
Accretion Expense	ACCREDITED
ARC Adjustment	ADJUSTMENTS
ARC Depreciation Expense	CURR_DEPR_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_ADJL
ARC Retirement	RETIREMENTS
ARO Gain/Loss	INPUT_GAIN_LOSS + GAIN_LOSS
ARO Settlement	SETTLED
Closed Cost of Removal	COST_OF_REMOVAL
COR Expense	COR_EXPENSE + COR_EXP_ADJUST + COR_EXP_ALLOC_ADJUST
Depreciation Expense	DEPRECIATION_EXPENSE + DEPR_EXP_ADJUST + DEPR_EXP_ALLOC_AD
IFRS Input Gain/Loss	INPUT_GAIN_LOSS
Salvage Depreciation Expense	SALVAGE_EXPENSE + SALVAGE_EXP_ADJUST + SALVAGE_EXP_ALLOC_A
Transition ARC Depreciation Expe	RESERVE_ADJUSTMENT
Transition ARO Accretion (curr mo	ACCREDITED
Transition ARO Begin Liability	BEG_LIABILITY

Rows 1 to 14 of 14

Thanks,  
 Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 11:00 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Thanks Angela, that really clears things up. I think the problem is this:

- The amount you are expecting to see on the reg entry is in the "Gain Loss" field for the depreciation.
- The reg entry you are looking at has a reg entry type of "ARC Depreciation Expense".
- I doubt this reg entry type includes the gain/loss amount when generating its entry. Do you have a reg entry type setup for gain/loss?

--  
Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

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200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:48 AM  
**To:** Jim Ogilvie; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Jim,

The ARO I am looking at is Purc-CR Nuclear Sources in Depr Group LGE 131707. The amount I would expect to see is \$40,145.35 because of the difference left in the reserve to clear out the 108107 account for this asset (credit 108 – debit 182). I have attached a screenshot of the reg entry. I am also sending a screenshot of the depr reserve screen. Let me know what else I can do to help.

**PowerPlant** ----- **PTAXDEV Database**

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Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

Manual... Reports Quit Help Calc Print Win

**ARO**

**Regulatory Entry Maintenance**

Entry Name	Regulatory Entry Type
Depreciation Neutrality -LGE- Gen	ARC Depreciation Expense
Depreciation Neutrality -LGE-COMM-E	ARC Depreciation Expense
Depreciation Neutrality -LGE-Comm-G	ARC Depreciation Expense

Add Update

Add Like

Delete Cancel

Entry Id: 11

Entry Name: Depreciation Neutrality -LGE- Gen

Entry Type: ARC Depreciation Expense

Factor (0 to 1): 1

Regulatory GI Account: 182317-OTHER REGULATORY

Offset GI Account: 407421-REGULATORY CREDIT

GI Je Code: ARO

Regulatory GI Account String: 0100-303-006250-006250-182317-0000-0699-0000-

Offset GI Account String: 0100-111-006250-006250-407421-0000-0699-0000-

Notes: Equip-Gen -LGE- Depreciation Neutrality

**Selected AROs/Depreciation Groups**

Depreciation Group
LGE-131707-ARO Cost Steam (Eqp)
LGE-133707-ARO Cost Hydro Prod (Eqp)
LGE-134705-ARO Cost Other Prod (L/B)
LGE-134707-ARO Cost Other Prod (Eqp)

<

<<

>

>>

**Unselected AROs/Depreciation Groups**

Depreciation Group
CC-NR303.00-Misc Intangible Plant
CC-NR311.00 Structures
CC-NR311.00 Structures & Improv
CC-NR390.10 Structures & Improv

**PowerPlant** ----- **PTAXDEV Database**

File Edit Subsystem Batch Admin Preferences Window Help

Unit Cat Projects Budgets Assets Depr Tables CR Admin MyPPlant Help Calc Print Win

**Asset Management**

**CPR Ledger Detail**

**CPR Depreciation**

Set of Books: **Financial**

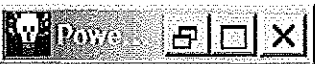
Asset Id: **30304493** Eng In Service Year: **10/2010**

Asset Description: **Purc-CR Nuclear Sources**

Company: **LOUISVILLE GAS & ELECTRIC COMPANY**

Depr Group: **LGE-131707-ARO Cost Steam (Eqp)**

Accounting Month:	<b>03/2011</b>	Depreciation Base:	<b>\$0.00</b>	Mid Period Method:	<b>Strai</b>
Initial Life(mo):	<b>158</b>	Beginning Reserve:	<b>\$1,038.13</b>	Mid Period Conv.:	
Remaining Life:	<b>154.5</b>	Current Depr Expense:	<b>\$0.00</b>	Depreciation Method:	<b>&lt;none&gt;</b>
Monthly Calc Rate:	<b>0.6472%</b>	Input Expense Adj:	<b>\$0.00</b>	Begin Year Reserve:	
Est. Salvage Pct:	<b>0.0000%</b>	Calc Expense Adj:	<b>\$0.00</b>	YTD Depr Exp:	
Beginning Value:	<b>\$41,183.48</b>	Reserve Adj:	<b>\$0.00</b>	YTD Expense Adj:	
Net Add / Adj:	<b>\$0.00</b>	Reserve Trans In:	<b>\$0.00</b>	Prior YTD Depr Exp:	
Retirements:	<b>(\$41,183.48)</b>	Reserve Trans Out:	<b>\$0.00</b>	Prior YTD Expense Adj:	
Transfers In:	<b>\$0.00</b>	Other Credits / Adj:	<b>\$0.00</b>	<b>Account Distribution Deta</b>	
Transfers Out:	<b>\$0.00</b>	Cost of Removal:	<b>\$0.00</b>	<b>403111</b>	
Current Value:	<b>\$0.00</b>	Salvage Proceeds:	<b>\$0.00</b>	<b>True-Up Reserve</b>	<b>Depr Adju</b>
* NOTE: Ending Reserve is not calculated until Depreciation Approval has been run.		Loss (Gain):	<b>\$40,145.35</b>	<b>Adjustment History</b>	<b>Audi</b>
		*Ending Reserve:	<b>\$0.00</b>		



Thanks,  
Angela

---

**From:** Jim Ogilvie [mailto:jogilvie@pwrplan.com]  
**Sent:** Tuesday, March 29, 2011 10:34 AM  
**To:** Crescente, Angela; PowerPlant Support; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** RE: ARO Settlements

Angela,

Given the number and complexity of LGE & KU's reg entries, it would be very helpful if you could provide the following information:

- The ARO(s) involved (your screenshot suffices)
- The Depr Group(s) involved
- The Reg Entry you expect to see a journal entry for (screenshot from the reg entry screen)
- The amount of the entry you expect to see with a brief explanation where that amount comes from (e.g. \$100 because XXX)

This will make it much easier for us to help you.

--

Jim Ogilvie  
jogilvie@pwrplan.com  
678-421-4809

PowerPlan is moving, effective April 18, 2011. Please update your records.  
The **New Address** is:

PowerPlan Consultants, Inc.  
200 Galleria Parkway, Ste. 1300  
Atlanta, GA 30339

Note: Phone numbers will not change.

---

**From:** Crescente, Angela [mailto:Angela.Crescente@lge-ku.com]  
**Sent:** Tuesday, 29 March, 2011 10:25 AM  
**To:** PowerPlant Support; Jim Ogilvie; Jim Dahlby; Josh Hirschel; Joseph Holt  
**Cc:** Wiseman, Sara; Wacker, Diana; Kinder, Debra  
**Subject:** ARO Settlements

All:

I am trying to test settlements this month and they are not working properly. The reg entry Depreciation Neutrality is not showing up on my reg entry rows. I have attached a spreadsheet of what I am seeing now versus what I usually see. I have looked over the reg entry and cannot see why it wouldn't be working. I can see this entry being used for normal month depreciation on the other assets, but when I retire, it doesn't fire for that particular asset. We set up these new transition AROs back in November, I am unsure of whether or not that could be the problem. The only thing I know of is that the old ones had "ARO" under book summary in the details screen and the new ones were blank. So, I went in and added "ARO" to book summary and it

Charnas

still did not work. So, I tried to process the settlement both with that field blank and with "ARO" and neither one worked. I have attached a screenshot for this too. Please advise.

<<lgetestmarch.xlsx>> <<LGE REG ENTRIES.xlsx>>

Thanks,

Angela





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Charnas

*persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.*

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**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, April 27, 2011 3:58 PM  
**To:** Koellner, Corey  
**Subject:** RE: LG&E ARO Regulatory Liabilities

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Tracking:** Recipient Koellner, Corey  
Read: 4/27/2011 4:01 PM

Corey,  
  
This activity should be netted against the credits.

Thanks,  
Angela

---

**From:** Koellner, Corey  
**Sent:** Wednesday, April 27, 2011 3:48 PM  
**To:** Crescente, Angela  
**Subject:** LG&E ARO Regulatory Liabilities

Angela –  
  
I’m preparing the LG&E Regulatory Liab information that will be included in the Form 3 filing. I identified these ARO liabs with debit activity in 1Q11:

Account	Account	Je Name	Line Description	Debits
254014	REGULATORY LIABILITY ARO - GENERATION	PP ARO USD 01-FEB-11	Journal Import Created	55.74
254014	REGULATORY LIABILITY ARO - GENERATION	PP ARO USD 01-JAN-11	Journal Import Created	55.74
254014	REGULATORY LIABILITY ARO - GENERATION	PP ARO USD 01-MAR-11	Journal Import Created	55.74

Could let me know if these items should be documented as debits, or if the nature of the activity is such it should be netted against the credits.

Thanks!

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Wednesday, April 27, 2011 10:53 AM  
**To:** Leichty, Doug  
**Cc:** Wiseman, Sara  
**Subject:** RE: SLC-ARO Entry 12312010.docx

Doug,

Please see below. Shannon approved it. Please send it to the Virginia staff.

Thanks,  
Angela

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, April 27, 2011 9:49 AM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: SLC-ARO Entry 12312010.docx

I am fine with this, thanks.

**Shannon Charnas**  
*Director, Accounting & Regulatory Reporting*  
*LG&E and KU*  
*(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, April 27, 2011 9:38 AM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** SLC-ARO Entry 12312010.docx

<< File: SLC-ARO Entry 12312010.docx >>

Shannon:

As you may know, Angela and I met with the VA staff on Monday to discuss AROs and some general issues including plant. As a result of the meeting, they asked for a sample ARO entry for December 2011. Here it is for your review.

**Clark, Ed**

---

**From:** Charnas, Shannon  
**Sent:** Wednesday, April 27, 2011 9:49 AM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: SLC-ARO Entry 12312010.docx

I am fine with this, thanks.

**Shannon Charnas**

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, April 27, 2011 9:38 AM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** SLC-ARO Entry 12312010.docx

<< File: SLC-ARO Entry 12312010.docx >>

Shannon:

As you may know, Angela and I met with the VA staff on Monday to discuss AROs and some general issues including plant. As a result of the meeting, they asked for a sample ARO entry for December 2011. Here it is for your review.

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, April 27, 2011 9:38 AM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** SLC-ARO Entry 12312010.docx



SLC-ARO Entry  
12312010.docx

Shannon:

As you may know, Angela and I met with the VA staff on Monday to discuss AROs and some general issues including plant. As a result of the meeting, they asked for a sample ARO entry for December 2011. Here it is for your review.

**KENTUCKY UTILITIES COMPANY  
D/B/A OLD DOMINION POWER COMPANY**

**CASE NO. PUE 2011-00013**

**Response to SCC Data Requests (On-Site)  
Dated: April 25, 2011**

**Responding Witness: Shannon L. Charnas**

Q. Provide December 2010 ARO journal entry activity.

A. See below.

<b>Account</b>	<b>Debit</b>	<b>Credit</b>
403-Depreciation Expense	\$242,198	
411-Accretion Expense	\$223,682	
108-Accumulated Depreciation		\$242,198
230-ARO Liability		\$223,682
407-Regulatory Credit		\$466,346
182-Regulatory Asset	\$466,346	
<b>Total</b>	<b>\$932,226</b>	<b>\$932,226</b>



**Clark, Ed**

---

**From:** Leichty, Doug  
**Sent:** Wednesday, April 27, 2011 7:56 AM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: VASCC site visit ARO entry.docx  
**Attachments:** SLC-ARO Entry 12312010.docx

See attached.

---

**From:** Wiseman, Sara  
**Sent:** Tuesday, April 26, 2011 9:09 PM  
**To:** Leichty, Doug  
**Cc:** Crescente, Angela  
**Subject:** VASCC site visit ARO entry.docx

<< File: VASCC site visit ARO entry.docx >>

Doug:

Would you take a look at this response and see if it looks OK? If so, we will pass it by Shannon.

Thanks.

**KENTUCKY UTILITIES COMPANY  
D/B/A OLD DOMINION POWER COMPANY**

**CASE NO. PUE 2011-00013**

**Response to SCC Data Requests (On-Site)  
Dated: April 25, 2011**

**Responding Witness: Shannon L. Charnas**

- Q. Provide December 2010 ARO journal entry activity.
- A. See below.

<b>Account</b>	<b>Debit</b>	<b>Credit</b>
403-Depreciation Expense	\$242,198	
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108-Accumulated Depreciation		\$242,198
230-ARO Liability		\$223,682
407-Regulatory Credit		\$466,346
182-Regulatory Asset	\$466,346	
<b>Total</b>	<b>\$932,226</b>	<b>\$932,226</b>

**Clark, Ed**

---

**From:** PowerPlantAlerts@eon-us.com  
**Sent:** Wednesday, April 27, 2011 6:00 AM  
**To:** Crescente, Angela  
**Subject:** PowerPlant Alerts - LGE-KU - AIP - ARO

Project 132874 has ARO Project 132875 has ARO

[login to powerplant](#)

**Crescente, Angela**

---

**From:** Elmore, Barry  
**Sent:** Thursday, January 27, 2011 4:32 PM  
**To:** Crescente, Angela  
**Cc:** Wiseman, Sara  
**Subject:** RE: Regulatory Asset and Regulatory Liability - PPL

Angela,

I am not sure what your differences are; however, I would put what you all have and what is consistent on our reports in Sharepoint. However, if you feel like something is not clicking between us and them, then we can get together and call Jon Benfield at PPL. Let me know what you all want to do.

**Barry Elmore**

Manager, Financial Accounting and Reporting  
LG&E and KU Energy LLC  
502-627-3580

---

**From:** Crescente, Angela  
**Sent:** Thursday, January 27, 2011 3:26 PM  
**To:** Elmore, Barry  
**Cc:** Wiseman, Sara  
**Subject:** Regulatory Asset and Regulatory Liability - PPL

Barry,

I am not coming up with the same numbers for the ARO regulatory asset and regulatory liability lines as PPL has on their 10-K so I made the change on the document in SharePoint as requested. I made other changes as well, but this one concerned me since it had to do with numbers.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Kinder, Debra  
**Sent:** Thursday, January 06, 2011 12:40 PM  
**To:** 'Jim Ogilvie'; 'support'; akoch@pwrplan.com  
**Cc:** Wacker, Diana; Crescente, Angela; Clements, Chad  
**Subject:** RE: GI to CR outage

Yep, that's right.

---

**From:** Jim Ogilvie [<mailto:jogilvie@pwrplan.com>]  
**Sent:** Thursday, January 06, 2011 12:08 PM  
**To:** Kinder, Debra; 'support'; [akoch@pwrplan.com](mailto:akoch@pwrplan.com)  
**Cc:** Wacker, Diana; Crescente, Angela; Clements, Chad  
**Subject:** RE: GI to CR outage

So PP sent an unbalanced entry to Oracle, and you corrected it in Oracle?

If that is the case, then we'll likely need to give you a SQL script to correct the CR because you won't be able to make a one-sided manual JE.

--  
Jim Ogilvie  
[jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com)  
678-421-4809

---

**From:** Kinder, Debra [<mailto:Debra.Kinder@lge-ku.com>]  
**Sent:** Thursday, 06 January, 2011 11:53 AM  
**To:** Jim Ogilvie; support; [akoch@pwrplan.com](mailto:akoch@pwrplan.com)  
**Cc:** Wacker, Diana; Crescente, Angela; Clements, Chad  
**Subject:** RE: GI to CR outage

Added two credit balance lines. We need the attached two credit lines in the CR to clear the balance there.

Thanks,  
Deb

---

**From:** Jim Ogilvie [<mailto:jogilvie@pwrplan.com>]  
**Sent:** Thursday, January 06, 2011 10:40 AM  
**To:** Kinder, Debra; 'support'; [akoch@pwrplan.com](mailto:akoch@pwrplan.com)  
**Cc:** Wacker, Diana; Crescente, Angela; Clements, Chad  
**Subject:** RE: GI to CR outage

Can you tell us exactly what you changed during the Oracle import? Added a line, changed a line, etc...

--  
Jim Ogilvie

[jogilvie@pwrplan.com](mailto:jogilvie@pwrplan.com)  
678-421-4809

---

**From:** Kinder, Debra [<mailto:Debra.Kinder@lge-ku.com>]  
**Sent:** Thursday, 06 January, 2011 10:19 AM  
**To:** support; Jim Ogilvie; [akoch@pwrplan.com](mailto:akoch@pwrplan.com)  
**Cc:** Wacker, Diana; Crescente, Angela; Clements, Chad  
**Subject:** GI to CR outage

Good Morning,

During November's closing a PP ARO journal produced an error (see screen shot attached) we fixed the entry before we imported it to Oracle General Ledger, but now it is causing a GL to CR outage of \$144,529.10 in account

421105. I'm not sure how to fix this in CR now. Can you help?

month_number	gl_journal_category	company	account	cr	gl	difference
201011	POWERPLANT	0100	421105	144529.1	0.00	144,529.10

<<JE Error.pdf>>

Thanks,

Deb

---

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**Crescente, Angela**

---

**From:** Wiseman, Sara  
**Sent:** Thursday, December 29, 2011 9:05 AM  
**To:** Crescente, Angela  
**Subject:** Trimble comments



Re: Comments by January 6 - Tr...    Re: Comments by January 6 - Tr...



**Crescente, Angela**

---

**From:** Trimble, Robert  
**Sent:** Thursday, December 29, 2011 9:02 AM  
**To:** Wiseman, Sara  
**Subject:** Re: Comments by January 6 - Transmission ARO Discussion.docx

Do we need to add PT's to the ARO list at the bottom?

Robby Trimble | Mgr Transmission Lines & Substation Construction  
Cell - 859-576-0045 or 502-376-8364  
eFax - 502-217-2100

Sent from my iPad

On Dec 28, 2011, at 10:08 AM, "Wiseman, Sara" <[Sara.Wiseman@lge-ku.com](mailto:Sara.Wiseman@lge-ku.com)> wrote:

Hi all:

I want to thank everyone for helping us out on the ARO review we are currently conducting. Angela and I have attempted to compile a summary of items discussed at our meeting as well as what was decided on each item. Please take a few minutes to review it and provide any comments you may have to us. Please track your comments. We will be using this document as a starting point for our future discussions. If possible, we would appreciate comments by Friday, January 6. (The document is slightly longer than one page, so hopefully it would be a quick read).

Thanks!

Sara

<Transmission ARO Discussion.docx>

**Crescente, Angela**

---

**From:** Trimble, Robert  
**Sent:** Thursday, December 29, 2011 9:02 AM  
**To:** Wiseman, Sara  
**Subject:** Re: Comments by January 6 - Transmission ARO Discussion.docx

Otherwise looks good

Robby Trimble | Mgr Transmission Lines & Substation Construction  
Cell - 859-576-0045 or 502-376-8364  
eFax - 502-217-2100

Sent from my iPad

On Dec 28, 2011, at 10:08 AM, "Wiseman, Sara" <[Sara.Wiseman@lge-ku.com](mailto:Sara.Wiseman@lge-ku.com)> wrote:

Hi all:

I want to thank everyone for helping us out on the ARO review we are currently conducting. Angela and I have attempted to compile a summary of items discussed at our meeting as well as what was decided on each item. Please take a few minutes to review it and provide any comments you may have to us. Please track your comments. We will be using this document as a starting point for our future discussions. If possible, we would appreciate comments by Friday, January 6. (The document is slightly longer than one page, so hopefully it would be a quick read).

Thanks!

Sara

<Transmission ARO Discussion.docx>

**Crescente, Angela**

---

**From:** Wiseman, Sara  
**Sent:** Wednesday, December 28, 2011 11:05 AM  
**To:** Crescente, Angela  
**Subject:** Winkler's comments



RE: Comments by January 6 - Tr... RE: Comments by January 6 - Ge...

**Crescente, Angela**

---

**From:** Hudson, Rusty  
**Sent:** Wednesday, December 28, 2011 10:16 AM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** FW: Ash Pond Closure Estimates

For current valuation purposes. Rusty

---

**From:** Straight, Scott  
**Sent:** Wednesday, December 28, 2011 10:07 AM  
**To:** Hudson, Rusty  
**Cc:** Heun, Jeff; Waterman, Bob; Watson, Joseph; Millay, David; Burns, Kyle; Wiseman, Sara; Williams, John; Winkler, Michael; Revlett, Gary; Voyles, John  
**Subject:** FW: Ash Pond Closure Estimates

Rusty,

After reviewing the 12/19/11 emails with Jeff Heun this morning, as well as going over the history of the estimates, please see Jeff's note to me that the \$120k per acre remains a valid number to use for ARO at this time given current regulations. This value is obviously a ROM estimate and not tailored to site specifics, but should be valid for the intended purpose.

We can revisit this later in the year if the regulations become more clear on future requirements or if guidance is obtained from the State on closing current ponds before new regulations are in effect.

*Scott Straight*

Director, Project Engineering  
LG&E and KU Energy, LLC  
(502) 627-2701  
[scott.straight@lge-ku.com](mailto:scott.straight@lge-ku.com)

---

**From:** Heun, Jeff  
**Sent:** Wednesday, December 28, 2011 9:47 AM  
**To:** Straight, Scott  
**Subject:** FW: Ash Pond Closure Estimates

Scott,

Based on current laws/regulations the cost to close our existing impoundments would be approximately \$120k per acre. I have reviewed the cost estimate provided to Property Accounting last year and everything is still accurate and required no changes. I have attached the cost estimate as a reference.



Pond Closure  
Costs.xlsx

JBH

---

**From:** Heun, Jeff  
**Sent:** Monday, December 19, 2011 3:44 PM  
**To:** Hudson, Rusty; Millay, David  
**Cc:** Straight, Scott; Burns, Kyle  
**Subject:** RE: Ash Pond Closure Estimates

Rusty,

My comments in red below.

JBH

---

**From:** Hudson, Rusty  
**Sent:** Monday, December 19, 2011 3:37 PM  
**To:** Heun, Jeff; Millay, David  
**Cc:** Straight, Scott; Burns, Kyle  
**Subject:** Ash Pond Closure Estimates

Guys, for purposes of the ARO valuation, I wanted to establish a few things to help me better answer Property Accounting's questions. Please let me know if the following are correct statements, or please answer them if worded as a question.

- The estimate to close ash ponds under existing rules/law is the \$120k per acre. Based on Stantec's estimate and understanding of the regulations. As an FYI the KYDWM and KYDOW has never closed an ash pond.
- If not for the new CCR rules expected to be announced in 2012, we would keep the existing ash ponds open, even while moving to landfills long-term. That is correct.
- Is there a distinction to be made between plants planned to be closed 1/1/16 and those planned to keep operating post 1/1/16 in terms of whether or not we would close the ash ponds under existing rules, if no new rules were expected? We did not make a distinction between pre 1/1/16 and post 1/1/16 pond closure. The costs are based on closing the ponds post EPA ruling.
- The estimate to close ash ponds under the expected new rules is the \$2.0m per acre. The costs would vary per site due to the size of the ponds and the available borrow material to cap the pond. Using Ghent as the basis should be acceptable.
- Is there a high level reconciliation that goes from the \$120k per acre to the \$2.0m per acre (in terms of what is driving the costs up so much)? Yes I have updated cost estimates

Rusty

Activity	2002	2010			Units
	Cost	Escalated Cost	Actual Cost	Adjusted Costs	
Engineering	\$0	\$0	\$250,000	\$250,000	1
Construction					
<i>Mobilization</i>	\$21,000	\$33,471		\$33,471	1
<i>Site Grading</i>	\$225,000	\$358,616		\$358,616	1
<i>1' Clay Cover</i>	\$0	\$0	\$8	\$8	18000
<i>1' Vegetative Cover</i>	\$0	\$0	\$6	\$6	18000
<i>Drainage Ditches</i>	\$25	\$40		\$40	3500
<i>Seeding &amp; Mulching</i>	\$0	\$0	\$2,000	\$2,000	11
<i>Demolition</i>	\$20,000	\$31,877		\$31,877	1
Post Closure Care					
<i>Ground Water Monitoring</i>	\$2,480	\$3,953		\$3,953	1
<i>Maintenace</i>	\$3,000	\$4,782		\$4,782	1

Sub-Total  
Bond

Contingency 20%

Total for 11 acres

Total Per Acre

Total Cost
\$250,000
\$33,471
\$358,616
\$144,000
\$108,000
\$139,462
\$22,000
\$31,877
\$3,953
\$4,782

**\$1,096,160**

\$8,221

\$219,232

**\$1,323,613**

\$120,328.43

Activity	2002	2010			Units	Total Cost
	Cost	Escalated Cost	Actual Cost	Adjusted Costs		
Engineering	\$0	\$0	\$250,000	\$250,000	1	\$250,000
Construction						
Mobilization	\$21,000	\$33,471		\$33,471	1	\$33,471
Site Grading	\$225,000	\$358,616		\$358,616	1	\$358,616
1' Clay Cover	\$0	\$0	\$8	\$8	18000	\$144,000
1' Vegetative Cover	\$0	\$0	\$6	\$6	18000	\$108,000
Drainage Ditches	\$25	\$40		\$40	3500	\$139,462
Seeding & Mulching	\$0	\$0	\$2,000	\$2,000	11	\$22,000
Demolition	\$20,000	\$31,877		\$31,877	1	\$31,877
Post Closure Care						
Ground Water Monitoring	\$2,480	\$3,953		\$3,953	1	\$3,953
Maintenace	\$3,000	\$4,782		\$4,782	1	\$4,782

**Sub-Total \$1,096,160**

Bond \$8,221

Contingency 20% \$219,232

**Total for 11 acres \$1,323,613**

**Total Per Acre \$120,328.43**



**Crescente, Angela**

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**From:** Jones, Greg  
**Sent:** Thursday, December 22, 2011 11:28 AM  
**To:** Crescente, Angela  
**Cc:** Mooney, Mike (BOC 3)  
**Subject:** RE: Paddy's and Canal 108 Estimate

Angela,

We probably have not looked at this in that detail for those out years. We do know that asbestos and other hazardous material abatements have an extremely heavy toll on the cost.

If you have to have a gueestimate, you might use 50% as the cost related to asbestos abatement.

Thanks  
GWJ

---

**From:** Crescente, Angela  
**Sent:** Thursday, December 22, 2011 11:17 AM  
**To:** Mooney, Mike (BOC 3); Jones, Greg  
**Subject:** RE: Paddy's and Canal 108 Estimate

Mike and Greg,

I'm sorry, I should have also asked you if you have estimated asbestos removal numbers for each plant for the remaining years of the LTP?

Thanks,  
Angela

---

**From:** Mooney, Mike (BOC 3)  
**Sent:** Thursday, December 22, 2011 10:42 AM  
**To:** Crescente, Angela  
**Subject:** FW: Paddy's and Canal 108 Estimate

Angela,

According to the engineer below, 50% of Paddy's (\$1.25M) and 50% of Canal (\$762k) will be for asbestos removal.

If you need anything else, just let me know.

--Mike

---

**From:** Jones, Greg  
**Sent:** Thursday, December 22, 2011 10:32 AM  
**To:** Mooney, Mike (BOC 3)  
**Subject:** RE: Paddy's and Canal 108 Estimate

**Crescente, Angela**

---

**From:** Hudson, Rusty  
**Sent:** Monday, December 19, 2011 3:51 PM  
**To:** Crescente, Angela; Wiseman, Sara  
**Subject:** FW: Ash Pond Closure Estimates

I think this answers the basic questions – that under existing rules/laws we would not be obligated to close the ponds, and that the estimate is the \$120k per acre. Under the future, expected rules, that is what is driving the obligation to close and the \$2.0m estimate. Rusty

---

**From:** Heun, Jeff  
**Sent:** Monday, December 19, 2011 3:44 PM  
**To:** Hudson, Rusty; Millay, David  
**Cc:** Straight, Scott; Burns, Kyle  
**Subject:** RE: Ash Pond Closure Estimates

Rusty,

My comments in red below.

JBH

---

**From:** Hudson, Rusty  
**Sent:** Monday, December 19, 2011 3:37 PM  
**To:** Heun, Jeff; Millay, David  
**Cc:** Straight, Scott; Burns, Kyle  
**Subject:** Ash Pond Closure Estimates

Guys, for purposes of the ARO valuation, I wanted to establish a few things to help me better answer Property Accounting's questions. Please let me know if the following are correct statements, or please answer them if worded as a question.

- The estimate to close ash ponds under existing rules/law is the \$120k per acre. Based on Stantec's estimate and understanding of the regulations. As an FYI the KYDWM and KYDOW has never closed an ash pond.
- If not for the new CCR rules expected to be announced in 2012, we would keep the existing ash ponds open, even while moving to landfills long-term. That is correct.
- Is there a distinction to be made between plants planned to be closed 1/1/16 and those planned to keep operating post 1/1/16 in terms of whether or not we would close the ash ponds under existing rules, if no new rules were expected? We did not make a distinction between pre 1/1/16 and post 1/1/16 pond closure. The costs are based on closing the ponds post EPA ruling.
- The estimate to close ash ponds under the expected new rules is the \$2.0m per acre. The costs would vary per site due to the size of the ponds and the available borrow material to cap the pond. Using Ghent as the basis should be acceptable.
- Is there a high level reconciliation that goes from the \$120k per acre to the \$2.0m per acre (in terms of what is driving the costs up so much)? Yes I have updated cost estimates

Rusty

**Crescente, Angela**

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**From:** Puckett, Paul  
**Sent:** Thursday, December 15, 2011 11:34 AM  
**To:** Crescente, Angela  
**Cc:** Trimble, Robert; Wiseman, Sara; Birchell, Brent  
**Subject:** RE: Bushings

Angela,

From the data I have (only about 450 records for analyses between 2001 and 2011), about 27% of all bushings are PCB regulated (i.e. the PCB concentration is 50 ppm or more).

I think I'd use about 35%, just to be conservative.

*W. Paul Puckett*

Engineer - Environmental Affairs Department  
LG&E and KU Energy (Louisville Gas & Electric, Kentucky Utilities, and Old Dominion Power)  
220 West Main Street  
P.O. Box 32010  
Louisville, KY 40232  
(502) 627-4659  
(502) 217-4836 (facsimile)  
(502) 648-7842 (mobile)

*Please note the recent change in e-mail address: [paul.puckett@lge-ku.com](mailto:paul.puckett@lge-ku.com)*



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**From:** Crescente, Angela  
**Sent:** Thursday, December 15, 2011 11:05 AM  
**To:** Puckett, Paul  
**Cc:** Trimble, Robert; Wiseman, Sara; Birchell, Brent  
**Subject:** Bushings

Paul,

We just met with Shannon in regards to setting up AROs for the PCB in bushings and are trying to decide between the 30% and the 50%. I spoke with Robby and he said that you were more familiar with the percentage and that 30%-40% was probably more accurate. Shannon would like to have support for the percentage we choose to use. For example, *based on our past history with the retirement of bushings, approximately X% of the bushings were determined to have PCB material in them.* You mentioned double-checking the database to be comfortable with your estimate. Would you be able to verify a good percentage and explain why you feel that percentage is OK to use?

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Thursday, December 15, 2011 11:05 AM  
**To:** Puckett, Paul  
**Cc:** Trimble, Robert; Wiseman, Sara; Birchell, Brent  
**Subject:** Bushings

Paul,

We just met with Shannon in regards to setting up AROs for the PCB in bushings and are trying to decide between the 30% and the 50%. I spoke with Robby and he said that you were more familiar with the percentage and that 30%-40% was probably more accurate. Shannon would like to have support for the percentage we choose to use. For example, *based on our past history with the retirement of bushings, approximately X% of the bushings were determined to have PCB material in them.* You mentioned double-checking the database to be comfortable with your estimate. Would you be able to verify a good percentage and explain why you feel that percentage is OK to use?

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Pence, Mark  
**Sent:** Monday, November 14, 2011 9:15 AM  
**To:** Wacker, Diana  
**Cc:** Crescente, Angela; Cosby, David; Dowd, Deborah; Welsh, Elaine  
**Subject:** RE: Journal Entry Information

Diana,

Please copy me on the journal entry so I know the dollar amount. Thanks.

**Mark A. Pence**  
Budget Analyst - Mill Creek Station  
Phone: 933-6805

---

**From:** Wacker, Diana  
**Sent:** Monday, November 14, 2011 9:03 AM  
**To:** Pence, Mark  
**Cc:** Crescente, Angela  
**Subject:** Journal Entry Information

Mark:

I am doing a journal entry today to move the charges that are on Project AROMC0231 from account 108799 to 108901. Angela and I have talked about these charges and the ARO's at Mill Creek. We believe these charges were originally intended for the removal of some tanks that were taken care of during the revaluation and are no longer set up on the books as ARO's.

I wanted to give you some advance warning of the charges moving between accounts.

Thanks,  
Diana

**Crescente, Angela**

---

**From:** Stratman, Paul  
**Sent:** Monday, November 14, 2011 8:19 AM  
**To:** Crescente, Angela  
**Subject:** RE: Gas Mains and Regulator Facilities

The regulator pits, stations and assemblies are included in the system abandonment I put together for the distribution system.

---

**From:** Crescente, Angela  
**Sent:** Thursday, November 10, 2011 4:09 PM  
**To:** Stratman, Paul  
**Subject:** Gas Mains and Regulator Facilities

Paul,

As you will be hearing more about tomorrow during our meeting, we have identified some AROs that should have been recorded previously. The Gas Regulator Facilities (regulator pits and stations) were brought to our attention due to a question we received from someone when we sent out the quarterly ARO questionnaire. Is there any possibility that you included these in with the cut, cap and purge of Gas Distribution Mains when we asked you to come up with a new estimate in September of last year since they are distribution cut, cap and purge as well? If not, we will need to set them up. Please advise as we just want to make sure we are not double-counting.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Friday, November 11, 2011 1:50 PM  
**To:** Zwanzig, Darrell  
**Subject:** RE: 108799

<b>Tracking:</b>	<b>Recipient</b>	<b>Read</b>
	Zwanzig, Darrell	Read: 11/11/2011 2:24 PM

Darrell,

The Oracle GL and PowerPlant account description is 108799 – RWIP-ARO LEGAL. The product code is also different than the 108901 account. Instead of 131 for gas work, it should be 554. If it is for electric work, it is 354 instead of 122.

Thanks,  
Angela

---

**From:** Zwanzig, Darrell  
**Sent:** Friday, November 11, 2011 10:53 AM  
**To:** Crescente, Angela  
**Subject:** 108799

Angela,  
What is the PowerPlant description of account 108799?

*Thanks,*

*Darrell Zwanzig  
Lead System Administrator  
LGE-KU  
[darrell.zwanzig@lge-ku.com](mailto:darrell.zwanzig@lge-ku.com)  
502-627-3168 - Office  
502-664-5807 - Cell  
502-217-2715 - Fax*

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Thursday, June 16, 2011 2:25 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Quarterly Questionnaire.docx

I guess I will start shopping it around.

---

**From:** Crescente, Angela  
**Sent:** Thursday, June 16, 2011 2:22 PM  
**To:** Wiseman, Sara  
**Subject:** RE: ARO Quarterly Questionnaire.docx

Looks good to me.

---

**From:** Wiseman, Sara  
**Sent:** Thursday, June 16, 2011 1:38 PM  
**To:** Crescente, Angela  
**Subject:** ARO Quarterly Questionnaire.docx

<< File: ARO Quarterly Questionnaire.docx >>

Here is my first pass. Comments are welcome—but need them quickly....



**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Thursday, June 16, 2011 1:38 PM  
**To:** Crescente, Angela  
**Subject:** ARO Quarterly Questionnaire.docx



ARO Quarterly  
Questionnaire.d...

Here is my first pass. Comments are welcome—but need them quickly....

**ARO Quarterly Questionnaire**

Please answer the following questions.

1. To the best of your knowledge, are you aware of any changes that would impact the valuation of the asset retirement obligations (“AROs”) that have been identified? Such changes may include changes in laws, statutes, regulations, precedents set by the Company, contracts, permits, certificates of need, right of way agreements, market costs or available resources for remediation, or planned retirements. (Please list)

**Answer:**

2. To the best of your knowledge, are you aware of any acquired assets, land, or leases that will create an ARO? (Please list, include location)

**Answer:**

3. To the best of your knowledge, are you aware of any new construction that will create an ARO? (Please list, include location)

**Answer:**

4. In certain very limited circumstances the Company could be determined to be obligated to retire an asset or a group of assets based upon a commitment made to a third party. Are you aware of any communications either written or verbal between representatives of LKE and third parties with respect to retirement of an asset or a group of assets owned by LKE at the end of operations or a specific point in time? If so, please list the identities of the LKE representatives and assets involved, as well as the third party or parties who were involved and the context in which the discussions took place.

**Answer:**

**Completed by:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Clark, Ed**

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**From:** Charnas, Shannon  
**Sent:** Thursday, June 02, 2011 9:38 AM  
**To:** Wiseman, Sara  
**Cc:** Crescente, Angela  
**Subject:** RE: ARO quarterly questionnaires

I would go ahead and work under the draft policy and send the questionnaire.

Thanks,

**Shannon Charnas**

*Director, Accounting & Regulatory Reporting  
LG&E and KU  
(502) 627-4978*

---

**From:** Wiseman, Sara  
**Sent:** Thursday, June 02, 2011 9:36 AM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** ARO quarterly questionnaires

Shannon:

The proposed ARO policy states we are doing quarterly ARO questionnaires. (FYI--PPL does only annual.) Since the policies are still under development, should Angela and I go ahead and send one out for June or wait. Please let us know.

*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*

**Clark, Ed**

---

**From:** Wiseman, Sara  
**Sent:** Thursday, June 02, 2011 9:36 AM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** ARO quarterly questionnaires

Shannon:

The proposed ARO policy states we are doing quarterly ARO questionnaires. (FYI--PPL does only annual.) Since the policies are still under development, should Angela and I go ahead and send one out for June or wait. Please let us know.

*Sara Wiseman  
Manager, Property Accounting  
Office 502.627.3189  
Cell 502.338.0886*

**Clark, Ed**

---

**From:** Crescente, Angela  
**Sent:** Friday, May 13, 2011 9:21 AM  
**To:** 'Josh Hirschel'  
**Cc:** Jim Ogilvie  
**Subject:** RE: ARO Report

Josh,

I went ahead and asked Jim to help me while he was on-site with us this week, but I am not sure that he has been able to look at it. He has been pretty busy with other stuff of ours. So, Jim has copies of the things I need help with so maybe if you are both in the office today, you could see how far he has gotten on it and if he hasn't been able to look at it, maybe he can give you the copies and you can call me sometime today like you said below. Just let me know.

Thanks,  
Angela  
502-627-2524

---

**From:** Josh Hirschel [<mailto:jhirschel@pwrplan.com>]  
**Sent:** Wednesday, May 11, 2011 10:14 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Report

Sorry for the delay Angela... I have been in all day meetings from Mon-Thursday this week. If you can shoot me an email regarding the issue I will try to help; otherwise, I can give you a call on Friday.

Thanks,  
Josh

**Clark, Ed**

---

**From:** Wacker, Diana  
**Sent:** Thursday, May 12, 2011 9:04 AM  
**To:** Rose, Bruce  
**Cc:** Crescente, Angela  
**Subject:** ARO settlements

Bruce: Could you please look at the 108901 on project 122114 to see if any of this can be moved to the aro 108799?

Thanks,  
Diana

Clark, Ed

---

**From:** Josh Hirschel <jhirschel@pwrplan.com>  
**Sent:** Wednesday, May 11, 2011 10:14 PM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Report

Sorry for the delay Angela... I have been in all day meetings from Mon-Thursday this week. If you can shoot me an email regarding the issue I will try to help; otherwise, I can give you a call on Friday.

Thanks,  
Josh

---

**From:** Crescente, Angela [<mailto:Angela.Crescente@lge-ku.com>]  
**Sent:** Tuesday, May 10, 2011 2:34 PM  
**To:** Josh Hirschel  
**Subject:** ARO Report

Hey Josh,

I'm sorry to bother you, but you have helped me so much before and you always seem to understand what I am asking when I have questions (and you know how difficult ARO language can be sometimes). Would you please call me when me you get a chance so I can ask you a question about one of my ARO reports? It is causing me to be out of balance between the report and the General Ledger and I was hoping there was a way to fix it.

Thanks,

Angela

502-627-2524

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**NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.**

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**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Tuesday, January 11, 2011 9:33 AM  
**To:** 'eonaudit@us.pwc.com'  
**Cc:** Wiseman, Sara  
**Subject:** I.F.9

Please see the attached:



ARO Rollforward  
LGE KU Balanc...

Thanks,  
Angela





Louisville Gas and Electric Company  
 ARO Rollforward Schedule - 2010

	AGU Assets	AGU Liabilities	AGU Net Worth	Regulatory Assets	Regulatory Liabilities	Regulatory Net Worth	Depreciation Expense	Accruals	Depreciation Expense	Regulatory Assets	Regulatory Liabilities	Regulatory Net Worth	Depreciation Expense	Accruals	Depreciation Expense	Regulatory Assets	Regulatory Liabilities	Regulatory Net Worth	
November Activity																			
AGU Accruals	17,511,197.46																		
AGU Purchases	(6,190,127.64)																		
AGU Resales																			
AGU RAMP																			
Ending Balance Nov10	10,321,069.82																		
December Activity																			
AGU Accruals																			
AGU Purchases																			
AGU Resales																			
AGU RAMP																			
Ending Balance Dec10																			



Kentucky Utilities Company  
 ARO Rollforward Schedule - 2010

	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611	1610	1609	1608	1607	1606	1605	1604	1603	1602	1601	1600	1599	1598	1597	1596	1595	1594	1593	1592	1591	1590	1589	1588	1587	1586	1585	1584	1583	1582	1581	1580	1579	1578	1577	1576	1575	1574	1573	1572	1571	1570	1569	1568	1567	1566	1565	1564	1563	1562	1561	1560	1559	1558	1557	1556	1555	1554	1553	1552	1551	1550	1549	1548	1547	1546	1545	1544	1543	1542	1541	1540	1539	1538	1537	1536	1535	1534	1533	1532	1531	1530	1529	1528	1527	1526	1525	1524	1523	1522	1521	1520	1519	1518	1517	1516	1515	1514	1513	1512	1511	1510	1509	1508	1507	1506	1505	1504	1503	1502	1501	1500	1499	1498	1497	1496	1495	1494	1493	1492	1491	1490	1489	1488	1487	1486	1485	1484	1483	1482	1481	1480	1479	1478	1477	1476	1475	1474	1473	1472	1471	1470	1469	1468	1467	1466	1465	1464	1463	1462	1461	1460	1459	1458	1457	1456	1455	1454	1453	1452	1451	1450	1449	1448	1447	1446	1445	1444	1443	1442	1441	1440	1439	1438	1437	1436	1435	1434	1433	1432	1431	1430	1429	1428	1427	1426	1425	1424	1423	1422	1421	1420	1419	1418	1417	1416	1415	1414	1413	1412	1411	1410	1409	1408	1407	1406	1405	1404	1403	1402	1401	1400	1399	1398	1397	1396	1395	1394	1393	1392	1391	1390	1389	1388	1387	1386	1385	1384	1383	1382	1381	1380	1379	1378	1377	1376	1375	1374	1373	1372	1371	1370	1369	1368	1367	1366	1365	1364	1363	1362	1361	1360	1359	1358	1357	1356	1355	1354	1353	1352	1351	1350	1349	1348	1347	1346	1345	1344	1343	1342	1341	1340	1339	1338	1337	1336	1335	1334	1333	1332	1331	1330	1329	1328	1327	1326	1325	1324	1323	1322	1321	1320	1319	1318	1317	1316	1315	1314	1313	1312	1311	1310	1309	1308	1307	1306	1305	1304	1303	1302	1301	1300	1299	1298	1297	1296	1295	1294	1293	1292	1291	1290	1289	1288	1287	1286	1285	1284	1283	1282	1281	1280	1279	1278	1277	1276	1275	1274	1273	1272	1271	1270	1269	1268	1267	1266	1265	1264	1263	1262	1261	1260	1259	1258	1257	1256	1255	1254	1253	1252	1251	1250	1249	1248	1247	1246	1245	1244	1243	1242	1241	1240	1239	1238	1237	1236	1235	1234	1233	1232	1231	1230	1229	1228	1227	1226	1225	1224	1223	1222	1221	1220	1219	1218	1217	1216	1215	1214	1213	1212	1211	1210	1209	1208	1207	1206	1205	1204	1203	1202	1201	1200	1199	1198	1197	1196	1195	1194	1193	1192	1191	1190	1189	1188	1187	1186	1185	1184	1183	1182	1181	1180	1179	1178	1177	1176	1175	1174	1173	1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155	1154	1153	1152	1151	1150	1149	1148	1147	1146	1145	1144	1143	1142	1141	1140	1139	1138	1137	1136	1135	1134	1133	1132	1131	1130	1129	1128	1127	1126	1125	1124	1123	1122	1121	1120	1119	1118	1117	1116	1115	1114	1113	1112	1111	1110	1109	1108	1107	1106	1105	1104	1103	1102	1101	1100	1099	1098	1097	1096	1095	1094	1093	1092	1091	1090	1089	1088	1087	1086	1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068	1067	1066	1065	1064	1063	1062	1061	1060	1059	1058	1057	1056	1055	1054	1053	1052	1051	1050	1049	1048	1047	1046	1045	1044	1043	1042	1041	1040	1039	1038	1037	1036	1035	1034	1033	1032	1031	1030	1029	1028	1027	1026	1025	1024	1023	1022	1021	1020	1019	1018	1017	1016	1015	1014	1013	1012	1011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**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Thursday, January 13, 2011 5:36 PM  
**To:** 'eonaudit@us.pwc.com'  
**Cc:** Wiseman, Sara  
**Subject:** FW: I.F.9 - revised

Please see the attached:



ARO Rollforward  
LGE KU Balanc...

This rollforward was revised for minor changes within the spreadsheet. Balances remain the same.

Thanks,  
Angela



Louisville Gas and Electric Company  
 ARO Rollforward Schedule - 2019

	ARO Assets	Admin Debits	ARO-ARO Legal	CCR	Regulatory Assets	Regulatory	Accretion Expenses	Depreciation Exp	Demographic Expense	Asset Regulatory Cr	Asset Regulatory Cr	CCR	CCR	CCR
	(10,707,112.25)	(1,820,752.51)	(8,079.91)	(100)K	(1,823,251,522.27)	(2,540,141,254.61)	(11,115,411,117.10)	(45)K	(4,031,124,033.11)	(40,141,440,917.40)	(40,141,440,917.40)	(100)K	(100)K	(100)K
November Activity														
ARO Accretion					210,705.73									
ARO Depreciation														
ARO Depreciation														
PS Restat for Accruals														
ARO Reclas														
ARO RMP														
ARO CCR														
Ending Balance Nov10	40,107,138.34	(80,172,089.00)	2,847,076.77	(2,861,914.98)	(2,453,061.61)	(6,420,095.98)	(3,107,779.64)	210,705.73	103,844.49	(103,844.49)	(103,844.49)	(100)K	(100)K	(100)K
December Activity														
ARO Accretion														
ARO Depreciation														
ARO Depreciation														
ARO Purchase Accounting Correction														
ARO RMP														
Asset CCR														
Ending Balance Dec10	40,107,138.34	(80,172,089.00)	2,850,043.70	(2,861,914.98)	(2,453,061.61)	(6,420,095.98)	(3,107,779.64)	210,705.73	103,844.49	(103,844.49)	(103,844.49)	(100)K	(100)K	(100)K
November Activity														
ARO Accretion														
ARO Depreciation														
ARO Depreciation														
ARO Purchase Accounting Correction														
ARO RMP														
Asset CCR														
Ending Balance Dec10	40,107,138.34	(80,172,089.00)	2,850,043.70	(2,861,914.98)	(2,453,061.61)	(6,420,095.98)	(3,107,779.64)	210,705.73	103,844.49	(103,844.49)	(103,844.49)	(100)K	(100)K	(100)K





Kentucky Utilities Company  
 ARO Rollover Schedule - 2010

	ARO Assets	Accum Deprec	RVO/ARO Debt	COR	ARO Liabilities	Regulatory Assets	Regulatory Liabilities	Accumulation Expense	Depreciation Expense	Depreciation Expense	Depreciation Expense	Net Regulatory Cr	Net Regulatory Cr	Net Regulatory Cr	Cash
	101,074,101.25	10,817,618.25	100,708	100,000	230,022,232.25	182,317,182.31	2,540,142,254.015	411,150 - 111,151	10,000.00	1,000,000.00	1,000,000.00	407,401 - 407,402	407,401 - 407,402	407,401 - 407,402	(10,300.50)
	(983,317.80)	10,544.10	10,328.50	-	(2,108.77)	554,973.89	(10,000.00)	4,111.85	5,286.88	5,286.88	-	-	-	-	(10,300.50)
Ending Balance Oct10	31,059,453.34	(8,082,294.32)	239,384.27	2,388,400.00	(30,312,712.07)	34,311,058.80	(4,343,217.11)	3,932,487.10	1,000,000.00	1,000,000.00	1,000,000.00	(3,932,487.10)	(3,932,487.10)	(1,163,548.02)	(219,384.27)
November Activity															
ARO Accrual	-	-	-	-	(222,740.85)	222,740.85	-	222,740.85	-	-	-	(222,740.85)	(222,740.85)	-	-
ARO Depreciation	-	(244,008.80)	-	-	5,977,328.43	(5,977,328.43)	-	(5,977,328.43)	-	-	-	5,977,328.43	5,977,328.43	-	-
ARO Purchase Accounting	21,541,112.06	6,096,310.32	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Bad Debt	-	2,338.75	-	-	-	(2,338.75)	-	-	-	-	-	-	-	-	-
ARO RVP	-	-	(19,323.40)	-	-	-	-	-	-	-	-	-	-	-	19,326.50
Acrued COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Nov10	52,517,664.20	(9,277,588.02)	749,057.77	2,388,400.00	(53,727,624.57)	1,092,648.37	(4,388,170.31)	222,740.85	1,000,000.00	1,000,000.00	1,000,000.00	(222,740.85)	(222,740.85)	(244,008.80)	(240,057.17)
December Activity															
ARO Accrual	-	-	-	-	(223,081.89)	223,081.89	-	223,081.89	-	-	-	(223,081.89)	(223,081.89)	-	-
ARO Depreciation	-	(244,518.44)	-	-	5,977,328.43	(5,977,328.43)	-	(5,977,328.43)	-	-	-	5,977,328.43	5,977,328.43	-	-
ARO RVP	-	-	47,203.08	-	-	47,203.08	-	-	-	-	-	-	-	-	47,203.08
Acrued COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Dec10	52,517,664.20	(9,522,106.46)	796,260.85	2,388,400.00	(53,081,300.41)	1,590,648.70	(4,388,170.31)	445,822.74	1,000,000.00	1,000,000.00	1,000,000.00	(445,822.74)	(445,822.74)	(244,008.80)	(237,207.45)

**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Tuesday, January 18, 2011 10:44 AM  
**To:** Leichty, Doug  
**Cc:** Wiseman, Sara  
**Subject:** RE: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls  
**Attachments:** ARO Rollforward LGE KU Balance Ended Dec 10 for auditors.xls

OK, I am going to hand-deliver the Discoverer Reports for LGE and KU for DEC-2010. Please see the attached rollforward as you requested.

Thanks,  
Angela

---

**From:** Leichty, Doug  
**Sent:** Tuesday, January 18, 2011 10:39 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

Yes. Thanks.

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**From:** Crescente, Angela  
**Sent:** Tuesday, January 18, 2011 9:46 AM  
**To:** Leichty, Doug  
**Subject:** RE: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

Do you want the Discoverer report for only DEC-2010?

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**From:** Leichty, Doug  
**Sent:** Monday, January 10, 2011 7:29 AM  
**To:** Crescente, Angela  
**Subject:** RE: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

The reason for this monthly file is to calculate thirteen month average balances. The Discoverer report is also helpful and if it is not too much trouble I would like that also. Thanks.

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**From:** Crescente, Angela  
**Sent:** Sunday, January 09, 2011 2:56 PM  
**To:** Leichty, Doug  
**Subject:** RE: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

Doug:

This replaces the piece of paper with ending balances that I used to give you because everything is on here, right? Or are you going to still need the Discoverer report that I used to give you as well?

Thanks,  
Angela

Charnas

---

**From:** Leichty, Doug

**Sent:** Wednesday, December 29, 2010 9:35 AM

**To:** Crescente, Angela

**Cc:** Wiseman, Sara

**Subject:** FW: ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

I will need the attached file for the period ending December 31, 2010 by February 1, 2010.

Thanks,

Doug

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**From:** Crescente, Angela

**Sent:** Friday, July 16, 2010 9:35 AM

**To:** Leichty, Doug

**Subject:** ARO Rollforward LGE KU Balance Ended Dec 09 for auditors.xls

	ARO Assets	Accum Deprec	ARO Liabilities	Regulatory Assets	Regulatory Liabilities	Accrued Expenses	Accrued Liabilities	Depreciation Expense	Depreciation Liabilities	Accrued Regulatory Cost	Accrued Regulatory Liabilities	Accrued Regulatory Cost	Accrued Regulatory Liabilities	Accrued Regulatory Cost	Accrued Regulatory Liabilities	Accrued Regulatory Cost	Accrued Regulatory Liabilities
	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)
Ending Balance Dec31/4th Quarter	6,532,459.00	(5,092,292.53)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
January Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	(14,838.78)	-	164,958.41	-	164,958.41	-	14,838.78	(164,958.41)	-	164,958.41	(14,838.78)	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Jan10	6,532,459.00	(5,107,131.31)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
February Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	165,388.02	-	165,388.02	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Feb10	6,532,459.00	(5,112,002.30)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
March Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	166,213.02	-	166,213.02	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Mar10	6,532,459.00	(5,117,019.32)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
April Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	167,046.55	-	167,046.55	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Apr10	6,532,459.00	(5,122,085.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
May Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	167,880.00	-	167,880.00	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance May10	6,532,459.00	(5,127,155.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
June Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	168,720.00	-	168,720.00	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Jun10	6,532,459.00	(5,132,225.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
July Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	169,564.97	-	169,564.97	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Jul10	6,532,459.00	(5,137,295.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
August Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	170,413.28	-	170,413.28	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Aug10	6,532,459.00	(5,142,365.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
September Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	171,265.79	-	171,265.79	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Sep10	6,532,459.00	(5,147,435.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
October Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	172,118.11	-	172,118.11	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Oct10	6,532,459.00	(5,152,505.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
November Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	172,970.42	-	172,970.42	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Nov10	6,532,459.00	(5,157,575.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14
December Activity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Accretion	-	-	-	173,822.73	-	173,822.73	-	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accrue COR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Dec10	6,532,459.00	(5,162,645.87)	1,002,372.29	2,051,412.00	(8,076,178.84)	1,585,785.12	459,529.22	239,687.68	(1,097,760.14)	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14	(239,687.68)	1,097,760.14

Louisville Gas and Electric Company  
 ARO Rollforward Schedule - 2010

	Accum Deprec	RMP-ARO Legal	ARO Liabilities	Regulatory Assets	Regulatory	Accretion Expense	Depreciation Exp	Depreciation Expense	Accr Regulatory Cr	Depr Regulatory Cr	CCR	CCR	CCR
	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)	(10000)
November Activity													
ARO Accretion			(219,795.73)	219,795.73		219,795.73		219,795.73					
ARO Depreciation			12,833,895.51	(28,119,867.70)		(2,840,562.80)		(2,840,562.80)					
CS Reversal for Amortization													
ARO Reversal				(148,455.41)									
ARO RMP		193,211.99											
Ending Balance Nov10	(861,172.69)	2,457,270.77	(62,533,693.81)	6,459,600.86	(5,197,976.94)	219,795.73	52,289.22	103,944.45	(718,795.73)	(103,844.46)	(269,359.79)	(2,647,678.77)	(6,391)
December Activity													
ARO Accretion			(217,727.10)	217,727.10		217,727.10		217,727.10					
ARO Depreciation			18,251,118.18					60,833.78					
ARO Purchase Accounting Contract								140,793.64					
ARO RMP		59,490.00											
Ending Balance Dec10	(208,402.69)	2,525,440.76	(62,999,768.11)	6,699,111.27	(5,197,652.50)	484,522.83	39,933.78	209,490.88	(658,322.53)	(275,669.69)	(269,359.79)	(2,908,543.69)	(6,21)





**Clark, Ed**

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**From:** Daly, Karen  
**Sent:** Monday, January 10, 2011 3:28 PM  
**To:** Crescente, Angela  
**Subject:** ARO Rollforward LGE KU Balance Ended Dec 10 for auditors.xls



ARO Rollforward  
LGE KU Balanc...





Levellille Gas and Electric Company  
 ARO Rollforward Schedule - 2010

	ARO Assets	Accum Deprec	Rep/ARO Cost	COG	ARO Liabilities	Regulatory Assets	Regulatory Liabilities	Accrual Expense	Depreciation Exp	Depreciation Expense	Accrual Expense	COG	COG
	10107 & 10120	108107 & 117 & 125	100709	100709	102317 & 102318	102317 & 102318	102317 & 102318	102317 & 102318	102317 & 102318	102317 & 102318	102317 & 102318	102317 & 102318	102317 & 102318
101207,101253,101255	(6,100,127.44)	144,456.41	103,211.29	2,851,014.05	(2,433,051.61)	8,025,072.13	(7,761.08)	(2,066,619.64)	10,000.00	4,021,140,119	4,021,140,119	4,021,140,119	4,021,140,119
Ending Balance Year 0	46,107,135.54	(80,172.09)	2,547,075.27	2,851,014.05	(2,433,051.61)	8,025,072.13	(7,761.08)	(2,066,619.64)	10,000.00	4,021,140,119	4,021,140,119	4,021,140,119	4,021,140,119
December Activity													
ARO Accretion	-	-	-	-	-	217,727.10	-	217,727.10	-	245,877.51	-	-	-
ARO Depreciation	-	-	-	-	-	(40,579.32)	-	(40,579.32)	-	(194,334.73)	-	-	-
ARO Purchases (Accounting Correction)	-	-	54,408.89	-	-	-	-	-	-	(140,793.64)	-	-	-
ARO RAMP	-	-	-	-	-	-	-	-	-	-	-	-	-
Ending Balance Dec 0	46,107,135.54	(80,172.09)	2,601,484.16	2,851,014.05	(2,433,051.61)	8,242,800.23	(7,761.08)	(2,066,619.64)	10,000.00	4,267,017.60	4,267,017.60	4,267,017.60	4,267,017.60

Some related to purchases accounting correction.

Reg Asset ARO Lib  
 2,121,230.82  
 1,102,544.81  
 -30,441,654.81  
 12,933,600.51  
 21,100,000.00  
 7,050,300.27  
 0.00

(A) = Total ARO Accretion - other noncash activity  
 (B) = Total ARO Depreciation - other noncash activity  
 (C) = Total ARO Purch. Asset Adj. - other noncash activity  
 (D) = Total ARO RAMP  
 (E) = Total ARO Revaluation - other noncash activity

Account	ARO Assets	Accum Deprec	RWIP-ARO Local	ARO Liabilities	Regulatory Assets	Regulatory Liabilities	Acquisition Expense	Construction Exp	Construction Expense	Accrual Regulatory C	Clear Regulatory C	Non-Parent	Parent	Cash
	10107 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125
	10107 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125	10207 & 10125
Ending Balance Dec04th Quarter	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(202,744.93)	(653,207.33)
January Activity														
ARO Accretion					180,473.35									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance Jan10	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(202,744.93)	(653,207.33)
February Activity														
ARO Accretion					181,352.55									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance Feb10	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
March Activity														
ARO Accretion					182,300.82									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance Mar101st Quarter	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
April Activity														
ARO Accretion					183,285.83									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance April10	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
May Activity														
ARO Accretion					184,280.08									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance May10	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
June Activity														
ARO Accretion					185,199.36									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance June102nd Quarter	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
July Activity														
ARO Accretion					186,173.78									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance July10	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
August Activity														
ARO Accretion					187,153.88									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance August10	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
September Activity														
ARO Accretion					188,138.12									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance Sept103rd Quarter	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	
October Activity														
ARO Accretion					189,146.50									
ARO Depreciation														
ARO RPIJP														
Accruals														
Ending Balance Oct104th Quarter	9,359,183.00	(4,935,311.45)	240,077.77	(240,077.77)	20,870,293.12	(4,142,123.13)	2,185,184.88	1,733,724.53	298,744.93	(1,303,184.00)	(202,744.93)	(202,744.93)	(653,207.33)	



**Clark, Ed**

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**From:** Daly, Karen  
**Sent:** Tuesday, January 11, 2011 10:11 AM  
**To:** Fackler, Andrea  
**Cc:** Crescente, Angela; Wacker, Diana  
**Subject:** ARO Roll-up with tie-outs for CF in plant report

Attached is the file we used for the plant report CF on the ARO's.



ARO Rollforward  
LGE KU Balanc...

If you have any questions, please let us know.

***Karen L. Daly***  
Accounting Analyst III  
Property Accounting  
(502) 627-4279





Account Name	ARO Balance	Accum Debits	ARO Liability	Regulatory Assets	Regulatory Liabilities	Accrual Expenses	Depreciation Exp	Depreciation Cap	Depreciation Expense	Accrual Expenses	Regulatory C	Depreciation C	Non-Parent	Parent	Other
Ending Balance Dec/31/2019	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
January Activity	-	-	-	-	-	164,693.41	-	-	14,630.26	164,693.41	(14,630.26)	-	-	-	-
ARO Accrual	-	(14,630.26)	-	164,693.41	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,162,622.39)	2,801,914.08	(3,328,102.03)	-	(164,693.41)	9,008.01	466,616.25	14,630.26	(164,693.41)	(14,630.26)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Jan/31	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
February Activity	-	-	-	-	-	165,386.62	-	-	14,630.77	165,386.62	(14,630.77)	-	-	-	-
ARO Accrual	-	(14,630.77)	-	165,386.62	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(165,386.62)	9,988.91	477,116.24	14,630.77	(165,386.62)	(14,630.77)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Feb/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
March Activity	-	-	-	-	-	168,213.82	-	-	14,630.74	168,213.82	(14,630.74)	-	-	-	-
ARO Accrual	-	(14,630.74)	-	168,213.82	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(168,213.82)	9,988.91	477,116.24	14,630.74	(168,213.82)	(14,630.74)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Mar/31	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
April Activity	-	-	-	-	-	167,645.33	-	-	14,630.76	167,645.33	(14,630.76)	-	-	-	-
ARO Accrual	-	(14,630.76)	-	167,645.33	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(167,645.33)	9,988.91	477,116.24	14,630.76	(167,645.33)	(14,630.76)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Apr/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
May Activity	-	-	-	-	-	167,645.33	-	-	14,630.76	167,645.33	(14,630.76)	-	-	-	-
ARO Accrual	-	(14,630.76)	-	167,645.33	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(167,645.33)	9,988.91	477,116.24	14,630.76	(167,645.33)	(14,630.76)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance May/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
June Activity	-	-	-	-	-	168,213.82	-	-	14,630.74	168,213.82	(14,630.74)	-	-	-	-
ARO Accrual	-	(14,630.74)	-	168,213.82	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(168,213.82)	9,988.91	477,116.24	14,630.74	(168,213.82)	(14,630.74)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Jun/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
July Activity	-	-	-	-	-	168,213.82	-	-	14,630.74	168,213.82	(14,630.74)	-	-	-	-
ARO Accrual	-	(14,630.74)	-	168,213.82	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(168,213.82)	9,988.91	477,116.24	14,630.74	(168,213.82)	(14,630.74)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Jul/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
August Activity	-	-	-	-	-	170,413.28	-	-	14,630.76	170,413.28	(14,630.76)	-	-	-	-
ARO Accrual	-	(14,630.76)	-	170,413.28	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(170,413.28)	9,988.91	477,116.24	14,630.76	(170,413.28)	(14,630.76)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Aug/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
September Activity	-	-	-	-	-	171,258.78	-	-	14,630.76	171,258.78	(14,630.76)	-	-	-	-
ARO Accrual	-	(14,630.76)	-	171,258.78	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(171,258.78)	9,988.91	477,116.24	14,630.76	(171,258.78)	(14,630.76)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Sep/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
October Activity	-	-	-	-	-	175,861.76	-	-	14,630.76	175,861.76	(14,630.76)	-	-	-	-
ARO Accrual	-	(14,630.76)	-	175,861.76	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(175,861.76)	9,988.91	477,116.24	14,630.76	(175,861.76)	(14,630.76)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Oct/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
November Activity	-	-	-	-	-	244,628.10	-	-	14,630.76	244,628.10	(14,630.76)	-	-	-	-
ARO Accrual	-	(14,630.76)	-	244,628.10	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(244,628.10)	9,988.91	477,116.24	14,630.76	(244,628.10)	(14,630.76)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Nov/10	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
December Activity	-	-	-	-	-	140,783.84	-	-	14,630.76	140,783.84	(14,630.76)	-	-	-	-
ARO Accrual	-	(14,630.76)	-	140,783.84	A	-	-	-	-	-	-	-	-	-	-
ARO Depreciation	-	(3,117,682.20)	2,801,914.08	(3,328,102.03)	-	(140,783.84)	9,988.91	477,116.24	14,630.76	(140,783.84)	(14,630.76)	-	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)
Ending Balance Dec/31/2020	8,532,490.00	(3,650,262.83)	2,801,914.08	20,056,412.00	(3,874,728.14)	1,840,760.32	439,330.22	1,840,760.32	720,667.66	(1,958,750.43)	(2,338,687.65)	1,103,447.25	(2,338,687.65)	(2,338,687.65)	(2,338,687.65)





I would say 50% of each, especially for PR chimney, as the asbestos coating will extremely complicate the work.

---

**From:** Mooney, Mike (BOC 3)  
**Sent:** Thursday, December 22, 2011 10:14 AM  
**To:** Jones, Greg  
**Subject:** FW: Paddy's and Canal 108 Estimate

Any idea about the amounts they want below?

--Mike

---

**From:** Crescente, Angela  
**Sent:** Thursday, December 22, 2011 10:00 AM  
**To:** Mooney, Mike (BOC 3)  
**Subject:** Paddy's and Canal 108 Estimate

Mike,

Paddy's (132874) has \$2,500,000 budget to 108901 for 2012 and Canal (132875) has \$1,525,000 budgeted for 2012. Is any of this related to the removal of asbestos? If so, please provide me an estimate of how much is asbestos related versus normal removal. In order to complete the ARO footnote for year-end, I need this information no later than January 3<sup>rd</sup>.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Mooney, Mike (BOC 3)  
**Sent:** Thursday, December 22, 2011 10:42 AM  
**To:** Crescente, Angela  
**Subject:** FW: Paddy's and Canal 108 Estimate

Angela,

According to the engineer below, 50% of Paddy's (\$1.25M) and 50% of Canal (\$762k) will be for asbestos removal.

If you need anything else, just let me know.

--Mike

---

**From:** Jones, Greg  
**Sent:** Thursday, December 22, 2011 10:32 AM  
**To:** Mooney, Mike (BOC 3)  
**Subject:** RE: Paddy's and Canal 108 Estimate

I would say 50% of each, especially for PR chimney, as the asbestos coating will extremely complicate the work.

---

**From:** Mooney, Mike (BOC 3)  
**Sent:** Thursday, December 22, 2011 10:14 AM  
**To:** Jones, Greg  
**Subject:** FW: Paddy's and Canal 108 Estimate

Any idea about the amounts they want below?

--Mike

---

**From:** Crescente, Angela  
**Sent:** Thursday, December 22, 2011 10:00 AM  
**To:** Mooney, Mike (BOC 3)  
**Subject:** Paddy's and Canal 108 Estimate

Mike,

Paddy's (132874) has \$2,500,000 budget to 108901 for 2012 and Canal (132875) has \$1,525,000 budgeted for 2012. Is any of this related to the removal of asbestos? If so, please provide me an estimate of how much is asbestos related versus normal removal. In order to complete the ARO footnote for year-end, I need this information no later than January 3<sup>rd</sup>.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Mooney, Mike (BOC 3)  
**Sent:** Thursday, December 22, 2011 10:23 AM  
**To:** Crescente, Angela  
**Subject:** RE: Paddy's and Canal 108 Estimate

I will try to track down the engineer responsible for those projects and try to get an answer for you today.

--Mike

---

**From:** Crescente, Angela  
**Sent:** Thursday, December 22, 2011 10:00 AM  
**To:** Mooney, Mike (BOC 3)  
**Subject:** Paddy's and Canal 108 Estimate

Mike,

Paddy's (132874) has \$2,500,000 budget to 108901 for 2012 and Canal (132875) has \$1,525,000 budgeted for 2012. Is any of this related to the removal of asbestos? If so, please provide me an estimate of how much is asbestos related versus normal removal. In order to complete the ARO footnote for year-end, I need this information no later than January 3<sup>rd</sup>.

Thanks,  
Angela

**Crescente, Angela**

---

**From:** Crescente, Angela  
**Sent:** Thursday, December 22, 2011 10:00 AM  
**To:** Mooney, Mike (BOC 3)  
**Subject:** Paddy's and Canal 108 Estimate

Mike,

Paddy's (132874) has \$2,500,000 budget to 108901 for 2012 and Canal (132875) has \$1,525,000 budgeted for 2012. Is any of this related to the removal of asbestos? If so, please provide me an estimate of how much is asbestos related versus normal removal. In order to complete the ARO footnote for year-end, I need this information no later than January 3<sup>rd</sup>.

Thanks,  
Angela

**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Thursday, December 22, 2011 9:56 AM  
**To:** Raque, Gary  
**Subject:** Ohio Falls 108 Estimate

Gary,

There are two projects (127095 and 127202) that have money budgeted to 108901 (\$954,000 each) for 2012. Is any of this asbestos removal related? If so, would you be able to provide an estimate to me for how much is related to asbestos removal versus normal removal no later than January 4th, please? I need to know for the ARO footnote for year-end.

Thanks,  
Angela

**Clark, Ed**

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**From:** Christopher.Holland@ey.com  
**Sent:** Monday, October 10, 2011 10:57 AM  
**To:** Crescente, Angela  
**Subject:** Re: FW: ARO Settlement Testing  
**Attachments:** List of ARO settlements for 2011 - E&Y request.xlsx; AIPs requested by E&Y.pdf; ARO Audit Testing Screenshots - E&Y.docx

Thanks Angela



**Christopher J. Holland | Assurance**

Ernst & Young LLP  
400 West Market St Suite 2400, Louisville, KY 40202, United States of America  
Office: (502) 585-1400 | [Christopher.Holland@ey.com](mailto:Christopher.Holland@ey.com)  
Website: [www.ey.com](http://www.ey.com)

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**From:** "Crescente, Angela" <Angela.Crescente@lge-ku.com>  
**To:** "'christopher.holland@ey.com'" <christopher.holland@ey.com>  
**Cc:** "Wiseman, Sara" <Sara.Wiseman@lge-ku.com>  
**Date:** 10/10/2011 09:37 AM  
**Subject:** FW: ARO Settlement Testing

Chris,

I have attached project screenshots per your request for the selected settlements. Please note, the ARO RWIP account is 108799 instead of 108901 as we discussed. I have also attached the AIPs per your request. However, PMR414 does not have an AIP as it is a blanket project that does not require AIPs.

Please feel free to contact me if you have any questions.

Thanks,  
Angela

---

**From:** Christopher.Holland@ey.com [<mailto:Christopher.Holland@ey.com>]  
**Sent:** Friday, October 07, 2011 10:22 AM  
**To:** Crescente, Angela  
**Subject:** ARO Settlement Testing

Angela,

As an engagement team, we have decided to test the ARO controls in two different ways. The first way, we have the support we need and can independently test. The second way will be a sample from the known ARO settlements in the year. I have selected five settlements (see attached for selections highlighted in yellow). For these, we would like to see

Charnas

the screen shot showing that the payments are set up in the right account but since the control also references the original AIP and the process of establishing the ARO, we are also going to want to see the original AIP for the 5 selections. Let me know if you have any difficulty gathering this support.

Thanks,  
Chris



**Christopher J. Holland** | Assurance

Ernst & Young LLP

400 West Market St Suite 2400, Louisville, KY 40202, United States of America

Office: (502) 585-1400 | [Christopher.Holland@ey.com](mailto:Christopher.Holland@ey.com)

Website: [www.ey.com](http://www.ey.com)

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Project	Task	ARO
112767	CP ARO2010	MC Landfill
120578	CP RETIRE MAIN	GAS MAINS AND SERVICE ABANDONMENTS
122452	CP ASBESTOS	PRESTON CITY GATE
123187	CP AROTY3ASB2008	TY3 ASBESTOS
124001	CP ASBESTOS	GR3 ASBESTOS
124260	CP ASBESTOS	BR1 ASBESTOS
124380	CP ARO09-4AH-R	CR4 ASBESTOS
124380	CP ARO09-5BL-R	CR5 ASBESTOS
124380	CP ARO09-6BL-R	CR6 ASBESTOS
124798	CP ASBESTOS	MAGNOLIA 235120
124798	CP ASBESTOS	MAGNOLIA 235300
124798	CP ASBESTOS	MAGNOLIA 235600
124802	CP ASBESTOS	MULDRAUGH 235120
124802	CP ASBESTOS	MULDRAUGH 235300
124802	CP ASBESTOS	MULDRAUGH 235600
124831	CP PLUG WELL-CTR	Center GSF UGS (Wells)
124831	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)
124831	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)
124842	CP ASBESTOS	PRESTON CITY GATE
126057	CP ASBESTOS	BR2 ASBESTOS
126160	CP ASBESTOS	TY3 ASBESTOS
126421	CP PLUG WELL-CTR	Center GSF UGS (Wells)
126421	CP PLUG WELL-DRI	Doe Run GSF UGS (Wells)
126421	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)
126421	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)
126421	CP PLUG WELL-MUL	Muldraugh GSF UGS (Wells)
127259	CP ASBESTOS	BR1 ASBESTOS
127280	CP ARO ASBESTOS	MILL CREEK 2 ASB
127297	CP ASBESTOS	BR2 ASBESTOS
130720	CP ASBESTOS	MILL CREEK 1 ASB
AROMC0241	CP 1755793	MC Landfill
LSMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS
PMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS

**AUTHORIZATION FOR INVESTMENT PROPOSAL**

112767

Original  
 Revised

LG&E Energy Services Co.  Louisville Gas & Electric Co.  Kentucky Utilities Company  
 LG&E Energy Marketing  Western Kentucky Energy  LG&E Power Inc.  
 Other:

Name of Project: Mill Creek Landfill Expansion Construction  
 Date Requested: 1/15/2009 Project Number: 112767 (Related Project Numbers:  
 Budgeted (1)  Y  X  N  If unbudgeted, list alternate budget ref. Number(s) (1):  
 Expected Start Date (2): 3/1/2009 Expected In-service Date (2): 12/1/2010 Expected Completion Date (2): 12/31/2012  
 A/P Prepared by: Steve Roggard (Phone: 803-6632  
 Project Manager: Kevin Lova (Phone: 803-8509  
 Product Code (3) Resp. Center (4) Location # (6) OBU Name (8) Environmental Code/Category (7)  
 111 002401 0242 Generation

**REASONS AND DETAILED DESCRIPTION OF PROJECT**

(Include sketch no., if applicable)

Complete construction associated with the HORIZONTAL expansion of the Mill Creek Station Byproducts Landfill. Existing landfill capacity will be exhausted in 2010 following the completion of the vertical expansion. This project includes funding for final closeout of the vertical expansion including cover soil. At that time the horizontal expansion will be needed by 2010. The horizontal expansion work will begin in the second quarter of 2009 and be in service by the end of the first quarter of 2010. State permit approval, final drawings and construction plans have been received. Site development, drainage and liner design, floodwall re-location, schedule and cost development are included in the construction phase. Construction cost estimates during the MTP are \$2,897k in 2009, \$262k in 2010, and \$812k in 2011. The balance of \$2,629 will be spent from 2012-2015.

Acct = 131200 Tax = 047

Costs	Capital Investment	Cost of Removal/Retirement	Capital Cost Subtotal (8)	Initial O&M Cost (8)	Lifetime Maintenance Cost (8)	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor							
Contract Labor	1,981,374		1,981,374				1,981,374
Materials	813,747		813,747				813,747
Equipment	2,841,880		2,841,880				2,841,880
Other (Describe) Contingency	583,767		583,767				583,767
Loss Salvage							
Local Engineering and A&G: 2.7%	179,142		179,142				179,142
Subtotal	6,600,000		6,600,000				6,600,000
Contr. in Aid on Constr. (CIAC) (11)							
Net Expenditures - GAAP	6,600,000		6,600,000				6,600,000
Capitalized Interest (if applicable)							
Net Expenditures - IFRS	6,600,000		6,600,000				6,600,000

**Signature Required (Based on CAPITAL COST SUBTOTAL COLUMN) (8):**

Authorized by	Typed or Printed Name	Signature	Date
1. Supervisor/Team Leader (Non-IT and IT up to \$25k)	Steve Roggard	<i>Steve Roggard</i>	3/19/09
2. Commercial Operations Manager (13)	Dave Cook	<i>Dave Cook</i>	3/27/09
3. Manager (Non-IT > \$25k up to \$100k; IT > \$25k up to \$50k)	Jim Henry	<i>Jim Henry</i>	3/27/09
4. Director (Non-IT > \$100k up to \$300k; IT > \$50k up to \$100k)	Michael Kirkland	<i>Michael Kirkland</i>	3/27/09
5. OBU Budget Coordinator (14)	Deborah A. Dwyer	<i>Deborah A. Dwyer</i>	3/16/09
6. Financial Planning (Non-IT and IT > \$300k; all unbudgeted projects; all Development Proposals) (14) or Investment Committee Coordinator (Non-IT > \$1.0M; IT > \$500k; Development > \$500k) (18)	C. Hulsman	<i>Christian Hulsman</i>	3/9/09
7. Vice-President (Non-IT > \$300k up to \$750k; IT > \$100k up to \$200k; Development up to \$200k)	Relph Bowling	<i>Relph Bowling</i>	3/14/09
8. Senior Officer (Non-IT > \$750k up to \$1.0M; IT > \$200k up to \$500k; Development > \$200k up to \$500k)	Paul W. Thompson	<i>Paul W. Thompson</i>	3/15/09
9. CFO (Non-IT > \$1.0M; IT > \$500k; Development > \$500k) (16)	Bred Rhos	<i>Bred Rhos</i>	3/9/09
10. CEO (Non-IT > \$1.0M up to €25.0M; IT > \$500k up to €20.0M; Development > \$500k up to €25.0M) (18)	Vic Staffari	<i>Vic Staffari</i>	3/11/09
11. E. On Board (Non-IT, IT, and Development > €25.0M)			
12. Information Technology (17)	Tony Hall		
13. Director of Operating Services (18)	Kathleen A. Slay		
14. Property Accounting (including budget check)	Bruce M. Rose	<i>Bruce M. Rose</i>	3-11-09

ENCLOSURE 3/23/09 (BY 1808)

Project Number:

**Accounting [19]:**

-Upon retirement of the new asset, does a legal or environmental requirement exist governing disposal of this asset?

Y  N

-Does this project involve a leased asset?

Y  N

-Will this project create obsolete inventory?

Y  N

**Environmental [20]:**

Is this an Environmental Cost Recovery (ECR) project?

Y  N

If yes, indicate project type:

Air  Water  Waste  Noise

If yes, also provide ECR compliance plan number:

*For Environmental Affairs only - reviewed for ECR and other environmental issues*  Initial and Date

**Research & Experimental (R&E) Credit [21]:**

Is this an experimental project with the purpose of improving, enhancing, or adding to a current manufacturing process at a plant facility?

Y  N

If yes, check with Dale Stringer at 602-627-2796 in the Tax Department to determine if this project qualifies for the R&E credit.

**Sales Tax - For Investment Tasks only [22]:**

-Is this project done for environmental regulations or statutes (a)?

Y  N

(If yes, this may qualify for the Pollution Control Exemption)

If the answer to all three questions below is yes, this may qualify for the New & Expanded exemption.

-Is this project integrated in the Manufacturing Process (b)?

Y  N

-Is this equipment used in the state for the first time (c)?

Y  N

-Is this project considered an upgrade or improvement (d)?

Y  N

-Description of Upgrade, if applicable (i.e., improved materials, increased capacity, longer life, etc):

**INVESTMENT MATERIALS**

Task Number	UOP#	Description	Quantity	Total Cost
50A	5391	Vertical Closure - Misc. materials for vertical landfill closeout including drainage piping and concrete drainage ditches	Lot	467,330
70A	5391	Horizontal Expansion - Misc. materials for horizontal landfill construction including stone, drainage piping, concrete drainage ditches, liners and leachate	Lot	446,417
Total			-	913,747

**RETIRED EQUIPMENT (OR MATERIALS)**

Task Number	UOP#	Description	Original Project Number	Vintage Year	Qty
10B					

**SALVAGE & TRANSFERRED EQUIPMENT**

Task Number	UOP#	Units of Property Description	Salvage Stock (returned to sponsor)	Salvage Junk (sold to 3rd party)	Salvage Equipment	Transferred Equipment
Total						

AUTHORIZATION FOR INVESTMENT PROPOSAL

124380

Original  
 Revised

EON U.S. Services Co.       Louisville Gas & Electric Co.       Kentucky Utilities Company  
 LG&E Energy Marketing       Western Kentucky Energy       LG&E Power Inc.  
 Other:

Name of Project: GR Asbestos Abatement 2009  
 Date Requested: 3/1/2009      Project Number: 124380      Related Project Number(s):  
 Budgeted (1)  Y  X  N  If unbudgeted, list alternate budget ref. number(s) (1):  
 Expected Start Date (2): 4/1/2009      Expected In-service Date (2): 12/31/2009      Expected Completion Date (2): 12/31/2009  
 AIP Prepared by: Tim Harder      Phone: 449-8840  
 Project Manager: Steve Legler      Phone: 449-8844  
 Product Code (3) 111      Resp. Center (4) 002030      Location # (5) 181      OBU Name (6) Regulated Generation      Environmental Code/Category (7)

REASONS AND DETAILED DESCRIPTION OF PROJECT  
 (include sketch no. if applicable)

Authority is requested to continue the effort begun in 1992 to minimize and abate known and potential employee exposures to asbestos that exists within the Plant facilities. The abatement project was developed as a result of an Asbestos Task Force established in 1992. The Task Force identified over 300 areas of known and potential employee exposures of asbestos. High priority items were immediately addressed while other areas are being addressed as Plant maintenance is required.

*Acct-131200 Tot-084*

Costs	Capital Investment	Cost of Removal/Retirement	Capital Cost Subtotal (8)	Initial O&M Cost (9)	Life-time Maintenance Cost (9)	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor							
Contract Labor	77,536	120,000	197,536				197,536
Materials	65,000	5,000	70,000				70,000
Other (Describe)							
Less Salvage							
Local Engineering (10)	3,977	3,468	7,444				7,464
Subtotal - GAAP	146,513	128,468	275,000				275,000
Cont. in Aid on Constr. (CIAC) (11)							
Net Expenditures - GAAP	146,513	128,468	275,000				275,000
Capitalized Interest (if applicable) (11)							
Net Expenditures - IFRS	146,513	128,468	275,000				275,000

Signature Required (Based on CAPITAL COST SUBTOTAL COLUMN) (8):

Authorized by	Typed or Printed Name	Signature	Date
1. Supervisor/Team Leader (Non-IT and IT up to \$25k)			
2. Commercial Operations Manager (13)	Dan Kremer	<i>Dan Kremer</i>	3-2-09
3. Manager (Non-IT >\$25k up to \$100k; IT >\$25k up to \$50k)	Steve Legler	<i>Steve Legler</i>	3-6-09
4. Director (Non-IT >\$100k up to \$300k; IT >\$50k up to \$100k)	Steve Turner	<i>Steve Turner</i>	3-6-09
5. OBU Budget Coordinator (14)	Deborah Dowd	<i>Deborah Dowd</i>	3-6-09
6. Financial Planning (Non-IT and IT >\$300k; all unbudgeted projects; all Development Proposals) (16) or Investment Committee Coordinator (Non-IT >\$1.0M; IT >\$500k; Development >\$500k) (16)			
7. Vice-President (Non-IT >\$300k up to \$750k; IT >\$100k up to \$200k; Development up to \$200k)			
8. Senior Officer (Non-IT >\$750k up to \$1.0M; IT >\$200k up to \$500k; Development >\$200k up to \$500k)			
9. CFO (Non-IT >\$1.0M; IT >\$500k; Development >\$500k) (16)			
10. CEO (Non-IT >\$1.0M up to \$25.0M; IT >\$500k up to \$25.0M; Development >\$500k up to \$25.0M) (16)			
11. E.On Board (Non-IT, IT, and Development > \$25.0M)			
12. Information Technology (17)			
13. Director of Operating Services (18)			
14. Property Accounting (including budget check)	Bruce Rose	<i>Bruce Rose</i>	3-23-09



126421

AUTHORIZATION FOR INVESTMENT PROPOSAL - REVISION

LG&E and KU Services Co.       Louisville Gas and Electric Co.       Kentucky Utilities Company

Name of Project: 2010 PLUG AND REPAIR WELLS		Funding Project Type: Gas UG Stor NonD Task Level Utiliz	
Date Requested: 6/30/2009	Project Number: 126421	Budgeted: no	
Related Project Numbers: n/a		If unbudgeted, list alternate budget ref. Number(s): 126421 \$143K, ROMV332 \$105K, MAN414 \$100K, 126423 \$82k	
Expected Start Date: 1/1/2010	Expected In Service Date: 12/1/2010	Expected Completion Date: 12/1/2010	
AIP Prepared by: Sundholmer, Glenn		Phone: 502/333-1885	
Project Manager: Sundholmer, Glenn		Phone: 502/333-1885	
Asset Location: Magnolia Storage Field		Environmental Code:	
Resp. Center: 004475-DJR, GAS CONTROL AND STORAGE		Product Code: 131 - GAS COMMON	

REASONS AND DETAILED DESCRIPTION OF PROJECT

126421-2010 PLUG AND REPAIR WELLS WITH CORRODED CASINGS

@ 2352.50  
 TD 069

This project involves plugging and repairing gas storage wells that have either corroded casing, corroded acid lines, or defective valves. Wells with corroded casing for which relining is not viable will either be plugged, patched, or if defects are near the surface, repaired. Plugging and repairing wells is crucial for the safe and efficient operation of LG&E's storage fields

✓

Costs	Capital Investment	Cost of Removal/ Retirement	Capital Cost - Subtotal	Initial O&M Cost	Lifetime Maintenance Cost	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor	\$0.00	\$67,177.73	\$67,177.73	\$0.00	\$0.00	\$0.00	\$67,177.73
zCompany Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contract Labor	\$0.00	\$370,348.23	\$370,348.23	\$0.00	\$0.00	\$0.00	\$370,348.23
zContract Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Materials	\$7,000.00	\$20,823.90	\$27,823.90	\$0.00	\$0.00	\$0.00	\$27,823.90
zMaterials	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$17,521.86	\$17,521.86	\$0.00	\$0.00	\$0.00	\$17,521.86
zOther	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Local Engineering	\$0.00	\$37,128.28	\$37,128.28	\$0.00	\$0.00	\$0.00	\$37,128.28
zLocal Engineering	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Subtotal - GAAP	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00
Net Expenditures - GAAP	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00
Net Expenditures - IFRS	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00
2010 Total	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00

Approval Type: Non-IT Projects

Authorized by	Amount	Name	Date Approved	Req'd
Supervisor	\$25,000.00			N
Manager	\$100,000.00	Skeggs, John	12/20/2010	Y
Budget Coordinator	\$0.00	Porter, Janice	12/20/2010	Y
Director	\$300,000.00	Walker, Barry	12/21/2010	Y
Vice President	\$750,000.00	Hull, David for Malloy, John	12/21/2010	Y
Investment Committee Coordinator	\$0.00	Kuhl, Megan	12/21/2010	Y
Financial Planning Director	\$0.00	Garrett, Christopher	12/21/2010	Y
Senior Officer	\$1,000,000.00			N
CFO	\$1,000,001.00			N
CEO	\$1,000,002.00			N
Property Accounting	\$0.00	Leonards, Patricia	12/22/2010	Y

INVESTMENT MATERIALS

UOP #	Utility Account Id	Quantity	Total Cost

RETIRED EQUIPMENT (OR MATERIALS)

UOP #	Utility Account Id	Quantity	Vintage Year	Original Project Number

**AIP QUESTIONS**

Are there Related Project Numbers?

Provide related project numbers or indicate 'N/A'.  
 n/a

Is this an IT related project?

IT project is any project that requires IT involvement or the purchase of hardware and software.  
 no

Purchase/Sale of Real Estate?

Is this a transaction related to the sale/purchase of land or buildings?  
 no



AUTHORIZATION FOR INVESTMENT PROPOSAL - ORIGINAL

127280

EON U.S. Services Co.

Louisville Gas and Electric Co.

Kentucky Utilities Company

Name of Project: MC2 Sootblower Pipe Insulation		Funding Project Type: LGE Steam NonBnk Excluding Land	
Date Requested: 10/15/2009	Project Number: 127280	Budgeted: no	
Related Project Numbers: N/A		If unbudgeted, list alternate budget ref. Number(s): Funded with money previously allocated to project 122897 within Generation pool	
Expected Start Date: 11/18/2009	Expected In Service Date: 1/4/2010	Expected Completion Date: 1/1/2010	
AIP Prepared by: Cecil, Ray		Phone: 502/833-8808	
Project Manager: Cecil, Ray		Phone: 502/833-8808	
Asset Location: Mill Creek Unit 2		Environmental Code: N/A	
Resp. Center: 002401-GEN. MGR. MILL CREEK STATION		Product Code: 111 - WHOLESALE GENERATION	

REASONS AND DETAILED DESCRIPTION OF PROJECT

MC2 Sootblower Thermal Drain Piping Insulation

*ARO Acct-131200 Tot-084*

The thermal insulation on the Mill Creek Unit #2 sootblower thermal drain piping at the main floor & mezzanine elevations contains asbestos. The insulation is 35 years old and in a deteriorated state, which could possibly be releasing asbestos fibers into the atmosphere. There are areas where insulation has fallen off and the hot pipes are exposed, resulting in loss of efficiency and creating a potential safety hazard for operational and maintenance employees. We need to acquire the proper permits to abate the damaged ACM and return the thermal insulation system back to engineered specifications to gain maximum efficiency out of this unit of property.

Costs	Capital Investment	Cost of Removal/Retirement	Capital Cost Subtotal	Initial O&M Cost	Lifetime Maintenance Cost	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contract Labor	\$13,592.00	\$30,000.00	\$43,592.00	\$0.00	\$0.00	\$0.00	\$43,592.00
Materials	\$10,660.00	\$4,000.00	\$14,660.00	\$0.00	\$0.00	\$0.00	\$14,660.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Salvage	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Local Engineering	\$728.00	\$1,020.00	\$1,748.00	\$0.00	\$0.00	\$0.00	\$1,748.00
Subtotal - GAAP	\$24,980.00	\$35,020.00	\$60,000.00	\$0.00	\$0.00	\$0.00	\$60,000.00
Contributions	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Expenditures - GAAP	\$24,980.00	\$35,020.00	\$60,000.00	\$0.00	\$0.00	\$0.00	\$60,000.00
Capitalized Interest	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Expenditures - IFRS	\$24,980.00	\$35,020.00	\$60,000.00	\$0.00	\$0.00	\$0.00	\$60,000.00
2009 Total	\$10,980.00	\$35,020.00	\$46,000.00	\$0.00	\$0.00	\$0.00	\$46,000.00
2010 Total	\$14,000.00	\$0.00	\$14,000.00	\$0.00	\$0.00	\$0.00	\$14,000.00

Approval Type: Non-IT Projects

Authorized by	Amount	Name	Date Approved	Req'd
Supervisor	\$25,000.00			N
Manager	\$100,000.00	Didelot, Joseph	10/22/2009	Y
Budget Coordinator	\$0.00	Dowd, Deborah	10/26/2009	Y
Commercial Operations Manager	\$0.00	Cook, David	10/22/2009	Y
Special Approvers	\$0.00	Henry, James for Kirkland, Kenneth	10/22/2009	Y
Budget Coordinator	\$0.00	Panco, Mark	10/22/2009	Y
Director	\$300,000.00			N
Vice President	\$750,000.00			N
Financial Planning Manager	\$0.00	Neal, Susan	10/26/2009	Y
Investment Committee Coordinator	\$0.00	Kuhl, Megan for Wright, Sharon	10/26/2009	Y
Senior Officer	\$1,000,000.00			N
CFO	\$1,000,001.00			N
CEO	\$1,000,002.00			N
Property Accounting	\$0.00	Rose, Bruce	10/29/2009	Y

INVESTMENT MATERIALS

UQP #	Utility Account Id		Quantity	Total Cost
05698	131200	SYSTEM OF SOOT BLOWERS (05698)	1	\$10,660.00

RETIRED EQUIPMENT (OR MATERIALS)

UQP #	Utility Account Id		Quantity	Vintage Year	Original Project Number
05698	131200	SYSTEM OF SOOT BLOWERS (05698)	1		

**AIP QUESTIONS**

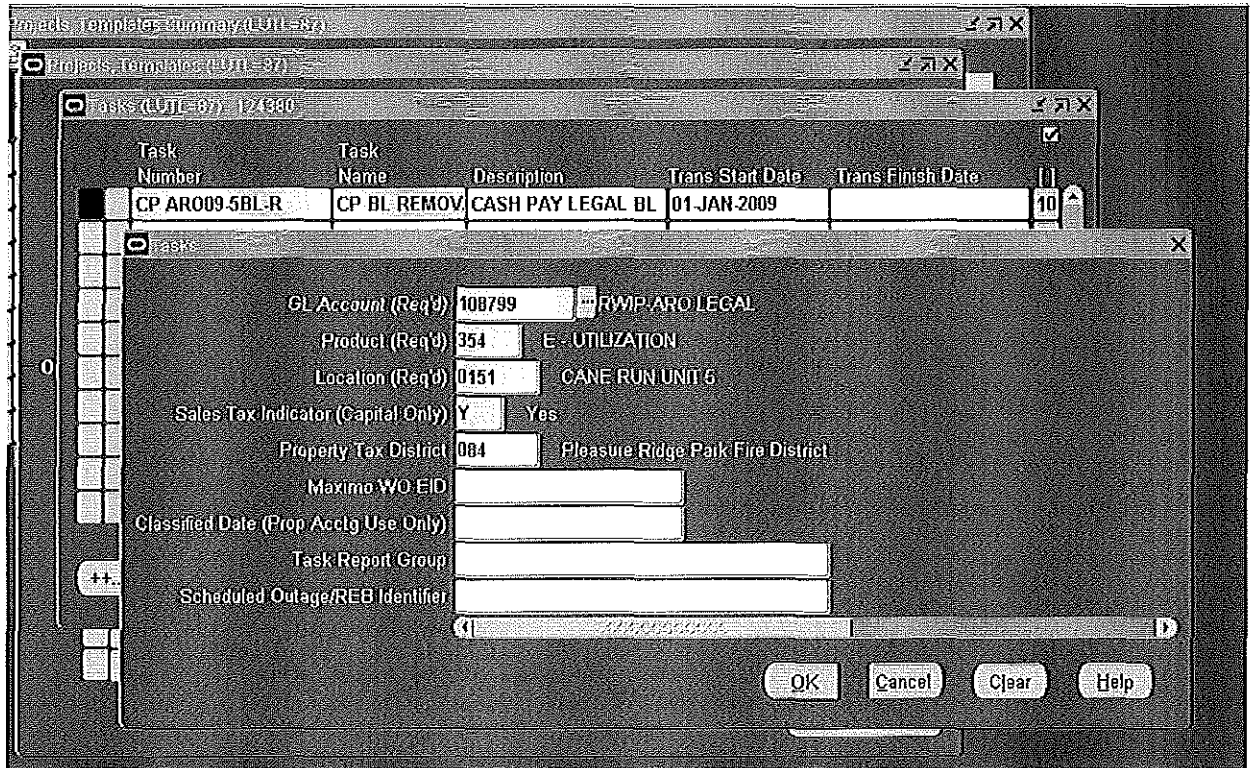
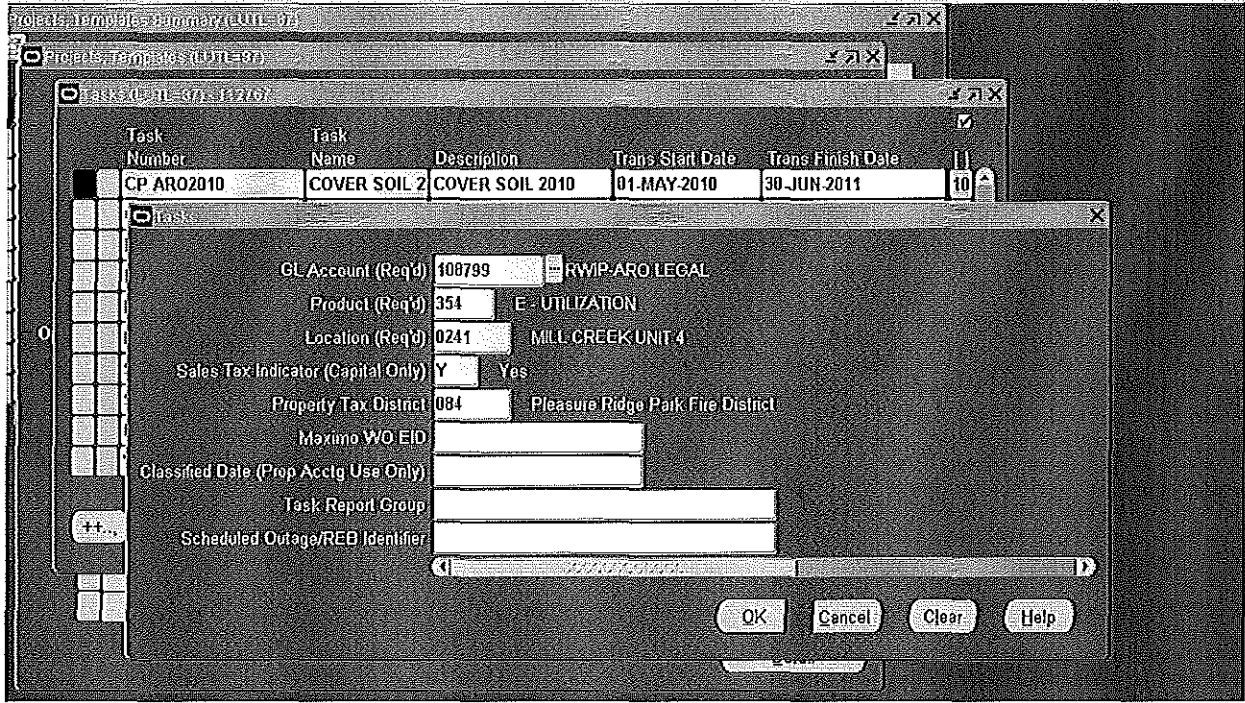
Are there Related Project Numbers?

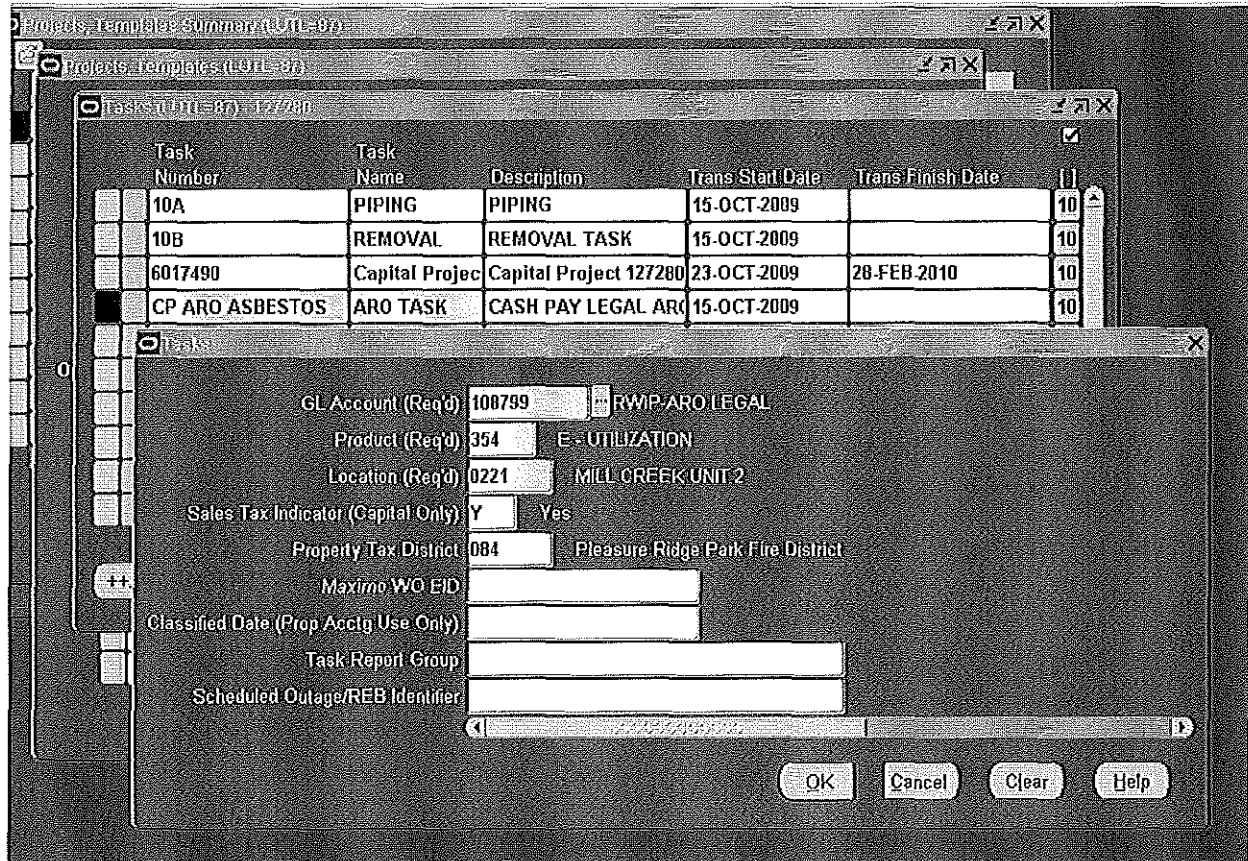
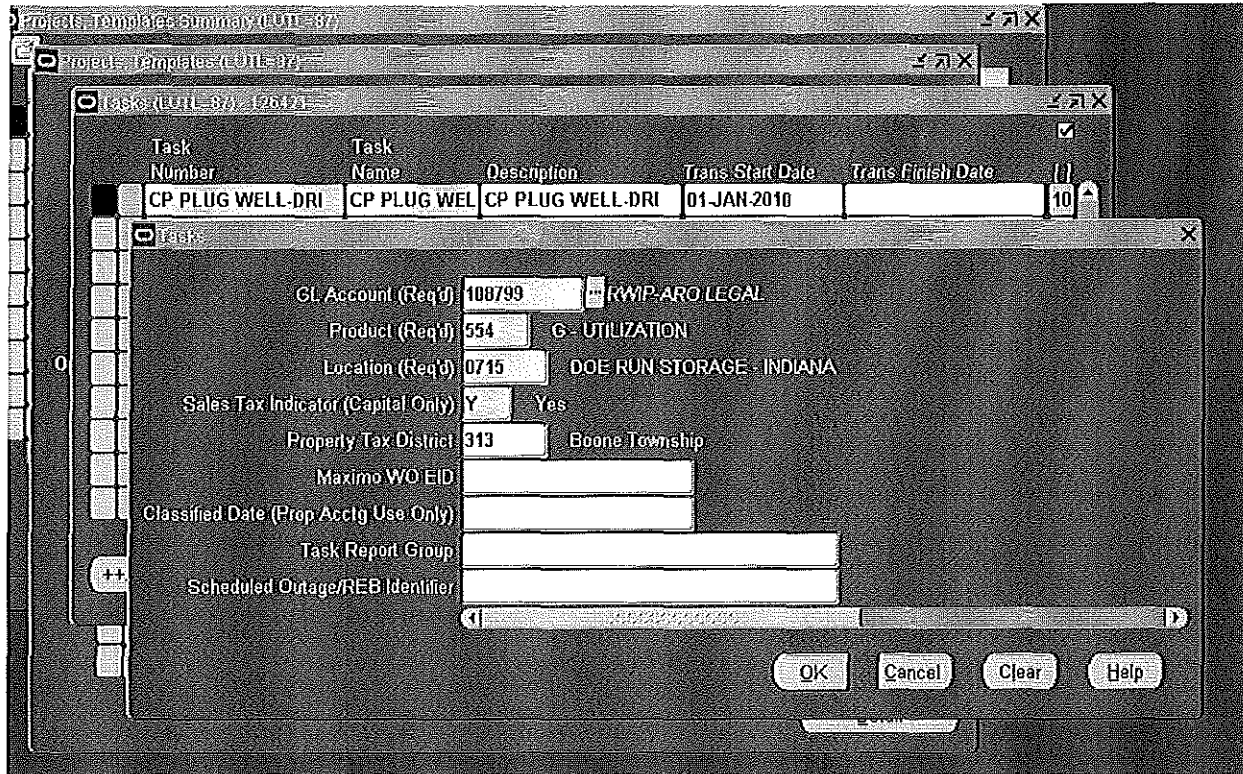
Provide related project numbers or indicate 'N/A'.

N/A

Is this an IT related project?

IT project is any project that requires IT involvement or the purchase of hardware and software.







The screenshot displays a software interface with multiple overlapping windows. The top window is titled "Projects, Templates Summary (LUTL=87)". Below it is another window titled "Projects, Templates (LUTL=87)". The primary window in the foreground is titled "Tasks (LUTL=87) FMR414" and contains a table with the following data:

Task Number	Task Name	Description	Trans Start Date	Trans Finish Date
CP ARO	CP ARO	CP ARO	01-SEP-2001	10

Below the table, a detailed form for the selected task is visible. The form includes the following fields and values:

- GL Account (Req'd): 108799 RWP-ARO LEGAL
- Product (Req'd): 554 G - UTILIZATION
- Location (Req'd): 2299 DISTRIBUTION MAINS
- Sales Tax Indicator (Capital Only):  Yes
- Property Tax District: K99 Not Separately Identifiable KY
- Maximo WO EID: [Empty]
- Classified Date (Prop Acctg Use Only): [Empty]
- Task Report Group: [Empty]
- Scheduled Outage/REB Identifier: [Empty]

At the bottom of the form, there are four buttons: "OK", "Cancel", "Clear", and "Help".

Clark, Ed

---

**From:** Crescente, Angela  
**Sent:** Monday, October 10, 2011 9:37 AM  
**To:** 'christopher.holland@ey.com'  
**Cc:** Wiseman, Sara  
**Subject:** FW: ARO Settlement Testing  
**Attachments:** List of ARO settlements for 2011 - E&Y request.xlsx; AIPs requested by E&Y.pdf; ARO Audit Testing Screenshots - E&Y.docx

Chris,

I have attached project screenshots per your request for the selected settlements. Please note, the ARO RWIP account is 108799 instead of 108901 as we discussed. I have also attached the AIPs per your request. However, PMR414 does not have an AIP as it is a blanket project that does not require AIPs.

Please feel free to contact me if you have any questions.

Thanks,  
Angela

---

**From:** [Christopher.Holland@ey.com](mailto:Christopher.Holland@ey.com) [<mailto:Christopher.Holland@ey.com>]  
**Sent:** Friday, October 07, 2011 10:22 AM  
**To:** Crescente, Angela  
**Subject:** ARO Settlement Testing

Angela,

As an engagement team, we have decided to test the ARO controls in two different ways. The first way, we have the support we need and can independently test. The second way will be a sample from the known ARO settlements in the year. I have selected five settlements (see attached for selections highlighted in yellow). For these, we would like to see the screen shot showing that the payments are set up in the right account but since the control also references the original AIP and the process of establishing the ARO, we are also going to want to see the original AIP for the 5 selections. Let me know if you have any difficulty gathering this support.

Thanks,  
Chris



**Christopher J. Holland | Assurance**

Ernst & Young LLP

400 West Market St Suite 2400, Louisville, KY 40202, United States of America

Office: (502) 585-1400 | [Christopher.Holland@ey.com](mailto:Christopher.Holland@ey.com)

Website: [www.ey.com](http://www.ey.com)

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Charnas

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Project	Task	ARO
112767	CP ARO2010	MC Landfill
120578	CP RETIRE MAIN	GAS MAINS AND SERVICE ABANDONMENTS
122452	CP ASBESTOS	PRESTON CITY GATE
123187	CP AROTY3ASB2008	TY3 ASBESTOS
124001	CP ASBESTOS	GR3 ASBESTOS
124260	CP ASBESTOS	BR1 ASBESTOS
124380	CP ARO09-4AH-R	CR4 ASBESTOS
124380	CP ARO09-5BL-R	CR5 ASBESTOS
124380	CP ARO09-6BL-R	CR6 ASBESTOS
124798	CP ASBESTOS	MAGNOLIA 235120
124798	CP ASBESTOS	MAGNOLIA 235300
124798	CP ASBESTOS	MAGNOLIA 235600
124802	CP ASBESTOS	MULDRAUGH 235120
124802	CP ASBESTOS	MULDRAUGH 235300
124802	CP ASBESTOS	MULDRAUGH 235600
124831	CP PLUG WELL-CTR	Center GSF UGS (Wells)
124831	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)
124831	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)
124842	CP ASBESTOS	PRESTON CITY GATE
126057	CP ASBESTOS	BR2 ASBESTOS
126160	CP ASBESTOS	TY3 ASBESTOS
126421	CP PLUG WELL-CTR	Center GSF UGS (Wells)
126421	CP PLUG WELL-DRI	Doe Run GSF UGS (Wells)
126421	CP PLUG WELL-DRK	Doe Run GSF UGS (Wells)
126421	CP PLUG WELL-MAG	Magnolia GSF UGS (Wells)
126421	CP PLUG WELL-MUL	Muldraugh GSF UGS (Wells)
127259	CP ASBESTOS	BR1 ASBESTOS
127280	CP ARO ASBESTOS	MILL CREEK 2 ASB
127297	CP ASBESTOS	BR2 ASBESTOS
130720	CP ASBESTOS	MILL CREEK 1 ASB
AROMC0241	CP 1755793	MC Landfill
LSMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS
PMR414	CP ARO	GAS MAINS AND SERVICE ABANDONMENTS



**AUTHORIZATION FOR INVESTMENT PROPOSAL**

112767

Original  
 Revised

LG&E Energy Services Co.     Louisville Gas & Electric Co.     Kentucky Utilities Company  
 LG&E Energy Marketing     Western Kentucky Energy     LG&E Power Inc.  
 Other:

**Name of Project:** Mill Creek Landfill Expansion Construction  
**Date Requested:** 1/15/2009    **Project Number:** 112787    **Related Project Number(s):**  
**Budgeted (1):**  Y  X  N    **If unbudgeted, list alternate budget ref. Number(s) (1):**  
**Expected Start Date (2):** 3/1/2009    **Expected In-service Date (2):** 12/1/2010    **Expected Completion Date (2):** 12/31/2012  
**AIP Prepared by:** Steve Raggard    **Phone:** 933-6532  
**Project Manager:** Kevin Lova    **Phone:** 933-8503  
**Product Code (3):** 111    **Resp. Center (4):** 002401    **Location # (5):** 0242    **OBU Name (6):** Generation    **Environmental Code/Category (7):**

**REASONS AND DETAILED DESCRIPTION OF PROJECT**

(include sketch no., if applicable)

Complete construction associated with the HORIZONTAL expansion of the Mill Creek Station Byproducts Landfill. Existing landfill capacity will be exhausted in 2010 following the completion of the vertical expansion. This project includes funding for final closeout of the vertical expansion including cover soil. At that time the horizontal expansion will be needed by 2010. The horizontal expansion work will begin in the second quarter of 2009 and be in service by the end of the first quarter of 2010. State permit approval, final drawings and construction plans have been received. Site development, drainage and liner design; Roadway re-location; schedule and cost development are included in the construction phase. Construction cost estimates during the MTP are \$2,987k in 2009, \$262k in 2010, and \$812k in 2011. The balance of \$2,828 will be spent from 2012-2015.

*Acct = 131200 Tax = 047*

Costs	Capital Investment	Cost of Removal/Retirement	Capital Cost Subtotal (8)	Initial O&M Cost (9)	Lifetime Maintenance Cost (9)	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor							
Contract Labor	1,981,374		1,981,374				1,981,374
Materials	813,747		813,747				813,747
Equipment	2,841,980		2,841,980				2,841,980
Other (Describe) Contingency	683,767		683,767				683,767
Less Salvage							
Local Engineering and A&G: 2.7%	178,142		178,142				178,142
Subtotal	6,600,000		6,600,000				6,600,000
Contr. in Aid on Constr. (CIAC) (11)							
Net Expenditures - GAAP	6,600,000		6,600,000				6,600,000
Capitalized Interest (if applicable)							
Net Expenditures - IFRS	6,600,000		6,600,000				6,600,000

**Signature Required (Based on CAPITAL COST SUBTOTAL COLUMN) (8):**

Authorized by	Typed or Printed Name	Signature	Date
1. Supervisor/Team Leader (Non-IT and IT up to \$25k)	Steve Raggard	<i>Steve Raggard</i>	3/1/09
2. Commercial Operations Manager (13)	Dave Cook	<i>Dave Cook</i>	2/16/09
3. Manager (Non-IT >\$25k up to \$100k; IT >\$25k up to \$50k)	Jim Henry	<i>Jim Henry</i>	3/2/09
4. Director (Non-IT >\$100k up to \$300k; IT >\$50k up to \$100k)	Michael Kirkland	<i>Michael Kirkland</i>	3/2/09
5. OBU Budget Coordinator (14)	Deborah A. Dowd	<i>Deborah A. Dowd</i>	3/4/09
6. Financial Planning (Non-IT and IT >\$300k; all unbudgeted projects; all Development Proposals) (14) or Investment Committee Coordinator (Non-IT >\$1.0M; IT >\$500k; Development >\$500k) (16)	<i>SWW</i> C. Hulsman	<i>Christina Hulsman</i>	3/9/09
7. Vice-President (Non-IT >\$300k up to \$750k; IT >\$100k up to \$200k; Development up to \$200k)	Ralph Bowling	<i>Ralph Bowling</i>	3/4/09
8. Senior Officer (Non-IT >\$750k up to \$1.0M; IT >\$200k up to \$500k; Development >\$200k up to \$500k)	Paul W. Thompson	<i>Paul W. Thompson</i>	3/5/09
9. CFO (Non-IT >\$1.0M; IT >\$500k; Development >\$500k) (16)	Bred Rhvos	<i>Bred Rhvos</i>	3/9/09
10. CEO (Non-IT >\$1.0M up to \$25.0M; IT >\$500k up to \$20.0M; Development >\$500k up to \$25.0M) (18)	Vic Staffert	<i>Vic Staffert</i>	3/1/09
11. E. On Board (Non-IT, IT, and Development > \$25.0M)			
12. Information Technology (17)	Tony Hall		
13. Director of Operating Services (18)	Kathleen A. Gray		
14. Property Accounting (including budget check)	Bruce M. Rose	<i>Bruce M. Rose</i>	3-16-09

Effective 3/26/07 (M/T/RS)

Project Number:

**Accounting [19]:**

- Upon retirement of the new asset, does a legal or environmental requirement exist governing disposal of this asset? Y  N
- Does this project involve a leased asset? Y  N
- Will this project create obsolete inventory? Y  N

**Environmental [20]:**

- Is this an Environmental Cost Recovery (ECR) project? Y  N
- If yes, indicate project type: Air  Water  Waste  Noise
- If yes, also provide ECR compliance plan number: \_\_\_\_\_
- For Environmental Affairs only - reviewed for ECR and other environmental issues*  Initial and Date

**Research & Experimental (R&E) Credit [21]:**

- Is this an experimental project with the purpose of improving, enhancing, or adding to a current manufacturing process at a plant facility? Y  N
- If yes, check with Dale Stringer at 602-627-2796 in the Tax Department to determine if this project qualifies for the R&E credit.

**Sales Tax - For Investment Tasks only [22]:**

- Is this project done for environmental regulations or statutes (a)? Y  N
- (If yes, this may qualify for the Pollution Control Exemption)
- If the answer to all three questions below is yes, this may qualify for the New & Expanded exemption.
- Is this project integrated in the Manufacturing Process (b)? Y  N
- Is this equipment used in the state for the first time (c)? Y  N
- Is this project considered an upgrade or improvement (d)? Y  N
- Description of Upgrade, if applicable (i.e., improved materials, increased capacity, longer life, etc): \_\_\_\_\_

**INVESTMENT MATERIALS**

Task Number	UOP#	Description	Quantity	Total Cost
50A	5391	Vertical Closure - Misc. materials for vertical landfill closeout including drainage piping and concrete drainage ditches	Lot	467,330
70A	5391	Horizontal Expansion - Misc. materials for horizontal landfill construction including stone, drainage piping, concrete drainage ditches, liners and leachate	Lot	446,417
Total				913,747

**RETIRED EQUIPMENT (OR MATERIALS)**

Task Number	UOP#	Original Project Number	Vintage Year	Qty
10B				

**SALVAGE & TRANSFERRED EQUIPMENT**

Task Number	UOP#	Units of Property Description	Salvage Stock (returned to sponsor)	Salvage Junk (sold to 3rd party)	Salvage Equipment	Transferred Equipment
		n/a				
Total						

AUTHORIZATION FOR INVESTMENT PROPOSAL

124380

Original  
 Revised

EOH U.S. Services Co.       Louisville Gas & Electric Co.       Kentucky Utilities Company  
 LG&E Energy Marketing       Western Kentucky Energy       LG&E Power Inc.  
 Other:

Name of Project: GIR Asbestos Abatement 2009  
 Date Requested: 3/1/2009      Project Number: 124380      Related Project Numbers:  
 Budgeted (Y)  (X)  (N)       If unbudgeted, list alternate budget ref. Number(s) (1):  
 Expected Start Date (2): 4/1/2009      Expected in-service Date (2): 12/31/2009      Expected Completion Date (2): 12/31/2009  
 AIP Prepared by: Tim Harder      Phone: 449-8840  
 Project Manager: Steve Legler      Phone: 449-8844

Product Code (3)	Resp. Center (4)	Location # (5)	OPU Name (6)	Regulated Generation	Environmental Code/Category (7)
111	002030	161			

REASONS AND DETAILED DESCRIPTION OF PROJECT  
 (include sketch no., if applicable)

Authority is requested to continue the effort begun in 1992 to minimize and abate known and potential employee exposures to asbestos that exists within the Plant facilities. The abatement project was developed as a result of an Asbestos Task Force established in 1992. The Task Force identified over 300 areas of known and potential employee exposures of asbestos. High priority items were immediately addressed while other areas are being addressed as Plant maintenance is required.

Acct-131200 Tot-084

Costs	Capital Investment	Cost of Removal/Retirement	Capital Cost Subtotal (8)	Initial O&M Cost (9)	Lifetimes Maintenance Cost (9)	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor							
Contract Labor	77,538	120,000	197,538				197,538
Materials	65,000	5,000	70,000				70,000
Other (Describe)							
Less Salvage							
Local Engineering (16)	3,977	3,488	7,464				7,464
Subtotal - GAAP	146,613	128,488	275,000				275,000
Contr. to Aid on Constr. (CIAC) (14)							
Net Expenditures - GAAP	146,613	128,488	275,000				275,000
Capitalized Interest (if applicable) (12)							
Net Expenditures - IFRS	146,613	128,488	275,000				275,000

Signature Required (Based on CAPITAL COST SUBTOTAL COLUMN) (8):

Authorized by	Typed or Printed Name	Signature	Date
1. Supervisor/Team Leader (Non-IT and IT up to \$25k)			
2. Commercial Operations Manager (13)	Dan Kremer	<i>Dan Kremer</i>	3-3-09
3. Manager (Non-IT >\$25k up to \$100k; IT >\$25k up to \$50k)	Steve Legler	<i>Steve Legler</i>	3-6-09
4. Director (Non-IT >\$100k up to \$300k; IT >\$50k up to \$100k)	Steve Turner	<i>Steve Turner</i>	3-6-09
5. OBU Budget Coordinator (14)	Deborah Dand	<i>Deborah Dand</i>	3-16-09
6. Financial Planning (Non-IT and IT >\$300k; all unbudgeted projects; all Development Proposals (16) or Investment Committee Coordinator (Non-IT >\$1.0M; IT >\$500k; Development >\$500k) (16)			
7. Vice-President (Non-IT >\$300k up to \$750k; IT >\$100k up to \$200k; Development up to \$200k)			
8. Senior Officer (Non-IT >\$750k up to \$1.0M; IT >\$200k up to \$500k; Development >\$200k up to \$500k)			
9. CFO (Non-IT >\$1.0M; IT >\$500k; Development >\$500k) (16)			
10. CEO (Non-IT >\$1.0M up to \$25.0M; IT >\$500k up to \$25.0M; Development >\$500k up to \$25.0M) (16)			
11. E.On Board (Non-IT, IT, and Development > \$25.0M)			
12. Information Technology (17)			
13. Director of Operating Services (18)			
14. Property Accounting (including budget check)	Bruce Rose	<i>Bruce Rose</i>	3-23-09



126421

AUTHORIZATION FOR INVESTMENT PROPOSAL - REVISION

LG&E and KU Services Co.       Louisville Gas and Electric Co.       Kentucky Utilities Company

Name of Project: 2010 PLUG AND REPAIR WELLS		Funding Project Type: Gas UG Stor NonBI Task Level Utiliz	
Date Requested: 8/30/2009	Project Number: 126421	Budgeted: no	
Related Project Numbers: n/a		If unbudgeted, list alternate budget ref. Number(s): 126421 \$143K, RDMV332 \$195K, MAN414 \$100K, 126423 \$82k	
Expected Start Date: 1/1/2010	Expected In Service Date: 12/1/2010	Expected Completion Date: 12/1/2010	
AIP Prepared by: Sundheimer, Glenn		Phone: 502/333-1885	
Project Manager: Sundheimer, Glenn		Phone: 502/333-1885	
Asset Location: Magnolie Storage Field		Environmental Code:	
Resp. Contor: 004476-DIR. GAS CONTROL AND STORAGE		Product Code: 131 - GAS COMMON	

REASONS AND DETAILED DESCRIPTION OF PROJECT

126421-2010 PLUG AND REPAIR WELLS WITH CORRODED CASINGS

@ 2352.50  
FD 069

This project involves plugging and repairing gas storage wells that have either corroded casing, corroded acid lines, or defective valves. Wells with corroded casing for which relining is not viable will either be plugged, patched, or if defects are near the surface, repaired. Plugging and repairing wells is crucial for the safe and efficient operation of LG&E's storage fields

Costs	Capital Investment	Cost of Removal/Retirement	Capital Cost - Subtotal	Initial O&M Cost	Lifetime Maintenance Cost	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor	\$0.00	\$67,177.73	\$67,177.73	\$0.00	\$0.00	\$0.00	\$67,177.73
zCompany Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contract Labor	\$0.00	\$370,348.23	\$370,348.23	\$0.00	\$0.00	\$0.00	\$370,348.23
zContract Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Materials	\$7,000.00	\$20,823.90	\$27,823.90	\$0.00	\$0.00	\$0.00	\$27,823.90
zMaterials	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other	\$0.00	\$17,521.86	\$17,521.86	\$0.00	\$0.00	\$0.00	\$17,521.86
zOther	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Local Engineering	\$0.00	\$37,128.28	\$37,128.28	\$0.00	\$0.00	\$0.00	\$37,128.28
zLocal Engineering	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Subtotal - GAAP	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00
Net Expenditures - GAAP	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00
Net Expenditures - IFRS	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00
2010 Total	\$7,000.00	\$513,000.00	\$520,000.00	\$0.00	\$0.00	\$0.00	\$520,000.00

Approval Type: Non-IT Projects

Authorized by	Amount	Name	Date Approved	Req'd
Supervisor	\$25,000.00			N
Manager	\$100,000.00	Skaggs, John	12/20/2010	Y
Budget Coordinator	\$0.00	Porter, Janice	12/20/2010	Y
Director	\$300,000.00	Walker, Barry	12/21/2010	Y
Vice President	\$750,000.00	Huff, David for Malloy, John	12/21/2010	Y
Investment Committee Coordinator	\$0.00	Kuhl, Megan	12/21/2010	Y
Financial Planning Director	\$0.00	Garrett, Christopher	12/21/2010	Y
Senior Officer	\$1,000,000.00			N
CFO	\$1,000,001.00			N
CEO	\$1,000,002.00			N
Property Accounting	\$0.00	Lehnerts, Patricia	12/22/2010	Y

INVESTMENT MATERIALS

UOP #	Utility Account Id	Quantity	Total Cost

RETIRED EQUIPMENT (OR MATERIALS)

UOP #	Utility Account Id	Quantity	Vintage Year	Original Project Number

**AIP QUESTIONS**

Are there Related Project Numbers?

Provide related project numbers or indicate 'N/A'.  
 n/a

Is this an IT related project?

IT project is any project that requires IT involvement or the purchase of hardware and software.  
 no

Purchase/Sale of Real Estate?

Is this a transaction related to the sale/purchase of land or buildings?  
 no

AUTHORIZATION FOR INVESTMENT PROPOSAL - ORIGINAL

127280

EON U.S. Services Co.

Louisville Gas and Electric Co.

Kentucky Utilities Company

Name of Project: MC2 Sootblower Pipe Insulation		Funding Project Type: LGE Steam NonBlk Excluding Land	
Date Requested: 10/15/2009	Project Number: 127280	Budgeted: no	
Related Project Numbers: N/A		If unbudgeted, list alternate budget ref. Number(s): Funded with money previously allocated to project 122897 within Generation pool	
Expected Start Date: 11/18/2009	Expected In Service Date: 1/4/2010	Expected Completion Date: 1/1/2010	
AIP Prepared by: Cecil, Ray		Phone: 502/933-6808	
Project Manager: Cecil, Ray		Phone: 502/933-6808	
Asset Location: Mill Creek Unit 2		Environmental Code: N/A	
Resp. Center: 002401-GEN. MGR. MILL CREEK STATION		Product Code: 111 - WHOLESALE GENERATION	

REASONS AND DETAILED DESCRIPTION OF PROJECT

MC2 Sootblower Thermal Drain Piping Insulation

*ARO Acct-131200 Tot-084*

The thermal insulation on the Mill Creek Unit #2 sootblower thermal drain piping at the main floor & mezzanine elevations contains asbestos. The insulation is 36 years old and in a deteriorated state, which could possibly be releasing asbestos fibers into the atmosphere. There are areas where insulation has fallen off and the hot pipes are exposed, resulting in loss of efficiency and creating a potential safety hazard for operational and maintenance employees. We need to acquire the proper permits to abate the damaged ACM and return the thermal insulation system back to engineered specifications to gain maximum efficiency out of this unit of property.

✓

Costs	Capital Investment	Cost of Removal/Retirement	Capital Cost Subtotal	Initial O&M Cost	Lifelong Maintenance Cost	O&M Cost Subtotal	TOTAL INVESTMENT
Company Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Contract Labor	\$13,592.00	\$30,000.00	\$43,692.00	\$0.00	\$0.00	\$0.00	\$43,692.00
Materials	\$10,660.00	\$4,000.00	\$14,660.00	\$0.00	\$0.00	\$0.00	\$14,660.00
Other	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Salvage	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Local Engineering	\$728.00	\$1,020.00	\$1,748.00	\$0.00	\$0.00	\$0.00	\$1,748.00
Subtotal - GAAP	\$24,980.00	\$35,020.00	\$60,000.00	\$0.00	\$0.00	\$0.00	\$60,000.00
Contributions	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Expenditures - GAAP	\$24,980.00	\$35,020.00	\$60,000.00	\$0.00	\$0.00	\$0.00	\$60,000.00
Capitalized Interest	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Net Expenditures - IFRS	\$24,980.00	\$35,020.00	\$60,000.00	\$0.00	\$0.00	\$0.00	\$60,000.00
2009 Total	\$10,980.00	\$35,020.00	\$46,000.00	\$0.00	\$0.00	\$0.00	\$46,000.00
2010 Total	\$14,000.00	\$0.00	\$14,000.00	\$0.00	\$0.00	\$0.00	\$14,000.00

Approval Type: Non-IT Projects

Authorized by	Amount	Name	Date Approved	Req'd
Supervisor	\$25,000.00			N
Manager	\$100,000.00	Dedelot, Joseph	10/22/2009	Y
Budget Coordinator	\$0.00	Dowd, Deborah	10/29/2009	Y
Commercial Operations Manager	\$0.00	Cook, David	10/22/2009	Y
Special Approvals	\$0.00	Henry, James for Kirkland, Kenneth	10/22/2009	Y
Budget Coordinator	\$0.00	Pence, Mark	10/22/2009	Y
Director	\$300,000.00			N
Vice President	\$750,000.00			N
Financial Planning Manager	\$0.00	Neal, Susan	10/26/2009	Y
Investment Committee Coordinator	\$0.00	Kuhl, Megan for Wright, Sharon	10/26/2009	Y
Senior Officer	\$1,000,000.00			N
CFO	\$1,000,001.00			N
CEO	\$1,000,002.00			N
Property Accounting	\$0.00	Rose, Bruce	10/29/2009	Y

INVESTMENT MATERIALS

UOP #	Utility Account Id		Quantity	Total Cost
05698	131200	SYSTEM OF SOOT BLOWERS (05698)	1	\$10,660.00

RETIRED EQUIPEMENT (OR MATERIALS)

UOP #	Utility Account Id		Quantity	Vintage Year	Original Project Number
05698	131200	SYSTEM OF SOOT BLOWERS (05698)	1		

**AIP QUESTIONS**

Are there Related Project Numbers?

Provide related project numbers or indicate 'N/A'.

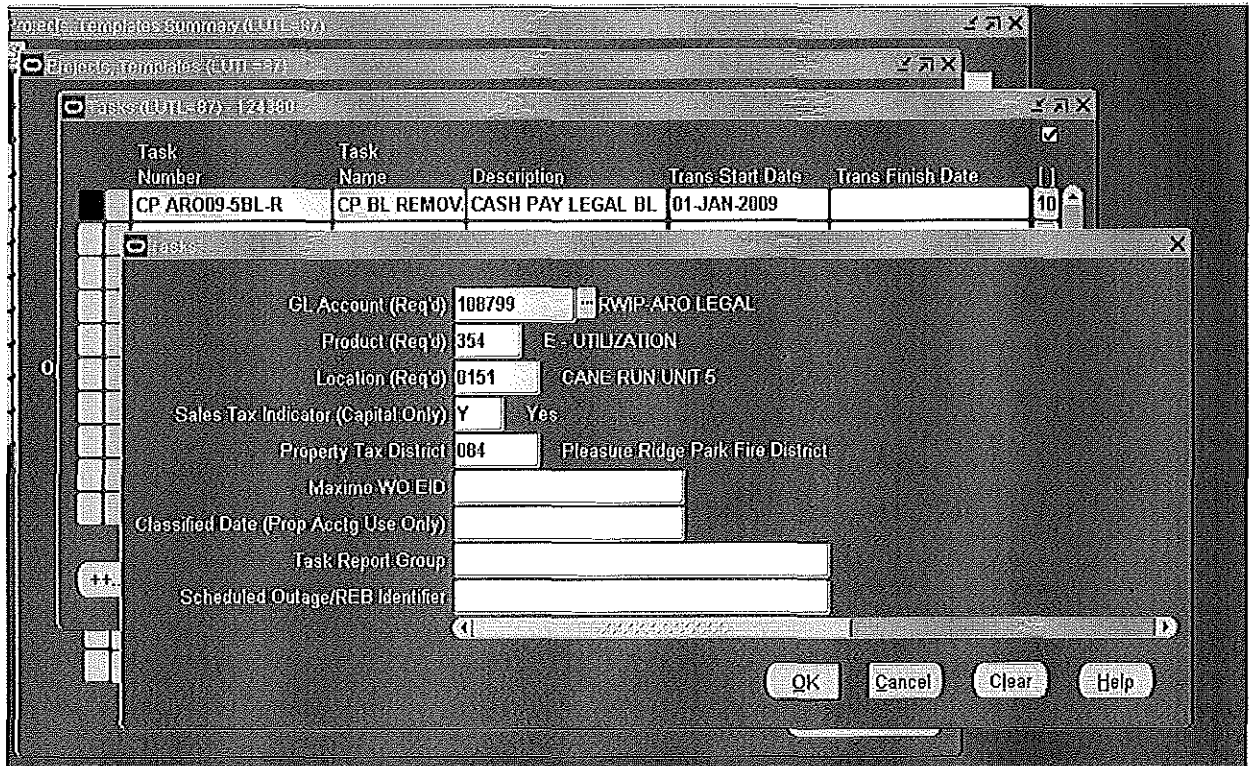
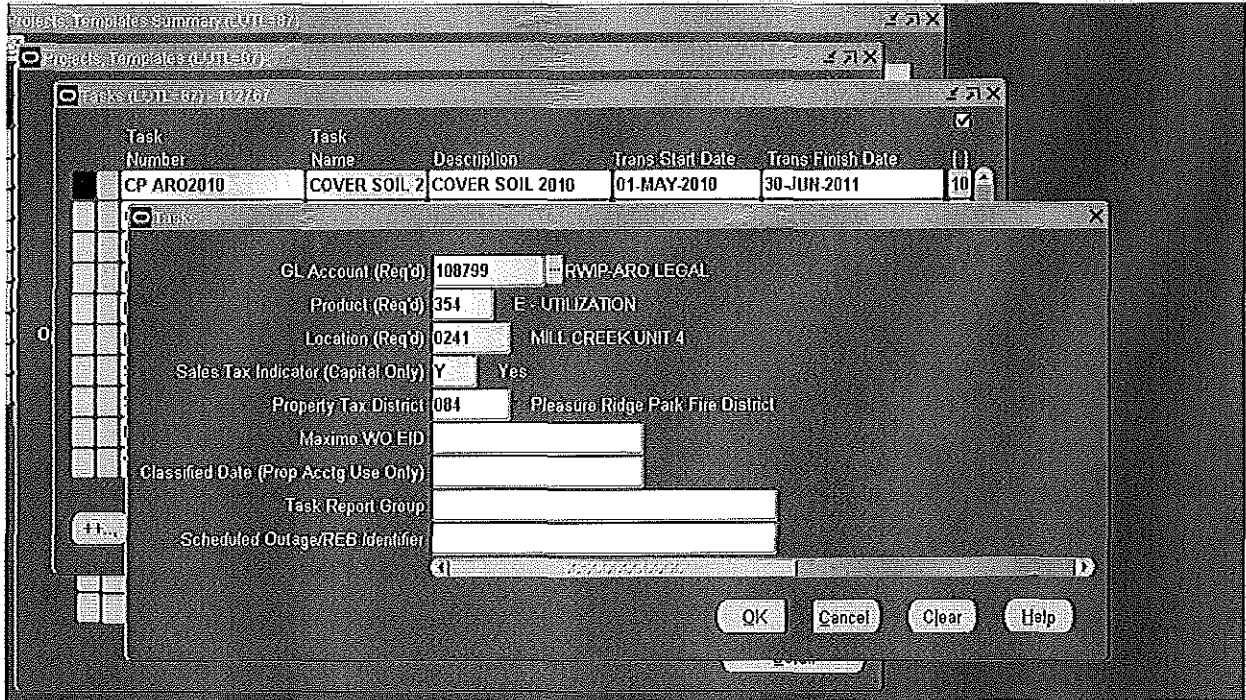
N/A

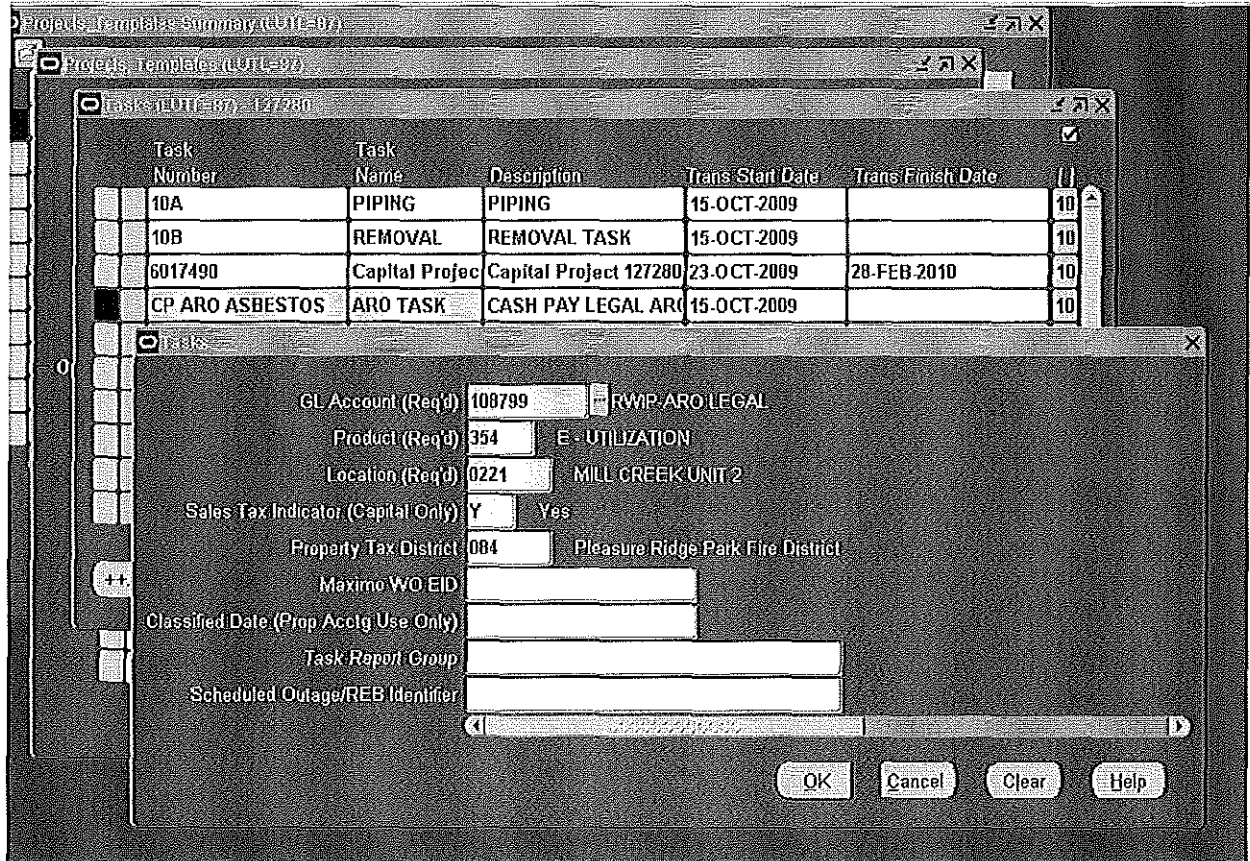
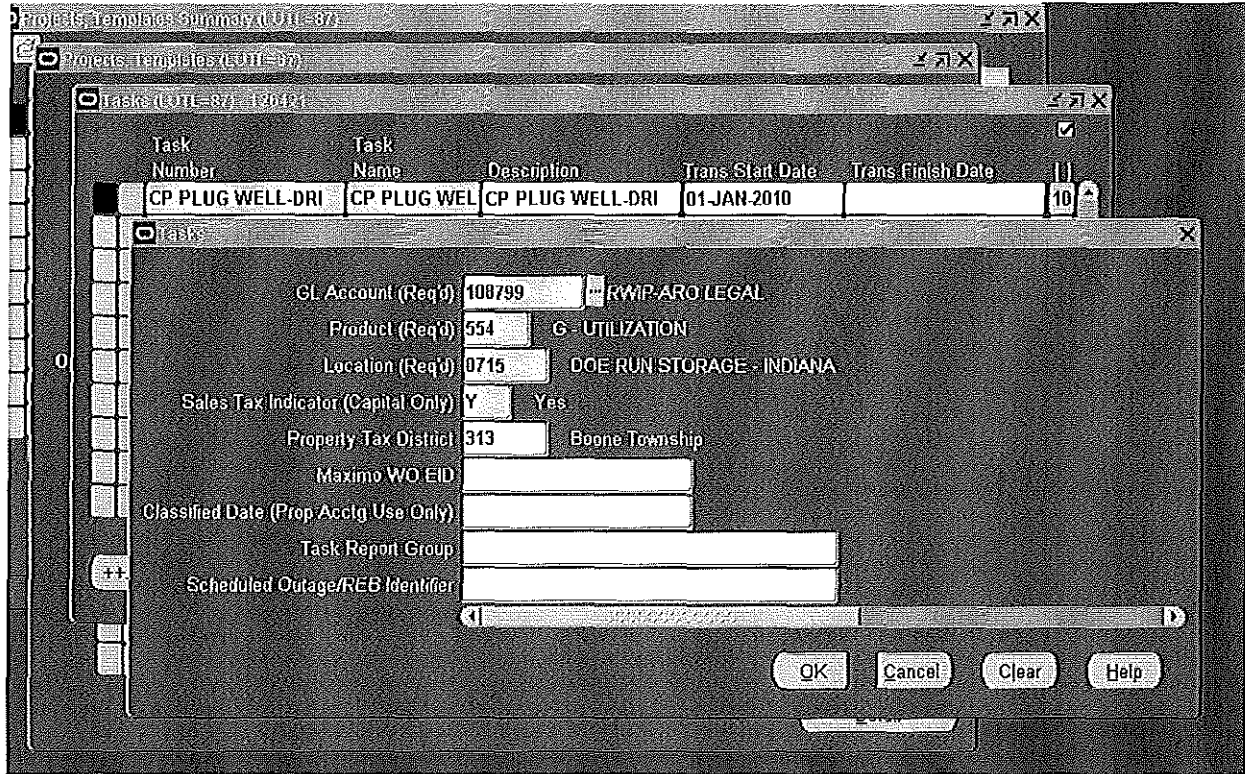
Is this an IT related project?

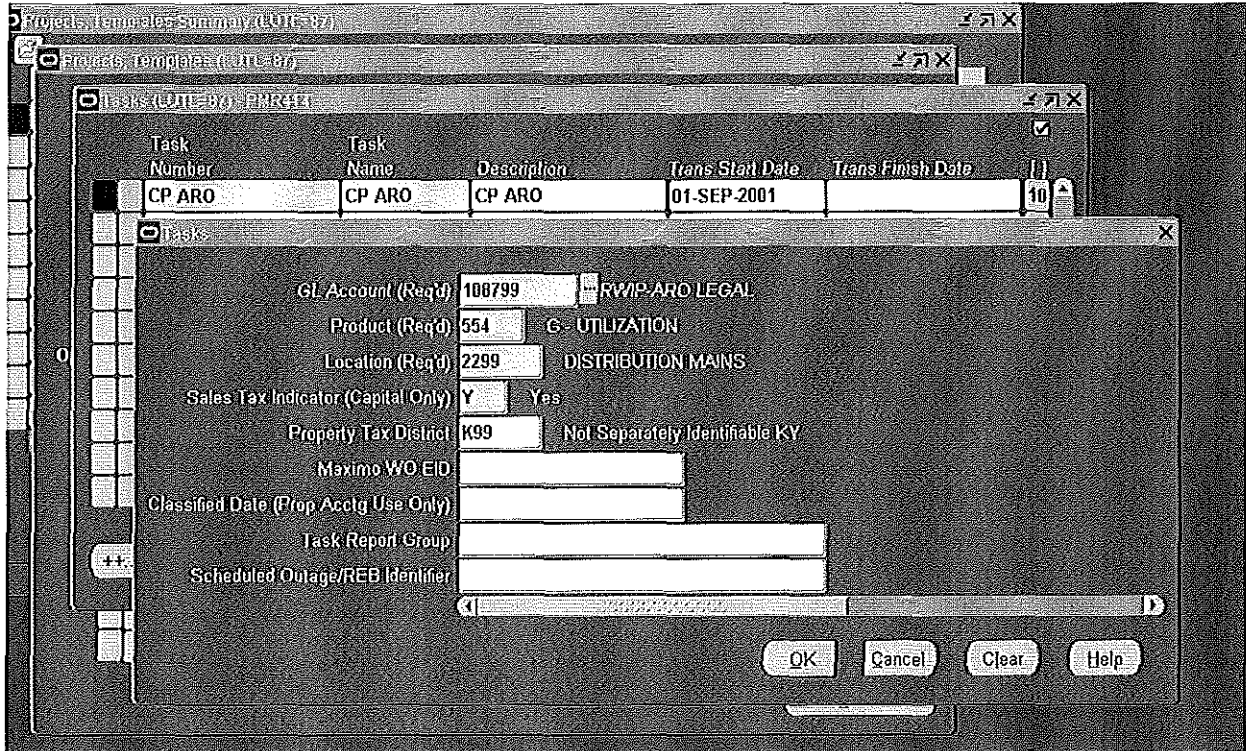
IT project is any project that requires IT involvement or the purchase of hardware and software.

no









**Crescente, Angela**

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**From:** Ritchey, Stacy  
**Sent:** Friday, July 15, 2011 11:49 AM  
**To:** Crescente, Angela  
**Subject:** RE: Brown Main Pond Close Out

Angela,

Just to verify on the budget side, you do want us to budget the capping costs on the landfill to ARO account, 108799, correct? I have the same question for the CCR EPA Ruling projects, last year we just put them to removal not ARO, but it is a significant amount of money (\$619M).

Thanks,

Stacy

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**From:** Crescente, Angela  
**Sent:** Friday, July 15, 2011 10:41 AM  
**To:** Raque, Gary; Ritchey, Stacy  
**Subject:** RE: Brown Main Pond Close Out

Please be sure to let me know when you begin construction on the new landfill (inserting the first bottom layer) so I can remove the main ash pond's liability.

Thanks,  
Angela

---

**From:** Raque, Gary  
**Sent:** Friday, July 15, 2011 10:39 AM  
**To:** Crescente, Angela  
**Subject:** RE: Brown Main Pond Close Out

Angela,

Due to our conversation today we will not be charging ARO or removal charges to the Brown CCR ash pond. At this time we will not be utilizing an ARO task.

---

**From:** Crescente, Angela  
**Sent:** Friday, July 15, 2011 9:34 AM  
**To:** Raque, Gary  
**Subject:** RE: Brown Main Pond Close Out

Gary,



I haven't seen any charges on this task yet, but it is my understanding (based on what I heard in the meeting we were just in) that the pond has been drained and construction is being started on the landfill conversion. I was just wondering where the closeout of the ash pond charges have been going.

Thanks,  
Angela

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**From:** Raque, Gary  
**Sent:** Monday, June 20, 2011 3:51 PM  
**To:** Crescente, Angela  
**Subject:** RE: Brown Main Pond Close Out

Yes its being converted to a Landfill

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**From:** Crescente, Angela  
**Sent:** Monday, June 20, 2011 3:49 PM  
**To:** Raque, Gary  
**Subject:** RE: Brown Main Pond Close Out

I have set up a task called CP ARO for this purpose. Is the whole ash pond being closed?

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**From:** Raque, Gary  
**Sent:** Monday, June 20, 2011 3:38 PM  
**To:** Crescente, Angela  
**Subject:** Brown Main Pond Close Out

Angela,  
Just wanted to bring to your attention that we will probably have charges this year related to "closing out" of the Brown CCR Main Pond (Project #132371). This will need to have an the ARO task set up. I know that you set them up before.

Gary Raque  
LG&E and KU Energy LLC  
Project Engineering  
BOC 3  
Phone: (502) 627-3241  
Fax: (502) 217-2801  
[gary.raque@lge-ku.com](mailto:gary.raque@lge-ku.com)

**Clark, Ed**

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**From:** Wiseman, Sara  
**Sent:** Sunday, January 16, 2011 2:48 PM  
**To:** Charnas, Shannon  
**Cc:** Crescente, Angela  
**Subject:** RE:

Shannon:

My recollection is that we decided to use what numbers are available in the MTP and then we completed a GLAFF to have the new ST accounts numbers set up. I looked back at my emails and I set the new numbers up back in September—a lot has happened since then, so maybe my wires got crossed. I'll be glad to have them mapped back to the ARO line if that is the decision.

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**From:** Charnas, Shannon  
**Sent:** Sunday, January 16, 2011 2:35 PM  
**To:** Wiseman, Sara; Scott, Valerie; Erskine, Greg  
**Cc:** Pienaar, Lesley; Crescente, Angela  
**Subject:** RE:

PPL does classify some of their AROs as short term – related to the asbestos abatement, I believe. We had not decided to reclassify any of our AROs to current. I thought in discussions, we were not readily able to determine what the current amount of the asbestos abatement would be for us. If this has changed, we can discuss.

**Shannon Charnas**

*Director, Utility Accounting & Reporting  
LG&E and KU  
(502) 627-4978*

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**From:** Wiseman, Sara  
**Sent:** Sunday, January 16, 2011 2:22 PM  
**To:** Scott, Valerie; Erskine, Greg  
**Cc:** Pienaar, Lesley; Charnas, Shannon; Crescente, Angela  
**Subject:** RE:

Valerie:

These are new accounts that were set up during the mapping exercise earlier in the year in order to be consistent with PPL. It is my understanding that they also classify some of the obligations as current. We have moved the short term obligations to these accounts (based on the MTP as was agreed at the time we set up the accounts). The mapping appears correct based on previous decisions, but of course can always be changed.

Sara

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**From:** Scott, Valerie  
**Sent:** Sunday, January 16, 2011 1:54 PM  
**To:** Erskine, Greg

**Cc:** Wiseman, Sara; Pienaar, Lesley; Charnas, Shannon  
**Subject:**

Greg,

The following two accounts are mapped to other current liabilities in your consolidation and should be mapped to AROs. Would you work with Sara to make the correction?

230022	ASSET RETIREMENT OBLIGATIONS - STEAM - ST
230026	ASSET RETIREMENT OBLIGATIONS - GAS - ST

*Valerie*

**Clark, Ed**

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**From:** Wiseman, Sara  
**Sent:** Sunday, January 16, 2011 2:22 PM  
**To:** Scott, Valerie; Erskine, Greg  
**Cc:** Pienaar, Lesley; Charnas, Shannon; Crescente, Angela  
**Subject:** RE:

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**From:** Scott, Valerie  
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**To:** Erskine, Greg  
**Cc:** Wiseman, Sara; Pienaar, Lesley; Charnas, Shannon  
**Subject:**

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230026	ASSET RETIREMENT OBLIGATIONS - GAS - ST

*Valerie*



**Clark, Ed**

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**From:** Hudson, Rusty  
**Sent:** Wednesday, December 28, 2011 9:21 AM  
**To:** Heun, Jeff; Straight, Scott  
**Cc:** Wiseman, Sara; Crescente, Angela  
**Subject:** Updated ARO estimate for ash pond closures

Sara said if she could have your updated estimate by Tuesday next week (the 3<sup>rd</sup>), they could then record the entry if it is materially different. To be clear, we are going down the path of:

1. What would be the cost of closing a pond under existing law (the \$120k number that Jeff is going to update/revise).
2. The expected retirement of the existing coal fired units does not mean that the pond(s) would have to be closed at the same time the coal units are retired or shortly thereafter. Therefore they will keep the further out closure dates that they currently are using, as opposed to going with the closure dates that we have in the 2012 MTP/LTP, which are based on expected future laws, not the current law. Rusty

**Crescente, Angela**

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**From:** Cosby, David  
**Sent:** Thursday, June 30, 2011 8:46 AM  
**To:** Crescente, Angela  
**Cc:** Dowd, Deborah  
**Subject:** FW: ARO Budgets

Hey Angela. Should we budget expected ARO spending in the 3 year MTP to the 108799 account for things we know about being actual charges such as Asbestos Abatement or things like the landfill closure costs we talked about yesterday? It looks like we typically lump those in with regular RWIP for budget and then charge the actuals to the 108799. Would you all use the budgets for reference if the entire company made a point to budget to that account? Thanks.

*David L. Cosby Jr.*  
Manager - Fin. & Budgeting - Power Generation  
LG&E and KU Energy Services  
502-627-2499  
[david.cosby@lge-ku.com](mailto:david.cosby@lge-ku.com)

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**From:** Dowd, Deborah  
**Sent:** Thursday, June 30, 2011 8:30 AM  
**To:** Cosby, David  
**Subject:** ARO Budgets

Good Morning David,

Yesterday we were talking about AROs and budgets. It appears we, Power Generation do not budget to an ARO Account. I am certain that we have plans for this expense but we must be using the Traditional Retirement Account 108901.

The only thing that I found was Energy Delivery.

Organization	Organization Description	Account	Account Description	Budget Item
004480	MAGNOLIA STORAGE	108799	RWIP-ARO LEGAL	131340
004485	MAGNOLIA DISTRIBUTION, FIELD AND TRANSMISSION	108799	RWIP-ARO LEGAL	131117

**Crescente, Angela**

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**From:** Crescente, Angela  
**Sent:** Thursday, June 30, 2011 8:52 AM  
**To:** Cosby, David  
**Cc:** Dowd, Deborah  
**Subject:** RE: ARO Budgets

David,

We actually do already have some projects that are being budgeted to 108799 in the current MTP and those are the ones that I took the spending for 2011 and moved them to the short-term account like we talked about yesterday. So, my answer would be yes if you have projects that meet the 108799 criteria.

Thanks,  
Angela

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**From:** Cosby, David  
**Sent:** Thursday, June 30, 2011 8:46 AM  
**To:** Crescente, Angela  
**Cc:** Dowd, Deborah  
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*David L. Cosby Jr.*  
Manager - Fin. & Budgeting - Power Generation  
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