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Qualifications of Stephen R. Eckberg

My name is Stephen R. Eckberg. I am employed as a Utility Analyst with the Office of Consumer Advocate (OCA), where I have worked since 2007. My business address is 21 S. Fruit Street, Suite 18, Concord, New Hampshire 03301.

I earned a B.S. in Meteorology from the State University of New York at Oswego and an M.S. in Statistics from the University of Southern Maine.

After receiving my M.S., I was employed as an analyst in the Boston office of Hagler Bailly, Inc, a consulting firm working with regulated utilities to perform evaluations of energy efficiency and demand-side management programs.

From 2000 through 2003, I was employed at the NH Governor's Office of Energy and Community Services (now the Office of Energy and Planning) as the Director of the Weatherization Assistance Program. More recently, I was employed at Belknap-Merrimack Community Action Agency as the Statewide Program Administrator of the NH Electric Assistance Program (EAP). In that capacity, I presented testimony before the NH Public Utilities Commission in dockets related to the design, implementation and management of the EAP. I have also testified before Committees of the New Hampshire Legislature on issues related to energy efficiency and low income electric assistance.

In my position with the OCA, I have testified jointly with Kenneth E. Traum, Former Assistant Consumer Advocate, in the following dockets:

- DG 08-048 Unitil Corporation and Northern Utilities, Inc. Joint Petition for Approval of Stock Acquisition.
- DW 08-070 Lakes Region Water Company Financing & Step Increase.

- DW 08-098 Aquarion Water Company of New Hampshire.
- DE 09-035 Public Service of New Hampshire Distribution Service Rate Case.

I have also entered (non-joint) testimony in:

- DT 07-027 Kearsarge Telephone Company, Wilton Telephone Company, Hollis Telephone Company & Merrimack County Telephone Company Petition for Alternative Form of Regulation. Phase II & Phase III.
- DW 08-073 Pennichuck Water Works, Inc. Petition for Rate Increase.
- DW 08-070 Lakes Region Water Company Third Step Increase.
- DW 08-065 Hampstead Area Water Company Petition for Rate Increase.
- DE 09-170 2010 CORE Energy Efficiency Programs.
- DW 10-090 Pittsfield Aquaduct Company Petition for Rate Increase.
- DW 10-091 Pennichuck Water Works Petition for Rate Increase.
- DW 10-141 Lakes Region Water Petition for Rate Increase.
- DE 10-188 2011-2012 CORE and Natural Gas Energy Efficiency Programs.
- DE 12-262 2013-2014 CORE and Natural Gas Energy Efficiency Programs.
- DE 12-292 PSNH 2013 Energy Service Rate.
- DE 12-262 2014 CORE Energy Efficiency Programs Update Filing
- DE 13-108 PSNH 2012 Energy Service Reconciliation

I have attended regulatory training at New Mexico State University's Center for Public Utilities. I participate in committees of the National Association of State Consumer Advocates (NASUCA) on behalf of the OCA. I am a member of the American Statistical Association.

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: August 23, 2013
AT (OFFICE): NHPUC

FROM: PUC Audit Staff

SUBJECT: Merrimack Station-Clean Air Project
Updated Cost Review as of December 31, 2012
FINAL Audit Report DE 11-250

TO: Tom Frantz, Director, Electric Division
Steve Mullen, Assistant Director, Electric Division

Introduction

The Audit Staff has reviewed the updated costs incurred relative to the Merrimack Station Clean Air Project (Scrubber) as of December 31, 2012. An Audit report, issued on August 21, 2012, reflected audit work done for project costs from inception through March 31, 2012. That report is incorporated hereto by reference. Reported costs per the Project Manager Cost Summaries and net changes are:

Work Order	3/31/2012	12/31/2012	Net Change
C04MK220 Main Scrubber	$341,959,498	$345,748,710	$3,789,212
C04MK227 Scrubber Equipment	$ 12,678,510	$ 12,921,885	$ 243,375
C04MK228 EMARS	$ 2,262,887	$ 2,307,437	$ 44,550
C04MK229 Truck Wash	$ 2,293,725	$ 2,409,873	$ 116,148
C04MK22A Truck Scale	$ 278,645	$ 964,150	$ 685,505
C04MK22B Soda Ash	$ 2,313,764	$ 2,688,135	$ 374,371
Sub-total Scrubber	$361,787,029	$367,040,190	$5,253,161
C04MK226 Secondary Waste Water	$ 25,792,414	$ 27,866,656	$2,074,242
C04MK22C SWWT Second Effect	$ 2,643,408	$ 3,866,534	$1,223,126
Sub-total Secondary Water	$ 28,435,822	$ 31,733,190	$3,297,368
Subtotal of Work Order Changes 4/2012 – 12/2012			**$8,550,530**
Completed Work Orders:			
C04MK221 E-Warehouse	$ 1,074,906	$ 1,074,906	$ -0-
C04MK222 Electric Power Supply	$ 16,956,973	$ 16,956,973	$ -0-
C04MK225 Meeting Place	$ 2,014,714	$ 2,014,714	$ -0-
Total Reported	$410,269,444	$418,819,973	$8,550,530
Less Cost of Removal			
C04MK220	$ (732,335)	$ (775,065)	$ (42,730)
C04MK222	$ (26,418)	$ (26,418)	$ -0-
Adjusted Total	$409,510,691	$ (801,483)	$ (42,730)
3/31/2012 Audit Adjustments	$(500,199)	$(500,199)	$ -0-
NET TOTAL	**$409,010,492**	**$417,518,291**	**$8,507,800**

The overall increase in company reported costs of **$8,550,530** was summarized in the following manner:

	C04MK220	C04MK227	C04MK228	C04MK229	C04MK22A	C04MK22B	C04MK226	C04MK22C	TOTAL
NU Labor	$ 209,353	$ -	$ -	$ -	$ -	$ -	$ 3,308	$ 77,194	$ 289,855
Materials	$ (282,683)	$ -	$ -	$ -	$ 57	$ 33,162	$ 152,441	$ 27,229	$ (69,794)
Contractor Labor	$ 3,712,647	$ 240,965	$ 43,325	$ 113,129	$ 663,894	$ 298,169	$ 1,904,352	$1,048,594	$8,025,075
Outside Services	$ 13,337	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,337
Employee Expenses	$ 1,844	$ -	$ -	$ -	$ -	$ -	$ 40	$ 1,400	$ 3,284
Vehicles	$ 33	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 33
Fees & Payments	$ 38,878	$ -	$ -	$ -	$ 1,585	$ -	$ -	$ -	$ 40,463
Rents & Leases	$ 61,254	$ -	$ -	$ -	$ -	$ -	$ -	$ 525	$ 61,779
Indirect Costs	$ 34,552	$ 2,410	$ 1,225	$ 3,019	$ 19,969	$ 10,036	$ 14,059	$ 28,878	$ 114,148
AFUDC	$ -	$ -	$ -	$ -	$ -	$ 33,003	$ -	$ 39,306	$ 72,309
TOTAL	$ 3,789,215	$ 243,375	$ 44,550	$ 116,148	$ 685,505	$ 374,370	$ 2,074,200	$1,223,126	$8,550,489

The work orders relating to the E-Warehouse C04MK221, Electric Power Supply C04MK222, and Meeting Place C04MK225 had been closed prior to 3/31/2012. Further audit work (after 3/31/2012) was therefore not necessary for these three work orders.

A recommended Audit adjustment of $(67,766) relating to the Meeting Place Miscellaneous Contractor Labor has not been reflected on the updated costs for work order C04MK225. The adjustment was identified in the August 2012 audit report. Audit understands that the cost summary sheets are not representative of the final accounting treatment of expenses incurred in the overall project.

Audit is also aware that the Project Manager's summary of expenses includes costs of removal relating to work order C04MK220 in the amount of $775,065 and work order C04MK222 $26,418 respectively. The costs of removal were booked to accounts 108.08 and 108.01 respectively.

C04MK220 Main Scrubber

Audit work completed as of March 31, 2012 reflected total reported costs of $341,959,498. The audit work recommended adjustments to work order C04MK220:

Miscellaneous Materials	$ (9,836)
Miscellaneous Outside Services	$ (39,615)
Miscellaneous Contractor Labor	$(324,496)
Net Audit adjustments	$(373,947)

The information provided by the Company for the period April 2012 through December 2012 did not reflect the adjustments as of the fieldwork date of April 2013.

The reported figure of $345,748,710 represents an increase over the 3/31/2012 Company figure of $3,789,212. The increase was verified to the schedule of costs noted above.

NU Labor - $209,353

Audit requested clarification of charge codes and source codes 056, 02P, as these NUSCO Labor charges did not reflect benefits overhead. The Company indicated that 056 is the charge code for Legal and 02P is the code for Corporate Purchasing, both of which as NUSCO. NUSCO labor charges have the General Service Company Overhead Loader applied, rather than the payroll benefit loaders. Refer to the Indirect Costs portion of this report.

Audit requested support for a direct labor charge in the amount of $2,405 which posted to the work order in April 2012. Audit was provided with a confidential payroll summary for the employee, which was verified to the hours posted to the work order without exception.

Materials – ($282,683)

A stores overhead (resource code ZC) is applied to all materials used from stock or returned to stock. Audit was provided with a listing of materials returned to warehouse stock, along with the related overhead. The overhead rate applied to the direct cost for 2012 was 0.14. The returned materials information reflected 533 line items, and amount to a net credit of $277,034 for the period. The overhead stores expense incurred was $31,717, which remained in the work order. The inclusion of the overhead complies with FERC. No exception.

Audit requested support for six individual entries noted in the resource code MX. The requested support was provided, along with copies of URS Final Release and Waiver, duly notarized; invoice certification statements; copies of invoices; shippers' bills of lading as necessary; screen print of payment approval; and screen print of actual payment. Audit specifically requested and was provided with support for:

- Emerson Process Management $14,821 for 18 weeks of training at $823.40 per week.
- Emerson Process Management $127,466 for software related to the soda ash softening system
- Two 1.5" back pressure regulators were verified to an invoice from New England Controls without exception. The total for the two, including $90 shipping was $3,169.
- Flaktwoods/The Fan Group $62,646. The invoice represents straight time, overtime, travel time, and report preparation of a Flaktwoods sub-contractor, Buck & Company, Inc.. Timesheets were provided. However, the timeframe for which the May 2012 invoice was billed, is:

07/12 – 07/17/2010	$ 7,007
09/12 - 09/25/2010	$16,278
10/10 – 10/15/2010	$ 3,741
06/12 – 06/26/2011	$19,000
07/19 – 07/22/2011	$ 4,513
Invoice total	$62,646

Audit requested clarification of hourly invoiced fees from Lee Buck of Buck & Company. The timesheets do not include two hours of report writing associated with three site visits. The Company indicated that the hours spent were not "unreasonable or unexpected". Audit calculated the unverified hours to represent $713.

In addition, travel hours reported on the invoice listed 48, although actual travel time was noted to be eight hours. The Company indicated that the travel hours included five layover days and one travel day.

Finally, Audit reviewed Appendix E Final Release and Waiver for contract 224738 which indicated that no part of the work had been subcontracted. Buck & Company, however, is an independently owned and operated field service company. When asked about the representation that none of the work had been subcontracted (from the Fan Group to others), the Company stated that "*the advice from our Sourcing Manager was that the waivers did not apply to subcontracted labor services, i.e. consultants, and that if a contractor certifies that they have not contracted with subs then that certification is acceptable to us.*"

<u>Contractor Labor - $3,712,647</u>

A payment to <u>George Cairns and Sons</u>, in the amount of <u>$141,407</u> was verified to an invoice dated 4/30/2012 for Site Finalization-phase 1. The total invoice was for $144,189. $2,782 was posted to work order C04MK22A. The application for payment schedule identified the total as work related to Work Change Request (WCR) 023 and WCR 043. Audit requested the work change requests and was provided with copies of them. WCR 023, dated 8/12/2011, was documented to "provide all labor, supervision, administration and management and supply all construction equipment, materials, and services necessary to complete the Site Finalization Phase 2 Scope of Work as outlined in the appendices attached to it. The lump sum price of $2,463,532 included an OCIP credit. There were additional terms and conditions, primarily associated with the timeframe for completion. Any no-fault extension of time for the work, after 11/18/2011, would result in reimbursement of site establishment costs past that date. Winter conditions caused the extension of work, and WCR 043 documented a lump sum cost of $108,253 for expenses incurred in 2011 ($49,206) and anticipated expenses in 2012 ($59,047). WCR 043 was dated 3/30/2012. Activity within the 4/30/2012 invoice was verified to the WCR 043 without exception.

A payment to <u>ES Boulos</u>, for Balance of Plant Electrical, was posted to work order C04MK220 in the amount of <u>$1,042,401</u>. Audit reviewed the materials request, purchase order, invoice, payment screen, and allocation of the overall invoice to three work orders. The invoice in the amount of $1,077,646, dated 6/1/2012 and paid 8/30/2012, was for the electrical erection at Merrimack Station. Total invoice was allocated among the following work orders:

C04MK220	$1,042,401	balance of all electrical progress payments
C04MK22A	$ 3,707	WCR 055, item 2, scale house security
C04MK229	$ 20,037	WCR 034 plans and drawings, WCR 046 truck wash feeder
C04MK229	$ 11,500	extend 4" conduit for fiber optics and communications cable to truck wash building
Invoice Total	$1,077,646	

A payment to <u>AZCO</u> for Balance of Plant Mechanical, was posted to work order C04MK220 in the amount of $1,200,174. The invoice noted the rolling contract sum to be $5,146,829 with $4,443,742 completed and stored to date with prior payments applied of $3,243,568. The invoice was dated 6/7/2012, and net due on the invoice was <u>$1,200,174</u>. Payment was made via ACH on 8/1/2012. The documentation provided to Audit included proper authorizations for payment from NU, PSNH, and URS. The total due was then verified to the contractor's application and certificate for payment which outlined the following WCR:

WCR-049 Monorails Time and Materials	$ 106,098
WCR-056 SWPH 1st Repairs	$ 136,364
WCR-057 CEMS Air, Cylinder Rack, LO PIs	$ 25,763
WCR-058 Units 1 & 2 Bypass Duct Installation Time and Materials	$ 898,114

WCR-061 Duct Project Damper Repairs	$ 10,934
WCR-065 Remove and Replace Guillotine Valves	$ 17,391
WCR-068 Ladder Cages Unit 1 Recirc Platform	$ 5,511
Total invoice	$1,200,174

Audit reviewed WCR-058, which authorized a not-to-exceed value of $900,000 relating to Unit 1 and Unit 2 bypass duct installation. Proper signatures evidencing permission to proceed with the work were noted on the WCR.

A payment to George Cairns and Sons for site finalization was posted to work order C04MK220 in the amount of $594,737 in October 2012. Supporting documents however indicate that the company was paid via ACH on 12/5/2011. Audit requested clarification of the dates and was provided with the following explanation: "*The costs were included in the 3/31/2012 audit. The transactions you are currently reviewing represent a reallocation of charges between work orders...*" Refer to the AS&E discussion in the Indirect Cost portion of work order C04MK227.

A payment to Siemens Energy Inc., in the amount of $4,278,231, was verified to a progress payment invoice. The invoice detailed the substantial completion to be $5,178,213, with a credit for disputed items of $(900,000) resulting in the $4,278,231. Reference was made to the contract for the Wet FGD system at Merrimack Station, at the value of $96,103,134. The disputed items credit was noted on the progress payment schedule as WCR-055 and related to the settlement agreement and release. Proper authorizations and affidavits were provided for review. A wire transfer was made on 6/14/2012. Audit requested a copy of the settlement agreement and release. The confidential dispute resolution compromise and settlement was provided and reviewed without exception.

Outside Services - $13,337

Costs in this category represent legal expenses paid through PO# 002233443. As noted in the August 2012 audit report, the legal firm of McLane, Graf, Raulerson and Middleton represented the Company in suits filed by commercial ratepayers relating to PUC determination of lack of authority to determine the public good (of the project); appeals filed relative to temporary permits issued by NHDES; research into permitting relative to wastewater and anti-degradation; motions before the Site Evaluation Committee regarding the size of the project; time relating to meeting with the EPA and NHDES; representing the Company in the appeal to the State Supreme Court relative to the PUC decision regarding the use of financing proceeds; and a matter relative to the appeal by PSNH to the Air Resources Committee (ARC) regarding the mercury baseline determination.

PSNH has stated that "*during our review of these and other Project charges, as we have completed periodically throughout the project to insure proper booking of costs, PSNH has identified three legal fee areas that will be removed from the project. These are the mercury baseline determination, the appeal relative to PUC decision regarding PSNH financing, and a Citizen's law suit vs. PSNH / Merrimack Station.*" Audit requested clarification of the costs and was provided with specific details which sum to $116,145. Audit was informed that the expenses were removed from Construction Work in Progress and posted to:

Account #50699 Misc Steam Power Exp-Other	$114,720
Account #923RA NUSCO Outside Services-RA	$ 1,425

Employee Expenses - $1,844

Thirty three entries ranging from $2 to $291 were noted. Due to the immateriality of each, detailed review was not conducted.

Vehicle Expenses $33

This figure is considered immaterial and was not reviewed by Audit.

Fees and Payments - $38,878

Audit requested supporting documentation for $30,899 noted on the Miscellaneous Fees and Payments line of the Cost Summary in October 2012. The entry was documented to be workmen's compensation.

Rents and Leases - $61,254

Audit reviewed the work order summary and noted in excess of 40 rental charges relating to dumpsters, scaffolding, portable toilets, office trailers, and storage containers. None was reviewed in detail due to the immateriality of the individual charges.

Indirect Costs - $34,552

The resource codes which comprise the Indirect Costs were noted:

ZC – Stores Allocation	$ 4,268
ZF – GSC Allocation	$ 2,700
ZJ – AS&E Allocation	$27,584
Total Indirect cost	$34,552

Indirect Costs represent allocations of Stores, General Services, and Administrative Salaries and Expenses Overheads.

ZC is an overhead rate applied to direct inventory dollars. For 2012, the rate was $0.14. Compliance with FERC was noted, as movement both from the warehouse and returned to the warehouse (if not used) incur the stores overhead. Audit recalculated the stores overhead without exception.

ZF General Services Allocation represents NUSCO service groups Corporate Center/Utility Group/Transmission Group, and Unregulated. The overheads include payroll taxes, pension, employee costs, and costs relating to the physical buildings which house the NUSCO groups. Annually the rate is updated during the budget process, with a separate rate calculated for each NUSCO service group based on the ratio of the service group's benefits and support activities to that service group's total payroll charges. The rate for 2012 was 0.7683.

ZJ, the AS&E overhead rate, is applied to eligible charges of a work order excluding ten specific resource codes. The overhead is booked to the work order as the applicable resource code charges are incurred. Audit selected a random sample of AS&E entries for work order C04MK220 and recalculated the charges without exception. Refer to the Indirect Cost section of C04MK227 for further discussion regarding the calculation of the rates themselves.

As noted in the August 2012 audit report, AS&E overhead rates for December 2010 and 2011 were .0150 and .0075 respectively. Throughout 2012 the rate changed as follows:

January-March	.0050	April	.0100
May	.0125	June	.0150
July	.0200	August	.0225
September	.0250	October	.0300
November	.0350	December	.0300

Audit was given the following explanation for AS&E overhead (ZJ) and its calculation: "*The AS&E is applied daily to applicable charges as they are posted to the work order. The end result is that AS&E is applied to the Total Cost of Work Order excluding AFUDC, reimbursements, CIAC payments and salvages.*"

Performance Incentive Program included in C04MK220

The Program Management agreement between URS and Northeast Utilities Service Company, as agent for PSNH, includes a Performance Incentive Program (PIP) and a Performance Incentive Fee (PIF). The PIP, as stated by PSNH, is "funded by the Contractor's Profit Fee of 8% of all costs and expenses, except general and administrative (G&A) and travel expenses. The PIF is funded by PSNH and is a 4% match of those same expenses." The PIP is referenced as Escrow and the PIF is referenced as Notational.

As noted in the prior audit report, PSNH reflects the PIF solely on the general ledger, while the PIP is tracked on the general ledger and is held in an account at Bank of America. Audit requested and was provided with the updated and final incentive payments made to URS. URS compiled a reconciliation of the overall incentive, and determined, based on settlement, that PSNH had over-estimated the incentive by $414,675. The following reconciliation detail (compiled by URS) was provided, which was summarized by Audit:

	Contractor's Profit Fee 8% Escrow	Performance Incentive Fee 4% Notational	
2008	$ 590,018	$ 295,009	
2009	$1,000,283	$ 500,141	
2010	$ 925,601	$ 462,801	
2011	$ 567,658	$ 283,829	
1/2012-3/2012	$ 49,811	$ 24,905	
4/2012-12/2012	$ 40,010	$ 20,005	
Sub-total Fee calculations	$3,173,381	$1,586,691	$4,760,072
Plus interest on Escrow account	$ 4,612	$ 2,306	$ 6,917
TOTAL Accrued	$3,177,993	$1,588,996	$4,766,989
Less Unearned Interest on Escrow	$ (401)	$ (200)	$ (601)
Less Unearned profit at Substantial Completion	$ (63,464)	$ (31,732)	$ (95,196)
Less Unearned profit at Final Completion	$ (212,585)	$ (106,292)	$ (318,877)
Amount Refunded URS to PSNH	$ (276,450)	$ (138,225)	$ (414,675)
Total Adjusted Incentive Paid	**$2,901,142**	**$1,450,572**	**$4,352,313**

The incentives were noted on the Project Manager's work order summary for work order C04MK220. Total incentive on the summary was $4,545,054 or $192,740 higher than the calculated final completion certificate and settlement agreement. Audit was provided with the following summary of the URS, URS PPF, and URS PIF line items as noted on the Project Manager's worksheet, and that which was invoiced by URS.

	Project Mgr	URS Invoice	Net Difference
URS	$44,049,486	$44,247,094	$ 197,608
URS PPF	$ 2,918,415	$ 3,173,381	$ 254,966
URS PIF	$ 1,626,639	$ 1,450,771	$(175,866)
	$48,594,539	$48,871,246	$ 276,707

Although the split among the three URS related line items in the Project Manager's worksheet do not directly correspond with the URS invoiced amounts, overall the summary noted on the worksheet is accurate. URS invoiced PSNH $276,450 more for the PPF incentive than should have. A credit was received and posted in December 2012. The difference between the costs recorded on the Project Manager's worksheet, and the credit received from URS, $256, is immaterial.

The general ledger activity reflected the escrow cash in account #134WG, with the offsetting liabilities noted in accounts #232WG, an accounts payable and #253WG Other Deferred Credit.

The notational incentive liabilities were noted in accounts # 232WN, an accounts payable and #253WN, Other Deferred Credit.

C04MK227 Scrubber Equipment - $243,375

Work order # C04MK227 – Scrubber equipment was opened on 9/27/2011 and placed in service on 11/17/2011. Audit work completed as of March 31, 2012 reflected total reported costs of $12,678,510. The reported figure at the end of December 2012 was $12,921,885, a net change of $243,375.

Contractor Labor - $240,965

Audit requested the invoice and supporting documentation for two invoices totaling $240,965. Both invoices provided reflected URS Washington Division in the letter head area and indicated Merrill Iron & Steel Transit, LLC as the contractor (a summary and detailed invoice were supplied for each invoice). PSNH provided screen prints showing purchase order and work order details and approvals of $16M, invoice details and payment approvals and details for the invoices. Payments were made via ACH to Merrill Iron & Steel Transit LLC.

Vendor	Invoice #	Invoice Date	Amount	Payment Date	PO #	Total Invoice Amt.
Merrill Iron & Steel Transit LLC	27032	11/10/11	$ 169,558	02/28/12	2252748	$ 211,390
Merrill Iron & Steel Transit LLC	27222	04/10/12	$ 71,407	05/02/12	2252748	$ 162,021
ASE Daily Calc.			$ 2,410			
			$ 243,375			

The first invoice # 27032 was dated 11/10/2011 for work through 10/28/2011, indicated PO # 02252748 and totaled $211,390. It was split 80.211% or $169,558 to WO C04MK227 and 19.789% or $41,831 to WO C04MK220. The invoice indicated the work performed was for the following:

Dated 11/10/11- Rec'd 1/9/12 - Posted 4/12	Inv. #27032	
Erection of Ductwork & CEMS Access Platforms	$ 37,235	WO C04MK220
Unit 2 - Expansion Joint Installation	$ 43,696	WO C04MK227
Unit 2 - Insulation and Lagging (supply & install)	$ 10,792	WO C04MK227
Unit 2 - Outage Tie-in	$ 115,070	WO C04MK227
OCIP Insurance credit	$ (2,530)	WO C04MK220
Change order WCR-043 - Temporary handrail	$ 7,126	WO C04MK220
Total Invoice	$ 211,390	

A copy of WCR-043 dated August 30, 2011 and signed by the contractor on October 28, 2011 was provided by PSNH and indicated approval for a lump sum price of $7,126 (inclusive of OCIP credit). Also reviewed were:

- A notarized partial release waiver which indicated the current invoice amount of $211,390 and the total paid to date of $14,163,711 for services provided prior to 10/28/2011;
- A notarized contractor affidavit which indicated the total amount of the contract was for $14,390,761 with $13,808,007 paid to Merrill to date. AZCO Inc. was indicated as the erection sub-contractor, the subcontract price was $12,461,462 and $12,165,465 had been paid to date with $295,998 remaining;
- An "authorized field invoice release of payment approval check list" was signed by the project manager on 11/11/2011 which indicated the invoice was for a progress payment and that the supplier/contractor had met contractual requirements and milestone schedule dates. The invoice was not paid until 2/28/12, and not posted to the work order until 4/2012. Audit asked about the AS&E calculated on the Merrill invoice #27032 in the amount of $211,390 dated 11/10/2011, posted 4/2012 and paid on 2/28/2012. PSNH explained that while it was dated 11/10/2011 it was not received until 1/9/2012 in the system. In response to the posting date, they explained that the entire invoice had originally been posted in January to WO C04MK220, then backed out and reposted in April 2012 in the current split.

The second invoice # 27222 was dated 4/10/2012 for work through 11/30/2011, indicated PO #02252748 and totaled $162,021. It was split 44.072% or $71,407 to WO C04MK227 and 55.928% or 90,614 to WO C04MK220. The invoice included the following charges:

Dated 4/10/12 - Rec'd 4/17/12 - Posted 4/12	Inv. #27222	
Unit 1 - Expansion Joint Assembly & Installation	$ 17,675	WO C04MK220
Unit 1 - Insulation and Lagging (supply & install)	$ 28,886	WO C04MK220
Unit 1 - By-Pass Tie-In	$ 16,365	WO C04MK220
Unit 2 - Expansion Joint Installation	$ 21,848	WO C04MK227
Unit 2 - Insulation and Lagging (supply & install)	$ 11,202	WO C04MK227
Unit 2 - Outage Tie-in	$ 38,357	WO C04MK227
Independent Testing & inspection	$ 1,545	WO C04MK220
Demobilization	$ 19,639	WO C04MK220
OCIP Insurance credit	$ (5,060)	WO C04MK220
Change order WCR-001 - Pre-engineered bldgs	$ 11,564	WO C04MK220
	$ 162,021	

A copy of WCR-001 (dated 2/17/2010 signed by the contractor on 3/28/2010) was provided by PSNH. It indicated in part "Execute the Purchase Order Agreement to Supply, Deliver, and Erect the Pre-Engineered Buildings, both "Service Water Pump House" and "Truck Wash Facility" as identified in Appendix VIII-2 of the Contract Agreement" and "The Lump Sum for all work associated with these buildings is $940,178". A value option was selected that indicated "*switch from the standard Direct Tension Indicator Washers to the Squirter Type Washers – Reduction in contract cost of ($25,000)*". Authorization was given to proceed with the described work for a lump sum price of $915,178. Also provided:

- A notarized partial release waiver that indicated the current invoice amount of $162,021 and the total paid to date was $14,325,732 for services provided prior to 11/30/2011;
- A notarized contractor affidavit that indicated the total amount of the contract was for $14,390,761 and that $14,163,711 had been paid to Merrill to date. Also indicated was that AZCO Inc. was the erection sub-contractor, the subcontract price was $12,715,578 and that $12,583,971 had been paid to date with $131,607 remaining;
- An authorized field invoice release of payment approval check list which was signed by the project manager on 12/15/2011 indicated that the invoice was for a progress payment and that the supplier/contractor had met contractual requirements and milestone schedule dates.

Indirect Costs - $2,410

Audit recalculated the AS&E charge by multiplying the total invoices posted to WO C04MK227 in April 2012 by the AS&E rate for April 2012 which was 0.010:

Vendor	Invoice #	Invoice Date	Amount	Payment Date	Post Date
Merrill Iron & Steel Transit LLC	27222	04/10/12	$ 71,407	05/02/12	4/12
Merrill Iron & Steel Transit LLC	27032	11/10/11	$ 169,558	02/28/12	4/12
			$ 240,965		
AS&E rate for 4/12			0.010		
Recalculation of AS&E Daily Calculation			$ 2,410		

Audit verification of the AS&E Rate Calculations

Audit requested PSNH's formal policies and procedures regarding AS&E. The Company explained that "*PSNH/NU has a documented procedure rather than an accounting policy or statement.*" Along with the explanation, the Company provided two "Summary of MIBS Loaders and Overheads" documents. The loaders and overhead documents explain the various loaders and overheads, provided the MIBS code, a brief description of the loader/overhead as well as a brief description of how it is applied but did not provide guidance on how the Company should handle reposting of invoices.

The first loader and overhead document was in effect until May 2012 (Audit is unsure when this procedure went into effect) at which time the second loader and overhead document became effective. Among other things the new loader effective in May 2012 has additional columns for frequency of rate application and frequency of rate calculation. The frequency of rate calculation also includes information for the store expense and lobby stock regarding when a true-up to its respective clearing accounts are performed. True-ups are not performed for the AS&E work order.

The AS&E clearing work order (ASECLR06) is booked to account #10709. While construction personnel charge time directly, a portion (approx. 4%) of salaries for support personnel is allocated to the AS&E clearing account. This allocation is cleared to the applicable project work order by the application of the monthly AS&E rate times the eligible charges posted to the project work order. The difference between the charges allocated to the AS&E clearing account for construction support services and what is cleared is what is reflected in the above comparison as the "clearing WO Balance" (see summary comparison below).

The clearing work order balance is for PSNH as a whole. Audit requested support for the balances and the Company provided construction work in progress trial balances that reflected the clearing work order balances identified by distribution (6D), generation (6F) and transmission (6T).

	Mar. 2012	May 2012	Sept. 2012
ASECLR6D	$ 6,571,453	$ 6,863,420	$ 7,207,655
ASECLR6F	$ (3,711,067)	$ (3,659,338)	$ (3,558,985)
ASECLR6T	$ (2,382,368)	$ (2,389,207)	$ (2,805,046)
*6D Activity	$ -	$ 4	$ 53
	$ 478,019	$ 814,878	$ 843,677

* 6D activity reflects activity for 6D not included in CWIP total

The Company explained that the AS&E work order includes PSNH administrative expenses and any NU administrative charges for time that NU employees spend on PSNH construction projects. When asked if this account was "trued-up" the Company explained that it was not because it was a continuous process.

Audit requested the details for the computation of the AS&E rate for May, July and November of 2012. Along with the computations PSNH explained that the "*... AS&E Rate is based on a rolling average of the prior 12 months*" and the "*...calculated AS&E rate is reviewed and occasionally adjusted by Business Group Budget Services in order to manage the balance of the AS&E Clearing Account such that it is not significantly under or over allocated*".

The calculation worksheets provided (Monthly Activity Report and Calculation for Overhead Rates – 12 Month Cumulative) indicated calculated cumulative rates (12 month cumulative direct Charges / 12 month cumulative construction base) of 1.32%, 1.39% and 1.55% for May, July and November. However, 1.25%, 2% and 3.5% were authorized for each of the months respectively rather than the calculated rates. After reviewing the information provided, Audit asked why the average cumulated rates were not used and how the authorized rates were determined. PSNH responded by providing additional calculations and explained *"the attached calculation sheet for one month standard balance is used to set the May such that the current-month balance remains close to the one-month-average balance. If the current-month balance is lower than one-month-average balance, then the rate is decreased. If the current-month balance is higher than the one-month-average balance, then the rate is* increased."

Below is an Audit prepared summary comparison of the AS&E average cumulated rate, as calculated over the prior twelve months as compared with the prior month rate and the new authorized rate as adjusted by the Business Group Budget Services for three select months (May, July and November 2012):

For Month	Ending Month of 12-Month Cumulative Average	Cumulative Calc. Rate (Cum Direct Chrgs / Cum. Construction Base)	One Month Average of Direct Chrgs (12 Mnth Cum / 12)	Clearing WO Balance	Over/ (Under)	Previous Month Rate	Adjusted Rate
May 2012	Mar. 2012	1.32%	$ 310,843	$ 478,019	$ 167,175	1.00%	1.25%
July 2012	May 2012	1.39%	$ 312,738	$ 814,878	$ 502,140	1.50%	2.00%
Nov. 2012	Sept. 2012	1.55%	$ 329,596	$ 843,677	$ 514,081	3.00%	3.50%

The Company explained that the cumulated calculated rate is calculated each month as part of the process and the result demonstrates a comparison of the AS&E over the last 12 months. The cumulated calculated rate is based on the cumulative totals of the prior 12 months construction base which is divided into the cumulative totals of the prior 12 months of direct charges. When setting the upcoming month's rate the Company compares a one-month average balance of direct charges against the ending balance of the clearing WO balance (ASECLR06) and adjusts the prior month's authorized rate up or down accordingly based on the comparison, historical factors ,and other forward looking variables such as the expected construction activity in the upcoming month.

Because the AS&E rates change monthly and the above referenced Merrill Iron & Steel invoices were dated 11/10/2011 and 4/10/2012 and were paid 2/28/2012 and 5/2/2012 respectively, Audit asked how the Company determined which AS&E rate was used.

The Company explained that the "*...AS&E rate utilized is the one in effect during the month in which the charge posts to the work order*". PSNH further explained that "*charges are booked to the work order when the expense is incurred. For example - when an invoice is received the charge is booked to the work order, when labor payroll is approved each week it is booked to the work order and when material is removed from stores the charge is booked to the work order*"

Audit asked about the AS&E calculated on the Merrill invoice #27032 in the amount of $211,390 dated 11/10/2011, posted 4/2012 and paid on 2/28/2012. In response to the posting date, they explained that the entire invoice had originally been posted in January to WO C04MK220, then backed out and reposted in April 2012 in the current split.

Audit questioned PSNH about the reallocation of invoices and related AS&E. It was noted that the when an invoice is booked to a work order and AS&E is booked, then at a later date the invoice is reallocated to a different work order, the original AS&E is not reversed.

The Company explained "*when an invoice is moved to a different work order in a different month than when it was originally posted, the AS&E rate in effect during the month in which the move is posted is used to calculate the credit to the 'from' work order and the debit to the 'to' work order.*"

Audit did not review all reposting transactions and is therefore not able to quantify the extent of the variance or other issues associated with this treatment. Because AS&E is included in the CWIP and subject to AFUDC, this unknown variance could also impact the overall AFUDC. Refer to **Audit Issue #2**

Below is a comparison of the correct versus original posting treatment <u>of invoice #27032</u>. While the actual treatment arrived at the same dollar amount overall (in this particular case), on a work order basis, and thus timing basis, the treatment created a variance.

<u>Invoice # 27032, total $211,389.79, dated 11/10/11 for work through 10/28/11, paid on 2/28/12</u>

		If recorded correctly initially		As recorded & adj.		
Post Month	Work Order	ASE Charge (Credit)	Calculation	ASE Charge (Credit)	Calculation	Variance
01/2012	C04MK220	$ 209	$41,831*0.0050 (Jan. rate)	$ 1,057	($211,390*0.0050 Jan. rate)	
01/2012	C04MK227	$ 848	$169,558*0.0050 (Jan. rate)			
04/2012	C04MK220			$ (2,114)	($211,390*0.010 April rate)	
04/2012	C04MK220			$ 418	($41,831*0.010 April rate)	
04/2012	C04MK227			$ 1,696	($169,558*0.010 April rate)	
		$ 1,057		$ 1,057		
Net	C04MK220	$ 209		$ (639)	C04MK220 is understated by	$ 848
Net	CO4MK227	$ 848		$ 1,696	C04MK227 is overstated by	$ (848)

Because in this particular case the invoice was originally posted in January 2012, reposted in April 2012 and work order C04MK220 went into service in September 2011 and C04MK227 in October 2011, there was no impact to the AFUDC calculation related to each work order. However, due to the unknown number of reallocations throughout the project, Audit cannot quantify the overall impact. Refer to **Audit Issue #2**

<u>C04MK228 Waste Water Treatment Enhanced Mercury and Arsenic Removal System (EMARS) - $44,550</u>

Audit work completed as of March 31, 2012 reflected total reported costs of $2,262,887. The reported figure at the end of December 2012 was $2,307,437, a net change of $44,550. As of the end of March, 2012 there had been 45 Work Change Requests. Three additional WCR were documented in May, September, and December 2012 reflecting a total net change of $36,554. The overall contract with Siemens Water Technology/Northern Peabody resulted in total costs of $19,666,144, spread among this work order, and work order C04MK22B.

Contractor Labor - $43,525

There were two limited engineering releases paid to Siemens Water; one in the amount of $29,103 in September 2012, the other in the amount of $14,222 in November 2012. Audit reviewed the 2010 invoice and supporting details relating to WCR-018, piers for the EMARS mezzanine $29,103. (Refer to the August 2012 final audit report for detailed discussion of the EMARS.) Audit's review of this one item was the result of the movement from the initial posting to work order C04MK220 in 2010 to the instant work order C04MK228 in September 2012. Refer to the Indirect Cost portion of this report for work order C04MK227 regarding the timing and posting of AS&E overheads.

Indirect Costs - $1,225

The AS&E overheads were recalculated without exception. The AS&E rate for September, 0.025 applied to the $29,103 resulted in the reported $728. The rate for November, 0.035 applied to the $14,222 resulted in the reported $498. The combined $1,225 agrees with the indirect cost noted above (all figures are rounded).

C04MK229 Truck Wash

Audit work completed as of March 31, 2012 reflected total reported costs of $2,293,725. The reported figure at the end of December 2012 was $2,409,873, a net change of $116,148.

Contractor Labor - $113,129

Audit requested and reviewed invoices totaling $99,939 all of which were resource code KL, contractor labor. Specifically:

AZCO	$30,450
ES Boulos Co.	$20,037
ES Boulos Co.	$11,500
ES Boulos Co.	$37,952
	$99,939

Invoice 14232-15 from AZCO, in the amount of $30,450 was paid 12/11/2011 for 20.75% of $146,782 invoice for Balance of Plant Mechanical Equipment & piping Installation. Costs are shown on WCR 038-040, 038-053, and 038-057.

Three invoices from ES Boulos Co. were reviewed. One in the amount of $20,037 or 1.86% of Requisition #15 total $1,077,646 was received 6/1/2012, paid 8/31/2012 for Balance of Plant Electrical Erection WCR 034, $4,686 and WCR 046, $15,352.

One ES Boulos Co. invoice in the amount of $11,500 or 1.07% of Requisition #15 total $1,077,646 was received 6/1/2012, paid 8/31/2012 for Balance of Plant Electrical Erection. WCR034, $4,686 and WCR 046, $15,352.

Lastly, an ES Boulos Co invoice dated 6/1/2012 was paid 8/31/2012 in the amount of 37,952, 4.07% of the Final billing $931,649 for Balance of Plant Electrical Erection.

Indirect Costs - $3,019

Audit recalculated three monthly AS&E overhead postings in August, September, and October. The rates used were 0.0225, 0.0250, and 0.0300 respectively. The calculations were without exception.

C04MK22A Truck Scale

Audit work completed as of March 31, 2012 reflected total reported costs of $278,645. The reported figure at the end of December 2012 was $964,150, a net change of $685,505.

Materials - $57

The immaterial amount noted for Materials was not reviewed in detail by Audit.

Contractor Labor - $663,894

Contractor Labor was verified to the work order activity from April 1, 2012 through December 31, 2012 to the following charge codes:

KL-Contractor Labor	$661,586
OS-Outside Services	$ 2,308
Total Contractor	$663,894

Audit requested and reviewed six invoices all of which were resource code KL, contractor labor. No exceptions were noted.

Invoice #9 from George R Cairns & Sons total $773,153 dated 9/30/2011, paid 12/1/2011 was allocated between work order C04MK220 $594,737 (refer to the C04MK220 portion of this report) and C04MK22A $178,417. The $178,417 related to 5 lump sum construction activities, noted as:

15.1, Sedimentation and erosion control	$ 10,592
15.4, Truck Scale Foundation	$101,518
15.5, Truck Scale Building Foundation	$ 36,169
15.6, Existing fence removal	$ 3,227
15.7, Grading & Drainage	$ 26,912
	$178,417

Invoice #10 from George R Cairns & Sons total $85,057 dated 10/31/2011 paid 12/19/2012 for 2 lump sum construction activities, noted as:

15.7, Grading and Drainage	$69,970
15.10, Electrical Work Including Power Supply, Lighting and Communication	$15,086
	$85,057

Invoice #11 from George R Cairns & Sons total $273,588 dated 11/30/2011 paid 01/19/2012 for 46.79% of the $561,018 invoice for:

15.2, Receive, unload and set the truck scale	$ 10,540
15.4, Truck Scale Foundation	$ 33,839
15.5 Truck Scale Building Foundation	$ 36,169
15.6, Existing Fence Removal	$ 1,076
15.7, Grading and Drainage	$ 10,765
15.8, Asphaltic paving of access road and turnaround	$ 76,067
15.10 Electrical work including power supply, lighting, communication	$ 80,460
15.12 Catching Basin	$ 6,316
15.13, 90% of Other	$ 18,356
	$273,588

Invoice #12 from George R Cairns & Sons total invoice $367,335 dated 12/11/2011 and paid 02/16/2012 was allocated with $65,723 posted to work order C04MK22A, and the remaining $301,612 posted to work order C04MK220. The $65,721 represented the following:

Site Finalization-Phase 1	$11,237
15.2 Receive, unload and set the truck scale in the truck scale building	$10,540
15.3 Receive, unload and set the truck scale in the truck scale building	$ 5,072
15.8, Asphaltic paving of access road and turnaround	$ 8,558
15.10 Electrical work including power supply, lighting and communication	$ 5,029
15.11, Seeding, fertilizing and mulching	$25,287
	$65,723

Invoice #15 from George R Cairns & Sons total $2,782 dated 04/30/2012 paid 06/15/2012 for 1.93% of the Site Finalization – Phase 1. Specifically included on the invoice were:

15.9, Roadway markings and signage	$ 742
15.13 10% of Other	$2,040
	$2,782

Invoice #16 from George R Cairns & Sons total invoice amount was $268,534. The invoice was 39,061 dated 05/31/2012 and paid 07/12/2012, and allocated to work orders as follows:

C04MK220	$214,504
C04MK229	$ 14,969
C04MK22A	$ 39,061

Specific testing relating to work order C04MK22A is summarized:

15.8, Asphaltic paving of access road and turnaround	$10,459
15.9, Roadway markings and signage	$ 4,208
	$14,667

Audit requested clarification of the difference between the $39,061 and $14,667. PSNH provided change order #44 which was the cost of an additional 1" paving on the truck scale road.

Fees and Payments - $1,585

Fees and Payments were verified to the work order charge codes:

PS-Printing Services	$ 314
FO-Other Fees and Payments	$ 436
FO-Other Fees and Payments	$ 835
Total	$1,585

Due to the immateriality of the specific items, further review was not conducted.

Indirect Costs - $19,969

AS&E overhead amounts were recalculated by Audit. For October 2012, the rate of 0.0300 was applied to $661,829. Audit verified the total to the work order and recalculated the AS&E charge of $19,855 without exception.

For August 2012, the AS&E rate of 0.0225 was applied to $3,707. Audit verified the total to the work order and recalculated the AS&E charge of $83 without exception.

For April 2012, there were only two line items noted in the work order:

MX Material	$ 3,034
UM UVL for March	$(3,034)
Net April activity	$ -0-

However, for April an AS&E charge of $30 was noted using $3,034 as a basis against which the rate of 0.0100 was applied. It appears that the AS&E charge was in error, but due to the immateriality, Audit does not recommend a change to the work order.

C04MK22B Soda Ash $374,371

Work order C04MK22B was opened on 11/1/2011 and placed in service on 6/21/2012. Audit work completed as of March 31, 2012 reflected total reported costs of $2,313,764. The reported figure at the end of December 2012 was $2,688,135, a net change of $374,371.

The total costs were recorded as:

Materials	$ 33,162
Contractor Labor	$ 298,169
Indirect Costs	$ 10,036
AFUDC	$ 33,003
	$ 374,370

Materials - $33,162

Audit requested the invoice and supporting documentation for the $33,162. The Company provided copies of the invoices payment approvals, along with various screen prints indicating invoice details, purchase order and work order details, approvals and payment details and are discussed in more detail below.

Invoice # 9038767, dated May 1, 2012 from Emerson Process Management totaled $43,046 and indicated that it was authorized under PO 2252543 WCR 016. The invoice contained one line item described as "I/O Cards for Soda Ash Softening System Q0081 / MLS" (DCS). The terms on the invoice were "payment due in 30 days". An email was attached to the invoice from an Emerson process Management Project engineer that referred to billing for

"...Event 88- Hardware delivery". Screen prints of the payment details were provided that reflected a payment of $43,046 was authorized and made via ACH on June 4, 2012. The total payment was split 77.039% or $33,162 to C04MK22B and 22.961% or $9,884 to C04MK220 and was coded as "MX" materials.

Audit requested a copy of and was provided with WCR 016 and an explanation of how the split was determined. The WCR-016 was dated 2/2/12 in the amount of $43,046 and provided a breakdown of the items included in the total. The Company also explained that "item 1 is specific to the Soda Ash System, work order C04MK22B, and item 2 is specific to the overall wastewater treatment system, work order C04MK220" and that "the cost for in house engineering was pro-rated between the two items based on cost".

Screen prints of the authorized material request and purchase orders (#02252543) that were originally issued on November 24, 2009 for $1.4 M were provided. These were both subsequently increased by $1.0M for a total not to exceed more than $2.4 M by NTX request #5962 on 1/19/2011.

A field invoice release of payment which was signed by the project manager on 5/22/2012 was provided in conjunction with the invoice and PO and indicated that it was approved for payment. The Field Invoice Release indicated that while the invoice was dated 4/5/2012 it was not received until 5/10/2012. The contract value was reflected as $2,279,310 (WCR – 16) and that including this current invoice that $2,202,437 had been billed to date.

An Invoice Certification Statement was completed by Emerson Process Management certifying that the invoice was correct and that subcontractors had been paid in full for work performed and supplies furnished. A notarized partial release waiver was provided and signed by Emerson Process Management Contract Administrator on 5/1/2012. The partial release reflected that Emerson was contracted to furnish plant control system (DCS), the current invoice of $43,046 and that total payment to date was $1,527,091 for work and services provided prior to 5/1/2012.

Contract Labor - $298,169

Contract labor of $298,169 consisted of the following:

Vendor	Invoice #	Invoice Date	Invoice Amount
URS Energy & Construction	1429055	04/18/12	$ 22,452
URS Energy & Construction	1432201	05/16/12	$ 15,669
URS Energy & Construction	1434898	06/14/12	$ 4,959
Siemens Water Technologies	1495-28	09/17/12	$ 242,789
Siemens Water Technologies	1495-28	09/17/12	$ 12,300
			$ 298,169

Audit requested the invoice and supporting documentation for all of the invoices above. The Company provided copies of the invoices, URS approvals, payment approvals, along with various screen prints indicating invoice details, purchase order and work order details, approvals and payment details and are discussed in more detail below.

URS - $43,081

The $43,081 of contract labor from URS billings was for program management services for February 25, 2012 through June 1, 2012 and consisted of the following (all three invoices indicated authorization under PO # 02247849 agreement 092407 change order # 063):

	Total
Salaries - Regular (305.5 Hours)	$18,552
Overhead - Regular (98% of reg. sal)	$18,181
Other Direct Costs (ODC)	$ 1,457
Sub-total	$38,190
G&A @ 4% of Sub-Total	$ 1,528
Service Fee @ 8% of Sub-Total	$ 3,055
Insurance @ $0.72 per $100 total due	$ 308
Total Due	$43,081

Copies of the URS invoices and corresponding billing detail reports that reflect the URS employees providing the services, the type of service provided, the dates and number of hours worked and the base salary rates of each employee were also provided by PSNH. Audit verified the supporting documentation to each invoice with no exceptions noted.

- Other Direct Costs (ODC) were calculated at $4.80 per man-hour which agreed with the contract;
- The G&A was calculated at 4% of salaries, other direct charges, subcontractor charges and general expenses which agreed with the contract;
- The Insurance was calculated at $0.72 per $100 of expense incurred during the billing period which agreed with the contract;
- No incentive fee was calculated- see below for deviation from the contrac;.
- The Service Fee of 8%, see below for deviation from the usual contract.

Deviation from PM Contract - The Soda Ash System was not part of the original URS Program Management contract. PSNH provided a copy of the Potential Deviation Notice (PDN) signed by URS Washington Division on 8/24/2011 outlining the addition of the Soda Ash Project. The URS scope of the project included provide engineering oversight, including bid evaluation, review of revisions and additions to existing documentation, equipment and infrastructure, construction management, startup support and project management and support. The PDN noted contract changes associated with the addition of the Soda Ash System, in part, deletion of the 4% incentive and that the Profit Fee of 8% would be calculated and paid as a fixed fee without any scorecard grading system. It was also noted that the addition of the soda-ash system was expected to extend the project schedule by four months (as related to URS program management). A rough order of magnitude estimate was given as $3,572,030 (capital cost), $206,968 (services) and 1,325 man-hours.

The PM agreement indicates that each invoice shall be certified in writing as correct by Contractor Representative, however no certifications were provided with the three URS invoices mentioned above.

System screen prints were provided by PSNH for each of the invoices reflecting the invoice details and ACH payment approvals. Copies of system screen prints were provided for the material request #58137120, approved on 9/21/07 (with a need date of 9/24/07) referenced to

C04MK220 and purchase order #02238795, issued 9/27/07 both of which were authorized at $35M. The NTX listing provided by PSNH reflected that on February 4, 2011 PO #02247849 for URS Energy & Construction was increase from $35M to $46M by NTX#/MR# 5910. A note to the NTX listing indicates with an asterisk that the change is due to "multiple purchase orders due to company separation".

An accounts payable listing for URS and Washington Group was provided for the period 11/15/2007 -7/26/2012 that totaled $45,697,865 and included two different purchase orders:

PO/Contract #2238795 (Inv. Dated 11/07-1/09) (Cks Dated 12/07-2/09)	$ 8,716,184
PO/Contract #2247849 (Inv. Dated 2/09-12/12) (Cks Dated 3/09-1/13*)	$ 36,981,681
	$ 45,697,865

*Through 12/31/12.

Siemens Water Technologies and Northern Peabody LLC - $255,089

Invoice # 1495-28 dated September 17, 2012, from Siemens Water Technologies Corp. (SWT) and Northern Peabody LLC (NPI) indicated authorization under PO 02250142. The invoice was for a Progress Payment Request (# 28) and covered the period February 1 through March 31, 2012 and totaled $306,153. The invoice was allocated $128,054 to SWT and $178,099 to NPI (and included a notation that the allocations would be less escrow agent fees to be split 50/50 among the consortium members). The SWT and NPI progress payment schedule was verified to the invoice. The invoice was allocated as follows:

	Care & Custody	$ 30,000	C04MK220
WCR-032	SASS Additional Bench Scale Studies	$ 12,300	C04MK22B
WCR-034	Air Compressor Maintenance	$ 870	C04MK220
WCR-037	Soda Ash System Full Release	$ 242,789	C04MK22B
WCR-040	Install CAT 5e Cables	$ 5,972	C04MK220
WCR-042	EMARS Effluent Recycle Line	$ 14,222	C04MK228
		$ 306,153	

Screen prints were provided of the purchase order and material request approvals which both reflected a contract value approval of $14.2M issued on 12/16/2008 (for all WO that SWT and NPI were involved in).

Payment of $306,153 was approved and made via wire on November 19, 2012. The total invoice of $306,153 was coded to "KL", contract labor, with a total of $255,089 allocated to C04MK22B ($242,789 + $12,300).

PSNH provided a contract change log for SWT and NPI that reflected the original contract price of $13.593M and 48 WCRs totaling $6.072M (issued between 4/09 – 12/12) for a cumulative total of $19.666M along with copies of the above WCR.

- WCR-032 was dated 1/3/2012 and signed by the contractor on 1/5/2012. It authorized the contractor to proceed with the bench scale treatability test of the FGD purge sample for a lump sum price of $12,300 which agrees with that portion of the invoice.
- WCR- 037 Rev. 1 was dated 11/30/2012 and signed by the contractor on 12/5/2012. The WCR was a revision to the original WCR-037 and stated in part that "This Revision actualized the Reimbursable costs and converts this entire WCR into Lump Sum". Authorization included $1,148,903 of contract work for the Soda Ash System and

$658,788 of subcontract work for the Soda Ash System for a total lump sum of $1,807,691 with invoicing and payments in accordance with the existing contract terms and conditions. Including this payment of $242,789 a total of 63 percent or $1,191,351 had been paid.

- WCR-040 Rev 1 indicated it was for the installation of six CAT5E network cables and accessories. The revision indicated that the original WCR authorized a Time and Material, not to exceed $9,275 but that the actual costs were $5,972, which agrees with that portion of the invoice.

PSNH provided a notarized partial release waiver that reflected SWT and NPI were contracted to furnish the wastewater treatment system and reflected that total payments of $18,991,928 had been made (including the current partial payment of $306,153) for work performed prior to 3/31/2012.

A copy of the Siemens wire remittance request provided that the revised contract value was $19,701,009 consisting of the original contract value of $13,593,280 and $6,107,729 of modifications. It also indicated that $18,991,928 had been billed to date which agreed with the partial release waiver.

The escrow disbursement instructions submitted by the consortium of Siemens Water Technologies Corp and Northern Peabody, LLC dated 9/17/2012 indicated it was for progress payment request #28, no retention was deducted.

PSNH provided an accounts payable listing for SWT and NPI that reflected total payments of $19,666,144 for the following two POs through 2/2013 (which agrees with the contract change log):

PO-2246009 (Inv. Dated 1/09-4/09)(Cks Dated 3/09-7/09)	$1,922,937
PO-2250142 (Inv. Dated 08/09-12/12) (Cks Dated 10/09-2/13)	$17,743,207
	$19,666,144

Audit compared the final progress payment schedule attached to the invoice agreed with the WCR log, without exception.

Indirect Costs - $10,036

Indirect costs of $10,036 (noted as ZJ - ASE Daily Calc.) associated with WO C04MK22B consisted of the following (also see indirect costs under WO C04MK227 of this report for a more detailed explanation):

Posted		Invoices Posted to WO	AS&E Rate	AS&E Charge
May 2012	URS (Inv. #1429055) & Emerson (Inv. #9038767)	$ 55,614	0.0125	$ 695
July 2012	URS (Inv. #s 1432201 & 1434898)	$ 20,628	0.0200	$ 413
Nov. 2012	Siemens (Inv. # 1495-28)	$ 255,089	0.0350	$ 8,928
		$ 331,331		$10,036

AFUDC - $33,003

AFUDC costs included in WO C04MK22B totaled $33,003 for the months of April, May and June of 2012. The soda ash system, WO C04MK22B, was placed in service on 6/21/2012 and consisted of the following:

YD-AFUDC (Debt)	$ 17,078
YE-AFUDC (Equity)	$ 15,925
Total AFUDC	$ 33,004

Audit verified that the AFUDC charges stopped as of June 2012 when the WO was placed in service and requested the calculations for the AFUDC charges which are summarized below and tied to the AFUDC charges booked to the Soda Ash workorder.

Month	CWIP BOM Base	CWIP EOM Base	CWIP Base (BOM + EOM /2)		Rate	Base * (Rate /12)
April 2012	$ 2,296,919	$ 2,296,919	$ 2,296,919	Debt	0.0221	$ 4,230
				Equity	0.0513	$ 9,819
				Total	0.0734	$ 14,049
May 2012	$ 2,296,919	$ 2,353,228	$ 2,325,074	Debt	0.0319	$ 6,181
				Equity	0.0136	$ 2,635
				Total	0.0455	$ 8,816
June 2012	$ 2,353,228	$ 2,353,228	$ 2,353,228	Debt	0.0340	$ 6,667
				Equity	0.0177	$ 3,471
				Total	0.0517	$ 10,138
			Total Debt			$ 17,078
			Total Equity			$ 15,925
			Total AFUDC			$ 33,003

Audit recalculated the charges based on the method used and rates and average CWIP bases provided by the Company. The above calculations, which agreed to the charges booked in the workorder, indicate that the AFUDC rate calculated was an annual rate and therefore needed to be divided by 12. PSNH used a simple average CWIP base beginning plus ending monthly balance divided by 2, when calculating the AFUDC.

Audit asked PSNH why there would be an ending balance in June if the project had been placed in service on 6/21/2012. PSNH explained that "*NU utilizes a half month convention. AFUDC is not applied to a work order if the in service date is the fifteenth of the month or earlier. If the in service date is the sixteenth of the month or later a full month of AFUDC is charged for that month and none is charged thereafter. Therefore, because the in-service date for WO CO4MK22B was after the fifteenth, AFUDC was applied as a full month using the average of the beginning-of-month balance and the final WO balance. Otherwise, AFUDC is calculated on the average of the work order's balance at the beginning of the month and the end of the month*".

Audit did not review the criteria or mechanisms used by the Company to determine the in service dates, it was noted that of the eleven workorders in the project all but three were placed in service after the 15th of the month.

Audit asked why the AFUDC was being calculated on a monthly basis when FERC requires it to be calculated annually. PSNH explained that "in 1981, during the construction of Millstone, Northeast Utilities obtained a special approval from FERC to compute its AFUDC rates on a monthly basis instead of an annual basis as required by the provisions of Order No. 561". Audit requested and was provided with a copy of the authorization.

The letter from NU to FERC dated October 19, 1981 requested in part "due to rapid changes in short-term debt requirements and rates that the NU Companies and other companies are currently experiencing, the NU Companies determine their AFUDC rates on a monthly basis. This provides better tracking of the cost of capital devoted to construction…" and "NU does not recommend a change from the formula concept, but does recommend that certain components of the AFUDC formula that are now fixed for stated periods of time be allowed to change when the capital structure and the related capital costs change".

NU also asked "*…that its operating companies be allowed to reflect in their monthly determination of AFUDC, the components of capital and their cost levels at the end of the prior month for all the components of capital utilized in the formula for the current month's determination of AFUDC*". On the summary of FERC Formula AFUDC attached to the letter the Company further explained "The AFUDC rate calculated from FERC Order No. 561 does not allow any recognition of a change in permanent capitalization in the year of issue. In light of the unprecedented capital costs for permanent finance, the weighted cost of capital may change significantly during the year these financings occur".

FERC responded with its approval to NU's request on November 13, 1981. In its letter of approval FERC reiterated that NU was not "*… requesting a change from the formula concept of Order No. 561 but ask that the operating companies be permitted to reflect in a monthly determination of AFUDC the balances and cost levels as of the end of the preceding month for all components of capital used in the formula*". FERC further stated "*not specifically stated in your request but presumed for purposes of this response is that construction work in progress balances and short-term debt balances and cost rates would continue to be estimated but only for the month that the AFUDC rate is to be used" and "also, it is assumed that compounding of previously capitalized AFUDC will be no more frequently than semi-annually*".

The Company provided the following AFUDC rates for 2011 through 2012:

	2011			2012		
Month	Total	Debt (YD)	Equity (YE)	Total	Debt (YD)	Equity (YE)
January	0.0621	0.0228	0.0393	0.0673	0.0221	0.0452
February	0.0664	0.0255	0.0409	0.0734	0.0221	0.0513
March	0.0708	0.0272	0.0436	0.0734	0.0221	0.0513
April	0.0727	0.0247	0.0480	0.0734	0.0221	0.0513
May	0.0776	0.0278	0.0498	0.0455	0.0319	0.0136
June	0.0794	0.0282	0.0512	0.0517	0.0340	0.0177
July	0.0697	0.0230	0.0467	0.0418	0.0261	0.0157
August	0.0661	0.0232	0.0429	0.0626	0.0626	-
September	0.0683	0.0238	0.0445	0.0285	0.0148	0.0137
October	0.0763	0.0243	0.0520	0.0428	0.0206	0.0222
November	0.0763	0.0243	0.0520	0.0487	0.0192	0.0295
December	0.0763	0.0243	0.0520	0.0580	0.0221	0.0359

The long-term debt used to calculate the AFUDC rates for 2011 was $820,490,000 with an associated cost percentage of 5.18% and the equity used was $1,746,938,000 of common stock with an associated cost percentage of 9.81%. The long-term debt used to calculate the AFUDC rates for 2012 was $982,377,000 with an associated cost percentage of 4.63% and the equity was $1,078,362,000 of common stock with an associated cost percentage of 9.81%. The short-term debt and associated cost and the CWIP balances fluctuated each month and were based on the previous month's information.

Audit requested and was provided with PSNH's formal policies and procedures regarding AFUDC (Revised June 16, 2006). The policies and procedures confirmed the Company's half month convention treatment for WO CO4MK22B. The policies and procedures also addressed the Company's special treatment of major projects "appropriate major projects will be charged with AFUDC to the specific date that the construction project is 'placed in or ready for service'."

Audit requested the AFUDC calculated for 2011 through 2012 by month and work order. The Company provided a schedule of the calculated AFUDC by work order for August 2011 through June 2012. Audit reviewed the schedule and calculation details for reasonableness, compliance with the procedures and to verify that the Company was not compounding previously capitalized AFUDC more often than semi-annually.

Audit noted that WO CO4MK229, Truck Wash, was opened on 9/27/2011 and closed on 2/22/2012 reflected as of September 30, 2011 (July – December 2011) debt AFUDC of $65,164 and equity AFUDC of $102,911 on an AFUDC base of $1,834,780. Audit requested clarification of the amounts and was told that *"the work orders established to care for equipment or systems not going into service with the scrubber (220 WO) in September 2011... included the dollars transferred to the new work orders (including 229), as well as all the associated journals."*

Audit also recalculated the AFUDC charged to WO C04MK220 in September 2011 based on the Company's policies and procedures for major projects. This was the "main scrubber" work order that was placed in service on 9/28/2011 with a 12/31/2012 value of $345,748,710. The AFUDC calculations provided by the Company indicated that $625,742 of debt and $1,169,980 of equity AFUDC were calculated for the month of September which calculates out to a full month of AFUDC. A journal entry crediting the difference between the full month and the appropriate 27 day calculation was provided to Audit. $214,737 of the AFUDC was reversed on October 5, 2011.

C04MK226 Secondary Waste Water

Audit work completed as of March 31, 2012 reflected total reported costs of $25,792,414. The reported figure at the end of December 2012 was $27,866,656, a net change of $2,074,242.

NU Labor - $3,308

NU labor costs were not reviewed in detail due to the immateriality of the amount. Refer to test work conducted in work order C04MK220.

Materials - $152,441

Resource Code MX;	
Direct Material Expense	$150,306
Overhead Stores Expense	1,965
Total	$152,271
Reported Materials Expense	$152,441
Cost Detail	$152,271
Immaterial Variance	$170

Contractor Labor - $1,904,352

AZCO	$1,648,081
George Cairns	129,329
Total	$1,777,410

AZCO Invoice #48165-07 - $1,648,081

$1,648,081 or 89.1% of the project costs were posted to Work Order C04MK226 and paid on 6/13/2012. AZCO work was performed on a time and materials basis and is billed in accordance with the rates and mark-ups in the contract. The contract terms included Materials and Rentals. Mark-up rates are as follows;

- Materials purchased by Contractor at the direction of the Construction Manager – 10%
- Lower Tier Subcontractor cost expended at the direction of the Const. Manager – 10%
- Equipment or other items rented at the direction of the Construction Manager – 5%

Detail of AZCO Invoice Costs:

T&M Labor	$532,858
T&M Subsistance	23,125
T&M Materials (at 10% MU)	321,628
T& M Subcontracts (at 10% MU)	653,635
T&M AZCO Tools & Equipment (>$5,000)	14,077
T&M Outside Rentals (at 5% MU)	49,645
3rd Party Fuel, Oil & Grease	17,813
T&M Expenses	1,619
2nd Shift Rate Differential	6,480
Home Office 2nd Effect	27,202
Total	$1,648,081

AZCO labor charges totaled $532,858 with no mark-up on labor costs per the contract. The Company provided the timesheets, the payroll weekly labor cost break down and the vendor invoices. All labor rates and hours worked shown on the timesheets agreed with PSNH's Payroll Weekly Craft Cost Breakdown sheets with no material exceptions.

Audit reviewed 63% of invoices for Materials, sampling various line items. Materials were $76,993 and with a 10% mark-up per the contract, totaled $84,692. This amount agreed with PSNH's Invoice Drilldown Detail. No exceptions were noted.

Sub-Contractor Costs were $594,213 with Audit testing $319,189 or 54%. Including a 10% mark-up per the contract, total sub-contractor cost was $653,635. The work was performed by five different sub-contractors and was for the painting of structural steel, the B-I System and insulation. Invoices greater than $5,000 were tested for accuracy and timeliness. Audit tied the sample invoice amounts to PSNH's Invoice Drilldown Detail sheets with no exceptions.

Outside Rentals were $27,433 per PSNH's Drilldown Cost sheet. Including a 5% mark-up rental costs totaled $34,761. Equipment was for modular structures which were invoiced monthly by the Rental Company and Booms/Cranes for specific heights and terrain and were rented on a weekly basis. Invoices greater than $1,000 were tested. Audit tied the sample invoice amounts to PSNH's Invoice Drilldown Detail sheets with no exceptions.

Employee Expenses - $40

This amount was considered immaterial and not reviewed by PUC Audit.

Indirect Costs - $14,059

The following resource codes comprised the Indirect Costs:

ZC – Stores Allocation	$170
ZJ – AS&E Allocation	$13,889
Total Indirect cost	$14,059

Refer to test work conducted in work order C04MK227, Scrubber Equipment.

George Cairns (Foundations & Underground) Invoice #10 - $129,329

Audit reviewed the George Cairns & Sons invoice dated July 12, 2012 in the amount of $129,329. The charges pertain exclusively to a change order for an outside containment slab. No break out of labor or material costs was provided.

The Company provided Audit with the Scope Change Request and Authorization Form #22 which stipulated the work completed, the amount of the project, the extended completion date and the terms of the lump sum contract.

The Company provided a project justification paper stating "that the modifications were necessary in order to create a more positive and complete drainage of the area. The original design utilized the SWWT process sump as a portion of the containment volume. As operation progressed, it was determined that additional water entering the system would adversely affect the process. The containment slab was extended to meet all SWPPP requirements for a stand-alone containment and not utilize the process sump in the volume calculations."

PSNH provided the computer screen printouts for the invoice detail, payment detail and the routing list which showed the personnel authorizing the payment of the invoice on August 1, 2012. All approvals followed the Company's Authorization and Approval policy.

C04MK22C SWWT Second Effect

Audit work completed as of March 31, 2012 reflected total reported costs of $2,643,408. The reported figure at the end of December 2012 was $3,866,534, a net change of $1,223,126.

NU Labor - $77,064

Direct Labor	$39,664
Non Productive Time	6,481
Stores Expense	30,919
Total	$77,064

Materials - $7,873
Resource Code MX;

Direct Material Expense	$7,346
Overhead Stores Expense	527
Total	$7,873

Contractor Labor - $1,048,594

AZCO	$826,749
Electrical Corporation of America	201,133
Atlantic Contracting	34,172
AQUATECH	(13,460)
	$1,084,594

Audited Invoices;

AZCO Invoice #48165-11 - $826,749

$826,749 or 73% of project completion was posted to Work Order C04MK22C on October 18, 2012, and $304,655, or 27% of the project was posted to Work Order C04MK226.

The AZCO contract states that work is to be performed on a time and materials basis and is billed in accordance with the rates and mark-ups in the contract. The contract terms included Material & Rental Mark-up rates as follows;

- Materials purchased by Contractor at the direction of the Construction Manager – 10%
- Lower Tier Subcontractor cost expended at the direction of the Const. Manager – 10%
- Equipment or other items rented at the direction of the Construction Manager – 5%

The invoice reflected the following details:

T&M Labor	$332,122
T&M Subsistance	18,625
T&M Materials (at 10% MU)	84,692
T& M Subcontracts (at 10% MU)	607,872
T&M AZCO Tools & Equipment (>$5,000)	20,744
T&M Outside Rentals (at 5% MU)	34,761
3rd Party Fuel, Oil & Grease	60
T&M Expenses	4,270
Home Office Travel	896
Home Office	27,202
2nd Shift Rate Differential	160
Total	$1,131,404

Labor charges were $332,122 with no mark-up on labor per the contract. The Company provided the timesheets, the payroll weekly labor cost break down and the vendor invoice. All labor rates and hours worked shown on the timesheet agreed with PSNH's Payroll Weekly Craft Cost Breakdown sheets with no material exceptions.

Costs for Materials were $76,993 and with a 10% mark-up per the contract, totaled $84,692. Audit reviewed 63% of invoices for materials, sampling various line items. Audit tied the Vendor's invoice amounts and/or specific line items to PSNH's Invoice Drilldown Detail sheets with no exceptions.

Cost for Sub-Contractors came to $594,213 with Audit testing 54% or $319,189. Including a 10% mark-up per the contract, total sub-contractor cost was $607,872. Invoices greater than $5,000 were tested. The work was performed by five different sub-contractors and was for the painting of structural steel and the B-I System and insulation. Audit tied the Vendor's invoice amounts and/or specific line items to PSNH's Invoice Drilldown Detail sheets with no exceptions.

Outside Rentals totaled $33,106 and with a 5% mark-up came to $34,761. Invoices greater than $1,000 were tested. Equipment rentals were for modular structures which were invoiced monthly by the Rental Company and Booms/Cranes for specific heights and terrain. Audit tied the Vendor's invoice amounts to PSNH's Invoice Drilldown Detail sheets with no exceptions.

Electronics Corporation of America (ECA), Invoice #46339 - $158,700

Change Order #13 charged to C04MK22C	$118,016
Change Order #15 charged to C04MK226	34,562
Change Order #18 charged to C04MK226	6,122
Total	$158,700

$118,016 or 74% of project completion was posted to Work Order C04MK22C on April 30, 2012, the remaining 26% of the project was posted to Work Order C04MK226.

PSNH provided the screen printouts for the invoice detail, payment detail and the routing list which showed the personnel authorizing the Application for Payment in the amount of $158,700 and paid on 5/15/2012. All approvals followed the Company's Authorization and Approval policy.

Audit reviewed WO C04MK22C charged on 5/2012 in the amount of $118,016. This was associated with change order #13 (addition of 2nd effect) and was executed lump sum. The Application for Payment dated 4/25/2012 showed the total scheduled value of the change order at $361,230 with work completed and previous applied of $213,066 and this application amount of $118,016. Total completion and stored to date of $331,082 or 88 %, with the balance to finish of $45,148.

Audit reviewed the Scope Change Request and Authorization form stipulating the revisions to the original contract which describes the materials and equipment changes.

The Contract Labor charges taken from the time sheets were $31,411. Subcontractor costs were marked up 10% as per the contract and all pay rates and hours worked agreed with the rate and timesheets.

Rentals/Materials and mark-up totaled $3,150 (2,561+303+286) and included a 5% mark-up per the contract. Audit reviewed all the invoices for the rental of meters and a portable 75 KV HIPOT tester with no exceptions noted.

Atlantic Contracting Invoice #851710 - $6,756

Audit reviewed an invoice for contract labor charges from June 18 through June 24, 2012 in the amount of $6,756. The project was a Time and Materials contract with only labor charges and described on the invoice as Maintenance/AQUATECH SWWT 2nd Effect Insulation Work.

The Company provided the Labor Material/Equipment Report from Atlantic Contracting showing the employee name, the work date and the hourly rates. The Report was then tied back to the timesheets and the vendor invoice. Timesheets were handwritten and included the description of the work, employee name, classification, the day and hours worked and were signed and dated by PSNH. Audit found no exceptions.

Atlantic Contracting Invoice #852305 - $6,844

Audit reviewed the invoice for contract labor charges from June 25 through July 01, 2012 in the amount of $6,844. The project is described as Maintenance/AQUATECH SWWT 2nd Effect Insulation Work.

The Company provided the Labor Material/Equipment Report from Atlantic Contracting and a detailed labor report which included the employee name, the work date and the hourly rates. The Report was then tied back to the timesheets and the vendor invoice.

Timesheets were handwritten and included the description of the work, employee name and classification, the day and hours worked. The timesheets were signed and dated by PSNH. This was a Time and Materials contract with only labor charges. Audit found no exceptions.

Employee Expenses - $1,400

Audit reviewed the work order summary which reflected 32 entries ranging from $10 to $100. Each entry was posted to the work order in June 2012. Audit requested clarification of the amounts and was told that the payments "were meal expenses for Merrimack Station union employees who worked overtime on the Clean Air Project SWWT 2nd Effect." Employees are paid a flat $10 for breakfast and lunch and $20 for dinner. Audit reviewed the schedule of employees and weeks/reimbursements provided, with no exception noted.

Rents and Leases - $525

The amount is considered immaterial and was not reviewed by Audit.

Indirect Costs - $28,878

The indirect costs of $28,878 were for AS&E overhead (ZJ). Refer to test work conducted in work order C04MK227, Scrubber Equipment.

AFUDC - $39,306

Refer to the discussion in work order C04MK22B, Soda Ash.

General Ledger as of 3/ 31/2012, 12/31/2012, and 3/31/2013

As noted in the August 2012 audit report, as of **3/31/2012**, the following totals were posted to the general ledger accounts identified:

	Closed WO to 101.01	Completed not Classified to 106.01	CWIP to 107.09	Closed WO Cost of Removal to 108.01	Open WO Cost of Removal to 108.08	Retirements Booked account not stated	Inventory to 154.01
C04MK221	$ 1,074,906						
C04MK222	$ 16,930,556			$ 26,418			
C04MK225	$ 2,014,715					$ 98,053	
C04MK220		$ 341,227,164			$ 732,335	$ 192,198	
C04MK227		$ 12,678,510					
C04MK228		$ 2,262,887					
C04MK229		$ 2,293,725					
C04MK22A		$ 278,645					
C04MK22B			$ 2,313,764				
C04MK226		$ 25,792,414					
C04MK22C			$ 2,643,407				
C04MK224							$ 86,385
	$ 20,020,177	$ 384,533,345	$ 4,957,171	$ 26,418	$ 732,335	$ 290,251	$ 86,385
			$ 409,510,693				

Updated general ledger information as of **12/31/2012** was:

	Closed WO to 101.01	Plant in Srv Clearing 101.51	Completed not Classified to 106.01	CWIP to 107.09	Closed WO Cost of Removal to 108.01	Open WO Cost of Removal to 108.08	Retirements Booked account not stated	Inventory to 154.01
C04MK221				$ 1,074,906				
C04MK222		$ 16,930,556			$ 26,418			
C04MK225		$ 2,014,714					$ 98,053	
C04MK220				$ 344,973,645		$ 755,065	$ 192,198	
C04MK227				$ 12,921,885				
C04MK228				$ 2,307,437				
C04MK229				$ 2,409,873				
C04MK22A				$ 964,150				
C04MK22B				$ 2,688,135				
C04MK226				$ 27,866,656				
C04MK22C				$ 3,866,534				
C04MK224								$ 86,385
	$ -	$ 18,945,270	$ --	$ 399,073,221	$ 26,418	$ 755,065	$ 290,251	$ 86,385
				$ 418,018,491				

Audit updated the 3/31/2012 general ledger detail with the information provided for the final period ended **3/31/2013:**

	Closed WO to 101.01	Completed not Classified to 106.01	CWIP to 107.09	Closed WO Cost of Removal to 108.01	Open WO Cost of Removal to 108.08	Retirements Booked account not stated	Inventory to 154.01
C04MK221	$ 1,074,906						
C04MK222	$ 16,930,556			$ 26,418			
C04MK225	$ 2,014,714					$ 98,053	
C04MK220		$ 344,209,274			$ 755,065	$ 192,198	
C04MK227		$ 12,921,885					
C04MK228	$ 2,340,401						
C04MK229	$ 2,430,588						
C04MK22A	$ 964,150						
C04MK22B	$ 3,342,529						
C04MK226		$ 27,950,618					
C04MK22C		$ 3,847,178					
C04MK224							$ 86,385
	$ 29,097,844	$ 388,928,955	$ -	$ 26,418	$ 755,065	$ 290,251	$ 86,385
			$418,026,799				

The final general ledger posting of capital costs does not reflect the August 2012 recommended reduction of $441,713 (which Audit recommended should have been expensed rather than capitalized), nor does it reflect the recommended reduction of AFUDC in the amount of $58,483. **Audit Issue #1**

The incremental change in costs from December 2012 $417,518,295 through March 2013 $417,526,603 is $8,308, or 0.002% of the 12/31/2012 costs posted to the general ledger. The amount was not considered material. Therefore Audit has concluded the fieldwork relating to the Clean Air Project.

Audit compiled the following summary of the Clean Air Project, for ease of view, to demonstrate that the total cost for the Clean Air Project should be $417,526,603. This total does not reflect any AS&E over or under charging due to reallocating invoices among work orders, not does it reflect any AFUDC impact of the AS&E reallocations.

		12/31/2012		3/31/2013	
		General Ledger		General Ledger	
C04MK220	Main Scrubber-total capital	$	344,973,645	$	344,209,274
C04MK220	Main Scrubber-cost of removal	$	775,065	$	775,065
		$	345,748,710	$	344,984,339
C04MK21	E Warehouse	$	1,074,906	$	1,074,906
C04MK222	Electric Power-capital	$	16,930,556	$	16,930,556
C04MK222	Electric Power-cost of removal	$	26,418	$	26,418
		$	16,956,974	$	16,956,974
C04MK225	The Meeting Place	$	2,014,714	$	2,014,714
C04MK226	Secondary Water	$	27,866,656	$	27,950,618
C04MK227	Scrubber Equipment	$	12,921,885	$	12,921,885
C04MK228	EMARS	$	2,307,437	$	2,340,401
C04MK229	Truck Wash	$	2,409,873	$	2,430,588
C04MK22A	Truck Scale	$	964,150	$	964,150
C04MK22B	Soda Ash	$	2,688,135	$	3,342,529
C04MK22C	SWWT 2nd Effect	$	3,866,534	$	3,847,178
	TOTAL CAPITAL	$	418,018,491	$	418,026,799
	TOTAL COST of REMOVAL	$	801,483	$	801,483
	TOTAL	$	418,819,974	$	418,828,282
	LESS Cost of Removal	$	(801,483)	$	(801,483)
Audit Issue #1	LESS Recommended Adjustment	$	(441,713)	$	(441,713)
Audit Issue #1	LESS AFUDC for Spare Booster Fan	$	(58,483)	$	(58,483)
	ADJUSTED CAPITAL for CAP	$	417,518,295	$	417,526,603

Audit Issue #1

Classification of Clean Air Project Costs

Background

The audit report issued in August 2012 contained recommended adjustments to the costs reviewed from inception of the Clean Air Project through March 31, 2012, in the amount of $441,713.

The August 2012 report also included Audit Issue #1 relating to a spare booster fan which resulted in the accumulation of AFUDC in the amount of $58,483

Issue

Audit understands that PSNH generally disagreed with the recommended adjustments as well as the exclusion of the spare booster fan for AFUDC calculation.

Recommendation

Audit encourages the Company to review the accounting treatment of the AFUDC related to the spare booster fan, as well as the detailed listing of incidental items recommended to be expensed rather than capitalized. The adjustments and AFUDC exclusion are reiterated for purposes of this final cost review.

PSNH Response

As encouraged by Audit, PSNH has reviewed the accounting treatment of both the AFUDC related to the spare booster fan as well as the detailed listing of items recommended to be expensed rather than capitalized. While PSNH understands Audit's recommendation, PSNH continues to believe the accounting treatment used for this project, and specifically these two items, is consistent with the Company's accounting guidelines, processes, and procedures.

The appropriateness of accruing AFUDC as funds are disbursed for construction expenditures is an acceptable industry standard and is supported by SFAS 71 and SFAS 34 as explained with the attached white paper, 'Milestone Payments Associated with Large Equipment Purchases'. Please see the separate attachment in our email response.

PUC Audit copied the white paper into this report below:

Milestone Payments Associated with Large Equipment Purchases

Introduction
With the increased size and complexity of our capital program, NU is entering into a growing number of nontraditional equipment purchase contracts. This large equipment, such as autotransformers and coal unloading cranes, is typically built to specific NU specifications with limited opportunities for the vendor to sell this equipment into the marketplace should NU not take delivery. With growing concerns over the global economy, including commodity pricing, foreign exchange rates, supply chain disruptions, availability of credit, and critical skill labor shortages, our vendors are mitigating such concerns and risks by requesting progressive payments along the design, manufacturing, shipment, and installation phases of equipment purchase. As a result, some of our large equipment purchase contracts call for milestone (or progress) payments with large, up-front payments several months prior to ownership passing to NU. Depending on the type of equipment purchase and related contract, additional risk mitigation tools such as letters of credit and special deposits are also employed by both NU and the vendor.

Below is an example of a typical milestone payment arrangement for an autotransformer:

Autotransformer (Single Phase)
10% Issuance of PO
15% Design drawings approved - *month 3*
20% Completion of Factory Acceptance tests - *month 12 - 15*
30% Deliver to pad - *month 16 - 19*
20% Substantial completion (dressed, filled, tested, and ready for energization) - *month 18 -20*
5% Final Acceptance - *month 20 - 24.*

From an accounting standpoint, the milestone payment arrangement presents a concern whether such payments should be recorded as a prepayment or a construction asset (CWIP). From the above payment arrangement, delivery, installation, and acceptance do not occur for several months after payments are made. On the surface, these payments represent prepayments, since transfer of title, ownership and risk of loss has not occurred. However, a closer examination of the nature of the equipment contract supports recording the payments to construction work in progress (CWIP).

Prepayment Treatment
The above payment schedule calls for significant payments, as a percent of the purchase price, made to the vendor prior to transfer of ownership or risk of loss. An argument can be made to record these payments as prepayments. However, prepayments tend to relate to current period expenses (prepaid pension expense, prepaid property taxes, prepaid insurance, etc.), not yet incurred, as opposed to a long-lived physical asset. By this definition, prepayments are classified as short-term assets, unlike physical equipment.

Prepayments are recorded in Account 165 under the FERC Uniform Chart of Accounts. Our Transmission and Generation jurisdictions allow rate base treatment for prepayments. Consequently, the prepayment earns a current cash return, as opposed to accruing non-cash AFUDC under a CWIP asset. *However, AFUDC is appropriate under FERC and GAAP rules, see CWIP section below for further details.* Finally, prepayment treatment would require a reclassification from a short-term asset (Account 165) to a long-term classification for SEC reporting purposes, resulting in inconsistent FERC vs. SEC reporting treatment.

Construction Asset (CWIP) Treatment
The above payment arrangement will become more prevalent for capital intensive companies, like utilities. As result of a world-wide credit crunch, volatility in raw materials, disruptions in supply chains, and skilled labor shortages, manufacturers mitigate such risks through the above type of payment arrangement. In addition, NU, much like other companies, requires a number of unique manufacturing specifications. As a result, the manufacturer, at the end of the manufacturing process has a uniquely-speced piece of equipment on their hands without a marketplace to sell it into. This situation results in progressive ownership and liability for damages at the start of the manufacturing process.

Progressive ownership is relevant in this situation because the vendor is manufacturing a unique asset for NU, in which a ready marketplace does not exist. If NU does not take possession of the equipment, the manufacturer is left with equipment it can not sell. Under such circumstances, the manufacturer would surely seek damages against NU. Progressive ownership treatment has been used by NU in the past. In the 1990s, the turbine replacement at Milestone Unit 2 required a uniquely manufactured turbine. NU was liable to the manufacturer for non-possession of the turbine at the start of the design and manufacturing process. Progress payments on the turbine were recorded directly to CWIP. More recently, the LNG tank in Waterbury, CT and the wood plant at Schiller Station were recorded directly to CWIP because of their uniqueness, turn-key, and on-site construction.

In November of 2008, NU polled a number of EEI utility companies at an industry roundtable event, regarding this subject. Overwhelmingly, the EEI companies would record the progress payments directly to CWIP. By recording the progress payments to CWIP, AFUDC would accrue on the equipment until it's placed in-service. AFUDC is appropriate in this case as funds are being disbursed directly for construction expenditures prior to the projects' in-service date. CWIP provides the mechanism to capitalize AFUDC under FERC accounting rules.

The appropriateness of AFUDC on milestone/progress payments is supported by SFAS 71 and SFAS 34. SFAS 71, Accounting for the Effects of Certain Types of Regulation, allows capitalization of AFUDC equal to the amount that would be capitalized under FAS 34, as long as the amounts are allowable costs for rate-making purposes (See paragraph 15 excerpt below). We believe the AFUDC on progress payments is collectible in accordance with FERC rules, as funds are being disbursed directly for construction expenditures prior to the projects' in-service date. CWIP provides the mechanism to capitalize AFUDC under FERC accounting rules.

Furthermore, FAS 34, Capitalization of Interest Cost, specifies that interest should be capitalized on deposits and progress payments, supporting CWIP classification and AFUDC accrual (see paragraph 9 excerpt below).

SFAS 71, paragraph 15:

Allowance for Funds Used during Construction

15. In some cases, a regulator requires an enterprise subject to its authority to capitalize, as part of the cost of plant and equipment, the cost of financing construction as financed partially by borrowings and partially by equity. A computed interest cost and a designated cost of equity funds are capitalized, and net income for the current period is increased by a corresponding amount. After the construction is completed, the resulting capitalized cost is the basis for depreciation and unrecovered investment for rate-making purposes. In such cases, the amounts capitalized for rate-making purposes as part of the cost of acquiring the assets shall be capitalized for financial reporting purposes instead of the amount of interest that would be capitalized in *accordance with FASB Statement No. 34, Capitalization of Interest Cost. Those amounts shall be capitalized only if their subsequent inclusion in allowable costs for rate-making purposes is probable. The income statement shall include an item of other income, a reduction of interest expense, or both, in a manner that indicates the basis for the amount capitalized.*

SFAS 34, paragraph 9.a)

9. Interest shall be capitalized for the following types of assets ("qualifying assets"):

a. Assets that are constructed or otherwise produced for an enterprise's own use (including assets constructed or produced for the enterprise by others for which deposits or progress payments have been made)

Other Considerations

In light of the emergence of equipment contracts with growing complexities, many contracts require some type of upfront collateral, by both parties, in the form of special deposits or letters of credit. Such collateral protect either the manufacturer or NU in the event of default by the other party.

In regard to special deposits, NU places cash in a bank account that the manufacturer/vendor has draw-down rights to. As cash is drawn-down, a prepayment or a construction asset (CWIP) is created.

In the case of the letters of credit, two scenarios are possible. First, if NU provides a letter of credit to the manufacturer, we are assuring economic performance on our end to complete the equipment purchase. Assuming delivery and payment take place, the letter of credit is never executed. However, if NU should default on its obligations under the contract, the manufacturer will settle its damages through execution of the letter of credit. If this happens cash is expended and a loss is incurred, unless some asset value (prepaid or construction) can be salvaged.

In the second scenario, the manufacturer provides the letter of credit to NU to assure economic performance on their end to complete the manufacturing and installation of the equipment. If the manufacturer defaults, NU would execute the letter of credit to cover damages for nonperformance. If this happens, cash would increase and amounts due from the manufacturer (a receivable) would settle. Existing prepayments or construction assets would be written off against the deferred credit established to offset the manufacturer receivable.

Although the use of special deposits and letters of credit to assure contract performance is more prevalent due to the complexity of various economic drivers, the use of such instruments, whether executed or not, does not weigh into the prepayment vs. construction asset debate. In the event of a default, on either side, the prepayment/construction asset debate is outweighed by impairment and other loss contingencies, since impairment would be required regardless of its classification.

Conclusion

The prepayment vs. construction asset debate becomes clearer when the substance of fact patterns are examined. The facts surrounding this issue are as follows:

Prepayments relate to current period expenses (prepaid pension expense, prepaid property taxes, prepaid insurance, etc.), not yet incurred, as opposed to a long-lived physical asset.

By this definition, prepayments are classified as short-term assets, unlike physical equipment.
The progress payments in question directly relate to construction assets, which are long-term in nature.
The vendor, through a specific job order, is manufacturing a unique asset for NU, in which a ready marketplace does not exist. If NU does not take procession of the equipment, the manufacturer would surely seek damages against NU.
NU in past has employed this treatment for progress payments in the Millstone 2 turbine replacement, the LNG tank and the wood burner at Schiller Station.
Other EEI companies would record the progress payments directly to CWIP.
AFUDC is appropriate in this case as funds are being disbursed directly for construction expenditures prior to the projects' in-service date. CWIP provides the mechanism to capitalize AFUDC under FERC accounting rules. *This is supported by SFAS 71 and SFAS 34.*
The prepayments are better described as construction assets, reflecting the true nature of the transaction, vs. as a short-term prepayment or long-term "other" debit.

Base on the above set of facts, we conclude the prepayments represent construction expenditures which should be directly capitalized as a construction asset (CWIP). However, because of the nature of these transactions NU will disclose the above recommended accounting treatment in the footnotes to our financial statements.

1/21/2009

Audit Comment

Audit appreciates the input and information provided by PSNH.

Audit Issue #2

AS&E

Background

PSNH posts AS&E overheads to work orders as invoices are booked.

Issue

Throughout the Clean Air Project, at certain times, invoices are reallocated from one work order to another. When the invoice is posted to the new work order, a new AS&E overhead is also posted. The new AS&E is credited to the original work order.

The difference between the original AS&E posting and the revised AS&E posting cannot be quantified due to the number of reallocations and the timeframe over which the accounting entries took place.

Because each work order was placed in service at different times, the subsequent cost impact may also include an over or under calculation relating to AFUDC.

Recommendation

Audit recommends that as invoices are moved from one work order to another, the original invoice and the original related AS&E move together. The debiting of a new AS&E calculation to the new work order, but offsetting the original AS&E debit with a revised credit creates an imbalance that cannot be quantified by Audit.

PSNH Comment

The Company has reviewed the accounting treatment for reposting of invoices and the calculation of AS&E; and believes the AS&E calculation for the reposting of invoices is consistent with acceptable industry practices and the Company's accounting processes.

On an individual work order basis, there may be a slight impact in the AS&E when invoices are reposted if the overhead rate is different. However, on an overall project and financial statement level, there is no impact as the AS&E nets out to the initial calculation.

Audit Comment

Audit appreciates the PSNH comment and encourages the Company to reverse costs as specifically as possible.

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Public Service Company of New Hampshire
Docket No. DE 11-250

Data Request OCA-02
Dated: 08/09/2012
Q-OCA-015
Page 1 of 1

Witness: **William H. Smagula**
Request from: **Office of Consumer Advocate**

Question:
Please explain the purpose of the truck wash facility.

Response:
Merrimack Station receives coal by both train and truck. Eastern bituminous coal is delivered by train from Northern Appalachia. South American coal is delivered by ship to Schiller Station in Portsmouth and then trucked to Merrimack Station. As a cost savings measure, trucks bringing coal to Merrimack Station can haul synthetic gypsum back to the seacoast rather than return empty. The contract for the sale of synthetic gypsum is with Georgia Pacific in Newington, very close to Schiller Station.

However, to maintain the proper quality and color of the light gold colored synthetic gypsum, it should not be commingled with the black coal dust and small clumps of coal remaining in the rear bed of the truck. In order to meet critical aspects of the gypsum delivery criteria, a truck wash was needed. If cleanliness was not maintained, the synthetic gypsum could not be sold and would have to be disposed of at considerable expense.

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Public Service Company of New Hampshire
Docket No. DE 11-250

Technical Session TS-01
Dated: 09/21/2012
Q-TECH-011
Page 1 of 1

Witness: **William H. Smagula**
Request from: **New Hampshire Public Utilities Commission Staff**

Question:
Please provide any analysis that was performed to justify construction of a truck wash.

Response:
A historic analysis document is not available; however, the economic basis for the truck wash is discussed below.

The truck wash facility was sent out for bid in 2009 and was awarded in early 2010. At that time, a review of coal truck traffic in 2008 and 2009 revealed about 8,500 truck deliveries per year. To move the contracted gypsum quantity, approximately 4,200 trucks per year would be needed. Based on trucking rates known for travel to/from Bow to Newington, the annual trucking cost for dedicated trucks would be over $1 Million per year. The alternative, often referred to as back hauling, would be to use coal trucks which would otherwise be returning to the seacoast empty. This was estimated to save approximately $4/ ton in trucking cost. Using the approximately 4,200 trucks each hauling about 30 tons, the savings associated with back hauling was determined to be over $500,000 per year. However, to ensure the quality of the gypsum product, the dump compartments of the coal trucks would have to be cleaned before loading gypsum. Discoloration and coal dust contamination is not acceptable to the gypsum purchaser. The final cost of the truck wash was $2,293,725. The revenue requirement in the initial years is between $350,000 and $400,000 (depending on the specific assumptions and then declining over time) which results in a lower annual customer cost compared to the $500,000 trucking cost per year. Based on these basic economics, the cost of the truck wash was an economic benefit for customers. Furthermore, this would eliminate wasteful use of fuel and unneeded vehicle emissions.

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Public Service Company of New Hampshire
Docket No. DE 13-108

Data Request OCA-01
Dated: 07/19/2013
Q-OCA-015
Page 1 of 1

Witness: **William H. Smagula**
Request from: **Office of Consumer Advocate**

Question:
Reference MLS-4 page 8 "Fossil Energy Costs by Station." During 2012 what quantity of coal was transferred by truck from Schiller to Merrimack Station? Please provide the tons per month and number of truck shipments. For each month please specify how many of these coal truck shipments returned to the seacoast area transporting gypsum on the "return run." Please describe the trucking arrangements and costs to provide these services (Company owned vehicles, leased vehicles, non-Company contractor, etc.).

Response:
Below please find the quantity of coal transferred by truck from Schiller Station to Merrimack Station. The table includes both the tons per month and the number of trucks per month.

Coal trucking is currently being contracted to Weaver Brothers Construction. PSNH pays $8.91 per ton for the transfer of coal by truck. Gypsum trucking is the responsibility of GP and currently being sub-contracted to D.W. Little Trucking.

2012	tons/month	# of trucks	Comments
January	13,619	449	
February	15,990	541	
March	5,842	194	
April	418	13	April 13 - last coal truck from SR to MK
May	0	0	April 30 - first truck of gypsum off-site to GP
June	0	0	
July	0	0	
August	0	0	
September	0	0	
October	0	0	
November	0	0	
December	0	0	

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Public Service Company of New Hampshire
Docket No. DE 11-250

Technical Session TS-02
Dated: 07/24/2013
Q-TECH-036
Page 1 of 1

Witness: **William H. Smagula**
Request from: **Office of Consumer Advocate**

Question:
Reference TS-01, Q-TECH-011. Please provide actual use data based on the estimates.

Response:
Response provided in TS-01, Q-TECH-011 - *The truck wash facility was sent out for bid in 2009 and was awarded in early 2010. At that time, a review of coal truck traffic in 2008 and 2009 revealed about 8,500 truck deliveries per year. To move the contracted gypsum quantity, approximately 4,200 trucks per year would be needed. Based on trucking rates known for travel to/from Bow to Newington, the annual trucking cost for dedicated trucks would be over $1 Million per year. The alternative, often referred to as back hauling, would be to use coal trucks which would otherwise be returning to the seacoast empty. This was estimated to save approximately $4/ ton in trucking cost. Using the approximately 4,200 trucks each hauling about 30 tons, the savings associated with back hauling was determined to be over $500,000 per year. However, to ensure the quality of the gypsum product, the dump compartments of the coal trucks would have to be cleaned before loading gypsum. Discoloration and coal dust contamination is not acceptable to the gypsum purchaser. The final cost of the truck wash was $2,293,725. The revenue requirement in the initial years is between $350,000 and $400,000 (depending on the specific assumptions and then declining over time) which results in a lower annual customer cost compared to the $500,000 trucking cost per year. Based on these basic economics, the cost of the truck wash was an economic benefit for customers. Furthermore, this would eliminate wasteful use of fuel and unneeded vehicle emissions.*

Gypsum trucking began April 30, 2012. Coal trucking between Schiller Station and Merrimack Station has not occurred since April 13, 2012 due to the unavailability of Venezuelan coal.

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Public Service Company of New Hampshire
Docket No. DE 11-250

Data Request OCA-04
Dated: 09/27/2012
Q-OCA-015
Page 1 of 1

Witness: **William H. Smagula**
Request from: **Office of Consumer Advocate**

Question:
Reference Audit page 49 regarding payments to New Hampshire Fish & Game. The Audit states that "[NH DES] required PSNH to reach an agreement with the NH Fish and Game Department." Please specify what rule, regulation, or required permit this agreement is pursuant to or intended to be in compliance with.

Response:
As part of construction related to PSNH's Clean Air Project, potential habitat for the New England cottontail rabbit, which is listed as endangered under the Endangered Species Conservation Act (RSA212-A), was impacted. To address these impacts in the permitting process, New Hampshire Department of Environmental Services required that PSNH reach an agreement with New Hampshire Fish and Game to adopt conservation strategies to benefit the species. NH Fish & Game agreed to accept payments totaling $50,000 to fund New England cottontail habitat and species conservation efforts.

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DE 11-250 PSNH Scrubber
Testimony of Eckberg
Attachment SRE-8

New Hampshire
FISH AND GAME
Connecting you to life outdoors

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HALL OF DONORS

Thanks to the generous people who donate to the **Nongame and Endangered Wildlife Program**, new research and continued monitoring and protection efforts are underway throughout New Hampshire to benefit nongame, threatened and endangered species in our state. This work is guided by the New Hampshire Wildlife Action Plan and made possible by the compassionate people and organizations who understand the importance of all wildlife. Thank you!

Following are **Honor Rolls listing donors to the Nongame and Endangered Wildlife Program** in New Hampshire (PDF format). Click on the date to view the list of contributors.

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- **January 1 - June 30, 2013**
- **July 1 - December 31, 2012**
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- **January 1 - June 30, 2011**
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Click here for a print-and-mail donation form. *Thanks for your support!*

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NONGAME
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NONGAME AND ENDANGERED WILDLIFE PROGRAM

2009 Special Autumn Appeal

Roster of Donors

July 1 - December 31, 2009

Contributors to the Nongame and Endangered Wildlife Program's 2009 Autumn Appeal helped work move forward on a special project to protect New England cottontails. With only eight known locations in the entire state where these rabbits still exist, New England cottontails are one of the species at greatest risk of extinction in New Hampshire.

During the winter of 2009-2010, thanks to contributions from over 200 generous supporters, biologists worked to restore habitat and relocate New England cottontails from low-quality habitats to protected areas with high-quality habitat.

Donations received for this special fall appeal also helped the Nongame Program qualify for a critical federal grant from the U.S. Fish & Wildlife Service -- one of just 13 grants available nationwide. The Rangewide New England Cottontail Initiative was selected as one of the country's highest priority projects for grant funding because it is an innovative public-private project that will restore habitat and New England cottontails throughout their range, from the Gulf of Maine to the lower Hudson River.

This project will also benefit a great diversity of wildlife, including many species of birds, reptiles, amphibians and insects. Ultimately, it is hoped that the focused efforts of the Rangewide New England Cottontail Initiative will boost their populations enough to prevent the need for federal endangered species listing.

Thank you for your support!

John J. Kanter
Nongame and Endangered Wildlife Program Coordinator

Following are Nongame and Endangered Wildlife Program donors who gave between July 1 and December 31, 2009. The list includes donations received for the 2009 Special Autumn Appeal, the Annual Fund Campaign, grant awards and memorial donations.

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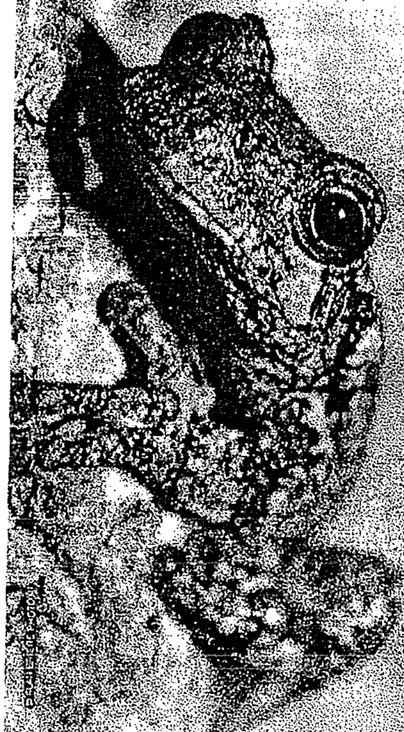

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H. Elizabeth Ring
Ms. Linda Schmidt
Helen B. Scribner
Frank W. Shaw
Pat Myers and Carolyn Sheehan
Stephen and Linda Shepard
Barbara Sidley
Marion M. Sloboda
Stanley Smith
James E. St. Onge
Edward Staub
R. Newcomb Stillwell
Guy W. Stoye
Brian V. Szarko
Mr. and Mrs. Peter Szawlowski
Barbara M. Thompson
Mr. David S. Thorpe
Phillip and Betsy Twombly
Col. and Mrs. Frank J. Van Cura
Robert Vanesse
William S. Wadsworth, Jr.
Tom Wall
Robert Wallace
Mr. George H. Watkins
Kathy and Bradley Webber
Roberta Willette
Lisa Yesse
Wini Scovill Young
John O'Brien, O'Brien Forestry Services
Anonymous - 13

OTHER

James Barrett
William E. Barrett
Ms. Bea B. Baxter
Igor and Amedine Bella
Dr. Edwin E. Blaisdell
Larry and Linda Boucher
Richard P. Brewster
Jane Brezosky
E. Allen Brooks
Ms. L. Buckley
Gail Bunnell
Jo Feyhl and Jim Buska
Col. (Ret) William T. Call, Jr.
Lou and Maria Candito
Roger A. Chambers
Robert J. and Janice H. Chapman
Martha Chase
Albert F. Chatel
Mr. Richard Cilley
John and Tina Cotton
Nicholas T. Day
Andrea Dow
Beverly Dziura
Robert Garland
Ms. Beverly Gibbs
Richard A. Hamblett, Sr.
Mr. Brad Hazen
Thatcher Hinman
Sophia Khebolan
Kathryn G. LeClair
P. L. Lecount
Joseph C. Letourneau
Laurel and Sid Letter
Ms. Mary Ann Lewis
Mary Lizie
Carroll L. Lothrop
Glen Miller
R. J. Morrell
Kathryn and Peter Nelson
Ms. Marianne I. Page
Peter and Rebecca Paquette
Robin Pelczar
Alvin C. Perry
Arthur Pitman
Larry Potter
Mr. Benjamin Pratt
Robert and Sally Puth
Judith Romano
Edith Rumrill
Mrs. Arnold R. Schultz
Beverly and James Seipel
Brenda D. Sens
Thomas Smith
April Teshima
Waino Tuominen
Barbara C. Walling
Winifred S. Ward
Kitty West
Wendy Fulton, 4-H Thumpers Group
Sandra W. Martin, The Little Nature Museum

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Public Service of New Hampshire
Return on Scrubber
2011 Actual (000s)

		Sep	Oct	Nov	Dec	Total	FERC Accounts (same accounting applies to p. 2)
Total Return							
Net Scrubber amount included in rate base		322,423	321,421	320,411	364,228		
Working capital allowance		74	74	74	74		
Deferred taxes		(8,476)	(8,476)	(8,476)	(9,642)		
Total		314,021	313,019	312,009	354,660		
Average for the return calculation		314,021	313,520	312,514	333,335		
Monthly return		0.9322%	0.8913%	0.8913%	0.8913%		
Total return to be recovered (A)	**	293	2,794	2,785	2,971	$ 8,843	Dr. B/S 182.P3 ES REG ASSET Cr. I/S 407.3P AM OV-UN REC SC
O&M, Fuel & Avoided SO2 Cost			240	410	650		
Depreciation Expense		97	1,001	1,010	1,069		
Property Tax Expense			17	17	17		
Total Scrubber Costs		389	4,053	4,222	4,707	$ 13,371	
Debt Return		Sep	Oct	Nov	Dec		
Net Scrubber amount included in rate base		322,423	321,421	320,411	364,228		
Working capital allowance		74	74	74	74		
Deferred taxes		(8,476)	(8,476)	(8,476)	(9,642)		
Total		314,021	313,019	312,009	354,660		
Average for the return calculation		314,021	313,520	312,514	333,335		
Monthly debt return		0.1889%	0.1980%	0.1980%	0.1980%		
Total debt return (B)	**	59	621	619	660	$ 1,959	
Equity Return							
Equity return = (A) - (B)		233	2,173	2,166	2,311	$ 6,884	Dr. I/S 407.3P AM OV-UN REC SC Cr. B/S 182.P4 CONTRA 182P3
Less amount recognized in income through 12/31/12 ($6,884 x 100% / 12 months x 8.5 months)						4,876	Dr. B/S 182.P4 CONTRA 182P3 Cr. I/S 407.3P AM OV-UN REC SC
Amount of 2011 equity return not recognized at 12/31/12						$ 2,008	
Less 2011 equity return remaining to be recognized through completion of rate year ending 4/15/13 ($6,884 x 100% / 12 months x 3.5 months)						2,008	
Amount of 2011 equity return not recognized at 4/15/13						$ 0	

** Please note September 2011 calculations reflect actual Scrubber in-service date, as such, calculations are for only 3 days of the 30 day month.

DE 11-250 PSNH Scrubber
Testimony of Eckberg
Attachment SRE-9

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Public Service of New Hampshire
Return on Scrubber
2012 Actual (000s)

Total Return	Jan	Feb	Mar	April	May	June	July	August	September	October	November	December	Total
Net Scrubber amount included in rate base	363,085	361,937	394,840	393,589	392,329	404,848	403,552	402,257	401,880	400,584	399,287	397,701	
Working capital allowance	300	300	300	300	300	300	300	300	300	300	300	300	
Deferred taxes	(9,642)	(9,642)	(14,469)	(14,469)	(14,469)	(20,781)	(20,781)	(20,781)	(18,237)	(18,237)	(18,237)	(32,486)	
Total	353,743	352,595	380,671	379,420	378,160	384,367	383,071	381,776	383,943	382,647	381,350	365,515	
Average for the return calculation	354,202	353,169	366,633	380,046	378,790	381,284	383,719	382,424	382,860	383,295	381,999	373,433	
Monthly return	0.9235%	0.9235%	0.9235%	0.9186%	0.9186%	0.9186%	0.9196%	0.9196%	0.9196%	0.9217%	0.9217%	0.9217%	
Total return to be recovered (A)	3,271	3,261	3,386	3,491	3,480	3,502	3,529	3,517	3,521	3,533	3,521	3,442	$ 41,454
O&M, Fuel & Avoided SO2 Cost	355	2,889	1,501	375	367	424	546	543	550	348	369	580	
Depreciation Expense	1,143	1,147	1,156	1,252	1,260	1,265	1,296	1,295	1,296	1,296	1,297	1,297	
Property Tax Expense	17	17	17	24	24	24	24	24	24	24	24	24	
Total Scrubber Costs	4,786	7,315	6,060	5,142	5,130	5,216	5,394	5,379	5,391	5,201	5,211	5,343	$ 65,567

Debt Return	Jan	Feb	Mar	Apr	May	June	July	August	September	October	November	December	Total
Net Scrubber amount included in rate base	363,085	361,937	394,840	393,589	392,329	404,848	403,552	402,257	401,880	400,584	399,287	397,701	
Working capital allowance	300	300	300	300	300	300	300	300	300	300	300	300	
Deferred taxes	(9,642)	(9,642)	(14,469)	(14,469)	(14,469)	(20,781)	(20,781)	(20,781)	(18,237)	(18,237)	(18,237)	(32,486)	
Total	353,743	352,595	380,671	379,420	378,160	384,367	383,071	381,776	383,943	382,647	381,350	365,515	
Average for the return calculation	354,202	353,169	366,633	380,046	378,790	381,284	383,719	382,424	382,860	383,295	381,999	373,433	
Monthly debt return	0.1938%	0.1938%	0.1938%	0.1961%	0.1961%	0.1961%	0.1956%	0.1956%	0.1956%	0.1944%	0.1944%	0.1944%	
Total debt return (B)	686	684	710	745	743	748	751	748	749	745	743	726	$ 8,778
Equity Return													
Equity return = (A) - (B)	2,585	2,577	2,675	2,746	2,737	2,755	2,778	2,769	2,772	2,788	2,778	2,716	$ 32,675

Less amount recognized in income through 12/31/12 ($32,675 x 66% / 12 months x 8.5 months)	15,276
Amount of 2012 equity return not recognized at 12/31/12	$ 17,399
Less 2012 equity return remaining to be recognized through completion of rate year ending 4/15/13 ($32,675 x 66% / 12 months x 3.5 months)	6,290
Amount of 2012 equity return not recognized at 4/15/13	$ 11,109
Plus estimated 2013 equity return that will not be recognized through completion of rate year ending 4/15/13 ($2,669 x 3.5 months)	9,3[illegible]
Total equity return that will not be recognized at 4/15/13	$ [illegible]
Plus additional estimated 2013 equity return that will not be recognized from 4/16/13 through 12/31/13 assuming temporary rates remain in effect ($2,669 x (1 - ($49,732/$55,500)) x 8.5 months)	[illegible]
Total equity return that will not be recognized at 12/31/13 assuming temporary rates remain in effect	$ [illegible]

DE 11-250 PSNH Scrubber
Testimony of Eckberg
Attachment SRE-9

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BEFORE THE STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

In the matter of:)
Public Service Company of New Hampshire)
DE 13-108)
Annual Reconciliation of Energy Service and)
Stranded Cost for 2012)

Direct Prefiled Testimony

of

Stephen R. Eckberg
Utility Analyst

on behalf of
The NH Office of the Consumer Advocate

Dated: **November 20, 2013**

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Q. Please state your name, business address and position.

A. My name is Stephen R. Eckberg. I am employed by the Office of Consumer Advocate (OCA) as a Utility Analyst. My business address is 21 S. Fruit Street, Suite 18, Concord, NH 03301. I include as Attachment SRE-1 to my testimony a statement of my education and experience.

Q. Have you previously testified before the Commission?

A. Yes, as noted in Attachment SRE-1, I have testified on behalf of the OCA in a number of dockets during my six years with the OCA.

Q. Does the OCA support the Company's Energy Service reconciliation of 2012 Energy Services expenses as filed?

A. No. The OCA has identified four issues which I discuss in my testimony below. I provide a recommendation to the Commission for one of these issues. The OCA believes that the other three issues need further investigation and discussion before we can make a final recommendation to the Commission regarding the Company's filing. A discussion of these issues follows.

Q. Please identify the specific issues that the OCA believes must be more fully explored and addressed before the final reconciliation of PSNH's Energy Service costs in 2012 can be established.

A. The issues include:

1. Whether the Company should be allowed to recover certain affiliate costs from customers in the absence of an affiliate agreement.
2. Whether it is appropriate for the Commission to approve of any of PSNH's proposed changes to the Average Year of Final Retirement for generation assets and any resulting Depreciation Reserve Imbalance without analytical support.
3. Whether PSNH's sale of #6 oil inventory, a rate base investment, which resulted in a net loss to ratepayers of $2 million was prudent.
4. Whether PSNH shareholders should earn a return on the full net plant value of its generation assets when certain assets were not fully used and useful in providing energy service in 2012.

Each of these issues has the potential to significantly impact the total energy service expense recovery under review in this docket.

1. RECOVERY OF CERTAIN AFFILIATE COSTS.

Q. Please address your first issue regarding costs allocated to PSNH from NSTAR.

A. In April, 2012, Northeast Utilities (NU) announced that it had completed its merger with NSTAR[1]. Northeast Utilities Service Company (NUSCO) provides services and allocated costs to PSNH in accordance with an affiliate agreement on file with the Commission and in effect during 2012. These services include a variety of centralized operations, planning, financial, and management services which NUSCO provides to each of NU's regulated utilities. The affiliate agreement specifies the type

[1] See NU News Release dated 04/10/2012 available at http://www.nu.com/media/news.asp

of charges that can be allocated and the method of allocation that will be used for each.

Q. Is your concern regarding expenses allocated to PSNH from NUSCO or from another affiliate company?

A. My concern relates to expenses from another affiliate – not NUSCO. In response to discovery, PSNH confirmed that expenses totaling approximately $900,000 were allocated to PSNH from NSTAR Electric and Gas Corporation (NSTAR-EGC) – NSTAR's service company. This concerns the OCA because we find no evidence of an affiliate agreement filed with the Commission between PSNH and NSTAR-EGC. No new filing of an affiliate agreement was made in PSNH's then existing docket relating to affiliate agreements, DA 12-030. Nor does there appear to be any new filing otherwise docketed in 2012[2] that would permit PSNH to recover from customers costs from NSTAR-EGC "allocated" to PSNH.

Q. Does the OCA have a recommendation regarding these costs?

A. Yes. The OCA recommends that the Commission disallow these charges as permitted by RSA 366:4. That statute states "Any contract or arrangement not filed with the commission pursuant to RSA 366:3 shall be unenforceable in any court in this state and payments thereunder may be disallowed by the commission unless the later filing thereof is approved in writing by the commission."

[2] Based on a review of 2012 dockets listed at http://www.puc.nh.gov/Regulatory/docketbk-2012.html

2. DEPRECIATION CHANGES AND DEPRECIATION RESERVE IMBALANCE.

Q. What is a depreciation reserve imbalance and what are the OCA's concerns?

A. Depreciation of the company's assets is the recognition of the decrease in value that an asset experiences over the term of its useful service life. Depreciation cost accounting is the measurement of this decline in value and the allocation of the property's original cost over its life. The Company records the amount of depreciation expense collected from its customers to track the "depreciation reserve," which is the cumulative depreciation cost recovered in rates. The amount of the depreciation reserve is subtracted from the original cost of plant in calculating rate base on which the Company is entitled to recover a return through rates.

From time to time, the Company may review the depreciation rates which apply to its various accounts of property. If the depreciation rates change, such a change may create an imbalance between the "depreciation reserve" amount on the company's books, and the new theoretical reserve amount calculated using new rates. Such an imbalance could represent either an overcollection or an undercollection of depreciation from customers. When such imbalances occur regulators may seek to correct the imbalance by amortizing the imbalance over a reasonable period of time. This could mean collecting more or less than the actual amount of depreciation calculated based on approved depreciation rates.

In this filing, PSNH has proposed changes to the Average Year of Final Retirement (AYFR) for some of its generation assets. This, in turn, has changed certain depreciation rates. The Company has not, based on my understanding of the information available, provided any detailed information on the Depreciation Reserve Imbalances which may exist as a result of these changes to depreciation rates. Thus, it is not possible to determine if an imbalance exists and whether regulatory action to address any such imbalance would be appropriate.

Q. Please provide an example of one of the Company's proposed changes to depreciation rates.

A. The Company's response to Staff 2-1 in DE 11-215 is a useful source of information on these details. I include that response and its attachments 1 through 3 as Attachment SRE-2 to my testimony. Examining the first long row of information in "Attachment 1" (at page 1 of 1) to Attachment SRE-2 the details on "PSNH 311 Steam Generation – Structures – Merrimack" are shown. This row of information shows the new proposed AYFR value of 2038. Then, all the way to the right is the new proposed "Derived 2012 Depreciation Rate" of 0.930%.

To compare this value to the current depreciation rate for the corresponding asset, refer to "Attachment 2" of Attachment SRE-2 at page 3 of 45. This document is the 2007 AYFR Technical Update (depreciation study which the OCA understands contains the currently approved depreciation rates for PSNH's generation assets. Looking at the very first row of information under "Steam Production," one sees account "311.00 Structures and Improvements" which shows a proposed "R/L Rate" of 1.66%. It is my understanding that this means a proposed "Remaining Life" depreciation rate of 1.66%. Compared to the newly proposed rate of 0.930%

described above, this is a noticeable change. Such a change could create an imbalance between the actual booked depreciation reserve amounts and the theoretical reserve amounts calculated using the newly proposed rates.

Q. In the documents you just referred to it appears that the information provided for the 2012 AYFR Technical Update is different than that for the 2007 AYFR Technical Update. Is that correct?

A. Yes. The 2007 AYFR Technical Update provided more detailed information and includes information on "Recorded Reserve," "Computed Reserve," and "Reserve Imbalance." The Company has not, to the OCA's knowledge, produced these same schedules with its 2012 AYFR Technical Update which would assist us in resolving our concerns about the possible Reserve Imbalances.

Q. In total, what amount of depreciation costs are included in this 2012 Energy Service Reconciliation filing?

A. Depreciation costs related to PSNH's fossil fuel and hydro generating assets totaling $33,220,000 for 2012 are shown in the Company's filing on Attachment MLS-4 page 13.

Q. Do you have a recommendation for the Commission on this issue?

A. Yes. The OCA recommends that the Commission direct the Company to provide additional details related to the 2012 AYFR Technical Update which adjusted 2012 depreciation rates for certain generation assets. The additional details should include schedules similar to those the Company provided with its 2007 Depreciation Update so that an evaluation of depreciation reserve imbalances can be made. The OCA also asks for an opportunity at that point to present a recommendation to the Commission.

3. NEWINGTON FUEL OIL SALES.

Q. Please address your next issue regarding the sale of fuel oil inventory in 2012.

A. In April and May, 2012, the Company completed two sales of #6 oil used at Newington station. These sales resulted in net total credit to customers in the 2012 energy service calculation of $8.4 million. However, the total gross sales amount of the two separate transactions was $20.7 million. Ratepayers realized only 41% of the gross value of the transactions. The OCA is concerned that the Company has not provided evidence that they made the best decision about these transactions for the benefit of the ratepayers.

Q. How long had this fuel been in inventory prior to its sale?

A. PSNH stated in discovery that the fuel was purchased at least three years earlier, in January and February 2009, as these were the most recent fuel purchases. See response to OCA 2-14 included as Attachment SRE-3.

Q. How much did ratepayers pay for the fuel?

A. The costs to ratepayers of this fuel include the costs to purchase it and return earned by the Company on the inventory. The Company's calculation as shown in

Attachment SRE-3 assumes that the fuel was acquired in January and February of 2009 at a total cost of $7,690,191. Applying the Company's authorized Rate of Return to the inventory value over the ensuing period resulted in ratepayers paying $2,760,047 in return. This makes the total cost to ratepayers $10,450,238.

Q. What was the total impact on ratepayers regarding the oil sale transactions?

A. Ratepayers realized a loss of roughly $2 million. The calculation of this amount is based on the $10,450,238 cost to ratepayers less the benefits totaling $8.451 million from the sales resulting in the overall impact of a loss of roughly $2 million.

Q. Did the Company provide support to show that this transaction was prudent?

A. No. The OCA asked for details of any cost/benefit analysis undertaken, but the Company's response did not provide the details requested. The Company instead claimed "Prior to the oil sale an evaluation of Newington Station's 2012 operation reconfirmed that burning natural gas was the more economic choice compared to burning oil." See response to OCA 1-19 included as Attachment SRE-4. An economic analysis of other options to the sale of the oil would be useful to see because of the loss ratepayers experienced. Our interest is to ensure that the Company evaluated such options and made the best decision given the totality of the circumstances.

Q. Do you have a recommendation for the Commission on this issue?

A. Yes. The OCA recommends that the Commission direct the Company to provide additional analytic support for its decision to execute the two #6 oil sales in 2012 which resulted in providing only 41% of the gross sales value to ratepayers, as well as a loss to ratepayers. In addition, the OCA would like an opportunity to make a recommendation to the Commission after the Company provides this additional information and before the Commission issues a decision on the Company's 2012 Energy Service Reconciliation

4. RETURN ON GENERATION ASSETS NOT FULLY USED AND USEFUL.

Q. Please address your fourth issue regarding the Company's use of its generation assets in 2012 and whether those assets were fully used and useful.

A. The evidence provided by PSNH demonstrates that it did not use its own generation assets to provide service to customers to the full extent that these assets were built and intended to provide such service (i.e. their "name plate" capacity). The entirety of these generation assets, then, do not meet the requirements of RSA 378:27 and RSA 378:28 which limits the recovery of a return on investment to assets that are "used and useful" in the service to customers. The Commission should therefore disallow PSNH's proposal to recover a return on the full value of these plants in rate base.

Q. What information in the filing are you relying on to support your contention that the Company's generation assets were not fully used and useful in 2012?

A. The testimony of William H. Smagula includes attachments which provide historical performance data including the heat rate, the equivalent availability factor and the capacity factor for each of the Company's fossil fuel generation plants. See Testimony of Smagula Appendix A pages 144 – 148. On these pages, Mr. Smagula provides a graphical presentation of this data from 1993 – 2012.

Q. What observations do you make from this data?

A. The data, presented in graphical form, demonstrate that each of the fossil plants has had historically higher capacity factors during the time period 1993-2001 than in the more recent time period 2009 – 2012. The main exception to this trend is the performance of Schiller 5 which is generating unit that PSNH rebuilt and retrofitted to burn wood chips in 2007.[3] Therefore, its operational and economic characteristics are significantly different than the Company's other vintage fossil fuel stations.

Q. What is the significance of these time periods you used in your observations above?

A. The period of 1993 – 2001 corresponds roughly to the time period leading up to and covering the development of electric deregulation in New Hampshire. The more recent time period, 2009 – 2012, corresponds to a time period of significant evolution in the electricity markets in which PSNH operates.

Q. What do you conclude from the data?

[3] See Docket DE 03-166

A. I have used the data presented by Mr. Smagula to calculate the average capacity factors for these two time periods for each generating asset. This data is presented in Table 1 below.

Table 1.

	MK1	MK2	Newington	Schiller4	Schiller5	Schiller6
Average Capacity Factor 1993-2001	80.1%	71.2%	29%	56%	54.6%	56.4%
Average Capacity Factor 2009-2012	60.5%	50.3%	4.5%	38.3%	83.0%	36.5%

A comparison of the values in the table confirms the downward trend in capacity factor reflected in Mr. Smagula's graphs. The average capacity factors for each of PSNH's fossil fuel generating plants (except Schiller 5 as discussed above) were much higher in the earlier time period than they are in the more recent period. From these comparisons, I conclude that the Company's generation assets are being used in a different way – at much lower capacity factors – than they were earlier in their service lives.

Based on this comparison of historical versus recent capacity factor, I conclude that PSNH's generation assets are no longer fully "used and useful" as required by law. The plants' capacity factors have decreased as shown above. If the Commission were to approve the Company's 2012 energy service reconciliation as proposed, customers would pay PSNH shareholders a return on assets which are not fully used and useful. Such an action would conflict with NH law.

Q. Do you have a recommendation for the Commission?

A. Yes. I recommend that the Commission not allow the Company to include a portion of each fossil fuel generation asset in its rate base for purposes of calculating the Energy Service rate. Only the "used and useful fraction" of each generation asset would be used to calculate the return. The rate base reduction will be determined by comparing recent plant capacity factors with historical capacity factors and allowing the Company's shareholders to earn a return only on the used and useful portion of each generation asset (i.e. "used and useful fraction"). Costs related to the "non used and useful portion" would be collected via an appropriate method but would not be used to calculate the return. I recommend, below, a process that the Commission can use to avoid having ratepayers pay a return on non-used and useful assets.

<u>OCA Recommended Process for Determining "Used and Useful Fraction."</u>

1. The 1993 – 2001 average historical capacity factor will be considered as the "baseline" capacity factor for each generating asset. This value will be used as the denominator in the "used and useful fraction."

2. The average capacity factor for the period 2009 – 2012 will be used as the numerator in the "used and useful fraction."

3. Calculate the "used and useful fraction" using the values defined above.

4. Multiply the "Net Plant" value for each generating facility by the "used and useful fraction." See for example, filing Attachment MLS-4 page 12 which shows "Net Plant." The information in this schedule would need to be disaggregated by generating facility.

5. Calculate the "Return-Adjusted" value as shown on Attachment MLS-4 Line 12 based ONLY on the used and useful fraction of each fossil generating plant permitted to earn a return. The value on line 2 of this Schedule listed as "Net Plant" would be replaced by the total "used and useful fraction" of Net Plant.

6. The adjusted return value, based on the "used and useful fraction," derived using the calculations shown on Schedule MLS-4 would carry forward into the remainder of the Company's calculations of its total energy service cost for 2012.

Q. Is it correct that your proposal does not include disallowance of costs related to the non-used and useful portion of the fossil fuel generation assets?

A. That is correct. The Company would continue to recover the costs of ownership of the non-used and useful portion of the fossil fuel generation assets from ratepayers. The only disallowance my proposal is that the Company's shareholders not earn a return on the non-used and useful fraction of the fossil generating facilities.

Q. Have you performed these calculations to determine the "used and useful fraction" for the Company's generating assets that would be impacted by your proposal?

A. Yes. I have used the information in Table 1 above to calculate the "used and useful fraction" for each asset. This information is presented below in Table 2.

Table 2.

	MK1	MK2	Newington	Schiller4	Schiller5	Schiller6
Average Capacity Factor 1993-2001 (B)	80.1%	71.2%	29%	56%	54.6%	56.4%
Average Capacity Factor 2009-2012 (A)	60.5%	50.3%	4.5%	38.3%	83.0%	36.5%
Used & Useful Fraction (=A/B)	75.5%	70.6%	15.5%	68.3%	100%*	64.7%

Q. Please provide an example of how this process would work.

A. Let's say that the historical data show that coal fired unit "Generator X" had a 1993-2001 average capacity factor of 80% and a 2009-2012 average capacity factor of 40%. We would use these values of 40% as the numerator and 80% as the denominator to calculate the "used and useful fraction" of 40/80 = ½. This indicates that Generator X is used and useful approximately one half of the amount that it was used historically. As a result, only one-half of the net plant in service for Generator X would, therefore, be allowed to earn a regulated return on rate base at Commission approved rates. The remaining fraction of rate base related to Generator X would not

* Eligible Portion limited to a maximum of 100%

earn a return. The Company would continue to fully collect costs of ownership for the plant (O&M, property taxes, etc.) providing those were determined to be prudent.

Q. Have you estimated the impact of this proposal on the Company's 2012 Energy Service reconciliation filing?

A. My estimate is that under the method I propose above, the Company's earned return on rate base as shown on the Company's schedule Attachment MLS-4 page 12 would be reduced by approximately $18,400,000. That is, a reduction in earned return on rate base from $82,727,000 to approximately $64,334,000.

Q. Does that conclude your testimony?

A. Yes.

DE 11-250
PSNH Supp. Tech. Statement of Hall & Shelnitz
Filed 2/20/2013
OCA Adjustment for "Used & Useful Fraction"
12/20/2013

Public Service of New Hampshire
Return on Scrubber
2012 Actual ($000s)

Total Return	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Net Scrubber amount included in rate base	363,085	361,937	394,840	393,589	392,329	404,848	403,552	402,257	401,880	400,584	399,287	397,701	
OCA Used & Useful Fraction (1)	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	73%	
OCA Adjusted Net Scrubber Amnt in Rate Base	265,052	264,214	288,233	287,320	286,400	295,539	294,593	293,648	293,372	292,426	291,480	290,322	
Working Capital Allowance	300	300	300	300	300	300	300	300	300	300	300	300	
Deferred Taxes	(9,642)	(9,642)	(14,469)	(14,469)	(14,469)	(20,781)	(20,781)	(20,781)	(18,237)	(18,237)	(18,237)	(32,486)	
Total = sum rows 9 thru 11	255,710	254,872	274,064	273,151	272,231	275,058	274,112	273,167	275,435	274,489	273,543	258,136	
Average for the return calculation	256,045	255,291	264,468	273,608	272,691	273,645	274,585	273,639	274,301	274,962	274,016	265,839	
Monthly return	0.9235%	0.9235%	0.9235%	0.9186%	0.9186%	0.9186%	0.9196%	0.9196%	0.9196%	0.9217%	0.9217%	0.9217%	
Total return to be recovered (A)	2,365	2,358	2,442	2,513	2,505	2,514	2,525	2,516	2,522	2,534	2,526	2,450	$ 29,771
O&M, Fuel & Avoided SO2 Cost	355	2,889	1,501	375	367	424	546	543	550	348	369	580	
Depreciation Expense	1,143	1,147	1,156	1,252	1,260	1,265	1,296	1,295	1,296	1,296	1,297	1,297	
Property Tax Expense	17	17	17	24	24	24	24	24	24	24	24	24	
Total Scrubber Costs	3,880	6,411	5,116	4,164	4,156	4,227	4,391	4,378	4,392	4,202	4,216	4,351	$ 53,885

Debt Return	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
OCA Adjusted Net Scrubber Amnt in Rate Base	265,052	264,214	288,233	287,320	286,400	295,539	294,593	293,648	293,372	292,426	291,480	290,322	
Working capital allowance	300	300	300	300	300	300	300	300	300	300	300	300	
Deferred taxes	(9,642)	(9,642)	(14,469)	(14,469)	(14,469)	(20,781)	(20,781)	(20,781)	(18,237)	(18,237)	(18,237)	(32,486)	
Total	255,710	254,872	274,064	273,151	272,231	275,058	274,112	273,167	275,435	274,489	273,543	258,136	
Average for the return calculation	256,045	255,291	264,468	273,608	272,691	273,645	274,585	273,639	274,301	274,962	274,016	265,839	
Monthly debt return	0.1938%	0.1938%	0.1938%	0.1961%	0.1961%	0.1961%	0.1956%	0.1956%	0.1956%	0.1944%	0.1944%	0.1944%	
Total debt return (B)	496	495	513	537	535	537	537	535	537	535	533	517	$ 6,304
Equity Return													
Equity return = (A) - (B)	1,868	1,863	1,930	1,977	1,970	1,977	1,988	1,981	1,986	2,000	1,993	1,933	$ 23,466

Calculation of Proposed Reduction in Equity Return

Original amount as filed by Hall & Shelnitz	$32,675,000
Less Return calculated here	$ 23,466,383
Reduction in Equity Return	$9,208,617

Notes
1. From Table 2 in Testimony of Eckberg in DE 13-108

DE 11-250 PSNH Scrubber
Testimony of Eckberg
Attachment SRE-11