

Mr. Scott Cannon MOX Federal Project Director NNSA Operations Office P. O. Box A Savannah River Site Aiken, SC 29808 24 November 2015 DCS-DOE-005054 Required Response: No Response Date: NIA

Subject: CONTRACT NO. DE-AC02-99CH10888, SECTION J.4 MOX FUEL PROJECT MONTHLY STATUS REPORT FOR OCTOBER 2015

Dear Mr. Cannon:

Transmitted herewith please find the MFFF Monthly Status Report for October 2015.

Please contact me at (803) 819-2220 should you have any questions or comments.

Regards,

Shane Steele Director Project Controls

Cc: E-Mail Distribution Attached



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MOX Fuel Fabrication Facility Monthly Status Report



October 2015

MOX Safety Fuels the Future



DCS-DOE-005054

Assessment based on BCP 12-121 Project Rebaseline and Plutonium Metal Feed Option

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Summary

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- Project Managers Assessment MOX Services and NNSA have established criteria to assist the Project Manager in assessing the current state of the project:
 - Cost and Schedule: Based on the established criteria, and based on the reductions in funding that are below the rebaseline plan for FY14 through FY16, the Project Manager's assessment is Red.
 - Technical: Based on the established criteria and since there have been no technical deficiencies or errors in the engineering baseline resulting in, or likely to result in, significant project impacts, the Project Manager considers the projects overall technical state to be green.
 - Overall: Based on the established criteria, and based on the cost and schedule assessment, the Project Manager's assessment is Red.
- Outstanding Safety Performance continues as MOX Services achieved 23.5 Million Safe Work Hours without a lost time accident. Two OSHA recordable incidents occurred in the month of October.
- Favorable Quality Performance continues based on six consecutive years of positive NRC Annual Performance Reports (NRC assessment – "no improvements needed") and weekly QC inspections. FY16 To Date (October 2015) there have been 6,088 QC inspections of HVAC, Pipe, Civil, Electrical, and Equipment Installation and of these, 96.0% (5,863) have been satisfactory.
- Execution against the FY16 Spend Plan shows an expenditure of \$38.1M against a forecast of \$35.4M for October.
- In the month of October, the overall Cost and Schedule Performance against the FY16 performance budget indicates a year to date CPI of 0.69 and a year to date SPI of 0.75. It is expected the CPI will again run below 1.00 as the projected spend plan exceeded the FY16 performance budget to allow completion of work planned for previous years. CPI was further impacted by revisions to the budget distribution for the HVAC duct supplier which reduced the cumulative progress. The SPI is also attributed to revisions to the budget distribution for the HVAC duct supplier as well as several work packages completed ahead of plan having budget in the current period.
- Progress reported on discrete work activities indicates that the project is 69.6 percent complete as measured against the current authorized Performance Measurement Baseline (2012 re-baseline modified by authorized PCNs) and incorporation of the aforementioned quantity adjustments. Overall percent complete is 67.9.
- Favorable overall Cost Performance and Schedule Performance continues with a Project-to-Date CPI of 0.99 and SPI of 0.98. Since the re-baseline in 2012, CPI is 0.96 and SPI is 0.95.
- \$412K was returned to Management Reserve in October. \$210K of contingency was utilized for DMO scope.

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Opportunities & Challenges



Opportunities

Project Execution

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- Refinement of the FY16 execution plan has started based upon the NNSA request to plan to the expected fiscal year funding levels and to minimize the utilization of prior year carryover. The most probable critical paths as defined within the out-year integrated project schedule will continue to drive the scope.
- Work in rooms impacted by the ledger plate repairs continues as ledger plates are repaired on a room by room basis.
- Bellows installation issues are resolved and work continues on cutting, fitting, and welding of bellows in place.
- Project Estimate at Completion:
 - MOX Services updated and submitted our annual Estimate at Completion as of July 31, 2015 in accordance with the Technical Direction Letter received from NNSA on November 25, 2014. Results of this submittal as well as the state of completeness for commodity installation was incorporated into the EVMS data during the July reporting period resulting in a reduction to prior period earnings. Project Change Notices requesting budget for quantity changes updated by design engineering were delayed but were submitted and processed during the October reporting period. This is to advise NNSA that the impact on EVMS from incorporation of the EAC should now be fully realized outside of the accounts identified as LOE.
- Prime Contract
 - Processing of REA's included in the 2012 re-baseline proposal would increase contract ceiling and extend the duration of CLIN 0002.
- Project Funding
 - TEC funding forecasted to be sufficient through mid January 2016 (including uncosted commitments & liabilities) as of mod 247.

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Challenges

Project Execution:

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 Additional challenges are identified in the Area Project Management/Construction section of this report.

• Project Estimate at Completion (EAC):

 The 2015 EAC resulted in significant augmentation of the existing budget from Management Reserve. In October \$412K was returned to MR leaving a variance of \$333.7M of EAC above the remaining MR.

• Integrated Project Schedule (IPS):

Ongoing efforts continue within the integrated project schedule to further refine and enhance the logic, sequencing, and buildout of the MFFF facility. Longest critical and near-critical paths have been re-established with sufficient detail to facilitate decision making regarding spend priorities in a limited spending environment. Resource requirements involving labor hours and commodity installation quantities derived from the annual updated EAC have been loaded within the IPS as well. NNSA has requested that the mid-level schedule buildout/development be maintained as a top priority for MS with the effort being completed no later than Jan. 30, 2016. MOX Services is on track to meet this due date.

• Project Funding Impacts

- Lack of funding (as compared to the 2012 Rebaseline funding profile) forced equipment delivery slowdowns which increased procurement costs.
- Lack of funding forced slowdown of fabrication vendors' work resulting in a loss of qualified welders, impacting schedule and cost risk.
- Procurement and engineering resources are continually engaged in subcontract renegotiations for delivery delays limiting their ability to manage ongoing required deliveries

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Challenges (con't)

- Prime Contract
- Lack of FY16 fee structure for milestones and incentives remains unresolved
- Modification of clauses H8, H9, H11 in the prime contract remain unresolved
- Fuel sales agreement awaiting NNSA signature (submitted in 2011; completed negotiation February 2013)
- Rebaseline proposal submitted for \$2,784.4M but not executed raising the following concerns:
 - CLIN 0002 contract value currently forecasted to be sufficient through 07 October 2016 (based on mod 247 and including uncosted commitments & liabilities)
 - Resumption of incentive fee payments delayed
 - REAs included in proposal remain unresolved/unprocessed (Total value = \$374.1M)
 - 11-003 Submitted Aug 2011 Quality Assurance / Quality Control FY12 15 = \$49.5M
 - 11-012 Submitted Aug 2011 Impact of Nuclear Renaissance on Engrng, Proj Serv's & Business Serv's (FY12-15) = 106.8M
 - 11-013 Submitted Sep 2011 Impact of Nuclear Renaissance on Equipment Costs = \$128.6M
 - 11-018 Submitted Dec 2011 Electrical Cable Quantities & Material Costs = \$17.3M
 - 11-027 Submitted Jan 2012 Impact of Nuclear Renaissance on Engrng, Proj Serv's & Business Serv's (FY07-11) = \$72.0M
- Per discussions with NNSA senior management, additional REA's will be submitted.
 - 15-001 Submitted Jun 2015 Cost/Schedule Incentive Fee Payment = \$50.4M
 - 15-004 Submitted Sep 2015 Funding Impacts on May 2013 Sep 2014 Hotel Load = \$216.5M

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Health & Safety



Health & Safety Performance



MOX ES&H Safety Report for Week Ending 29-Oct-15



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Health & Safety Performance (con't)

	<u>October</u>	CY Year-to-Date		
First Aid Cases	13	118		
OSHA Recordable	2	12		
Lost Time Incidents	0	0		
 Vehicle/Property Damage 	0	23		

There were 13 minor first-aid cases in addition to the following two OSHA Recordable/Restricted cases during October 2015.

- A 320SB embed plate fell on the foot of an employee while the employee was welding on an adjacent angle iron underneath the Mod 20 structural frame in the New Ironworker Fab Shop. The 350-lb plate had been tacked in place and was sitting 32" off the ground. An angle iron which had been clamped to support the plate had recently been removed so that the weld adjacent to the plate could be completed. The employee sustained multiple fractures to his right foot and was placed on restricted duty.
- A pipefitter stepped off the Module 20 platform onto a Kemper hose, rolling on his right ankle. The employee sustained a fracture and was placed on restricted duty.



Health & Safety Performance (con't)

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Note: The number of First Aid Cases for September was revised from 12 to 13 after the publication of the September report.

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Health & Safety October Events

Non-Injury Event/Near Miss/Property Damage (4):

- Operators were setting up a crane to make a lift. After getting the crane on outriggers, the operator swung the crane around, and the counterweight came in contact with a sign.
- An employee accessed Piping Module 15-South without the use of fall protection. This was observed by HSE and reported to the craft supervisor.
- An employee was assisting the Batch Plant in calibrating scales while standing on an elevated platform, having gained access via an aerial lift. After the testing was complete, the operator started to lower the lift when ground spotters alerted him to stop because he was pulling on the lanyard of the employee. The employee was "tied off" to the platform and to the aerial lift.
- An employee violated PP11-31 by working outside of a guardrail. A witness observed a welder on the scaffold sitting on a 12" diameter pipe on the north wall of a room. It was observed that the welder was sitting on the 12" diameter pipe with his back to the wall outside the rails of both scaffold rails with the only part of his body inside the scaffold being his lower legs. The welder was not wearing any fall protection and was approximately 15' above a lower level.

Observation (11):

- A laborer was using a string trimmer and felt ants on both legs.
- A laborer was walking back to a work location from the craft building after taking a break. When he took a drink of his soda he felt something on his lip. Employee then noticed that a bee had stung his lower lip.
- A carpenter was erecting scaffold when he felt a sting on his neck.
- A welder was tacking up an IWA when he states he developed a possible "Flash Burn". According to the employee, he was working near an interior temporary wall light that caused the "auto light" on his welding hood "not to work properly." The employee said he did not realize there was an issue until he arrived home that evening and his eyes became irritated.
- A welder received possible flash burns to eyes from another welders arc while welding module legs.
- A welder was walking outside of the shop and noticed a bee flying around him. The bee landed on the inside collar of his shirt. The
 employee stated the bee stung him in the right side of his neck/shoulder area. A small circular sting area was observed.
- An employee was lifting the corner of a portable temporary light stand when the light fell on top of the stand and struck the employee on the right shoulder.
- An employee experienced discomfort in right wrist area while handling a cable tray.
- A welder was grinding on a piece of duct when some dust entered his eyes while removing his PPE after the task was complete.
 According to the employee, he was wearing all the proper PPE as required by the JHA. MOX Medical was unable to see any dust or foreign substance.
- An ironworker pinched right index finger while manipulating a post install plate.
- An employee was holding a purge cup for a welder when he sustained a burn to his right, middle finger.
- Environmental/Fire (1):
 - At the start of a shift, an employee was doing a 360 inspection of a Govt. pick-up truck and discovered that approximately 3 quarts of oil had leaked onto the crushed stone.

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Engineering





Engineering Highlights

Completion of design commodities continued. Progress is as indicated in the table below.

Note: Design of HVAC Supports was completed in September 2015 and is no longer included in the chart below.

MOX Engineering Production Quantities							
Engineering /Supports	Octob	er 2015	Cumu	lative	Revised TII Qtys		
Engineering/supports	Planned	Actual	Planned	Actual	at Completion		
Primary Pipe Supports + Welded							
Straps - Designed ¹	988	585	34,263	32,924	39,205		
Pipe Supports Designed -Total ^{2, 5}	1,105	2,248	62,511	66,885	72,136		
Piping ISO's IFC-Linear Feet ³	8,606	5,150	454,666	447,256	471,879		
Tray/WW Supports Designed ⁴	281	214	14,532	14,472	15,093		

1 Primary Pipe Supports quantity increased by 7,970 per trend 15-1452 in Feb 2015.

2 Pipe Supports Designed - total qty increased by 13,242 per trend 15-1452 in Feb 2015.

3 ISO linear feet increased by 55,635 per trend 15-1452 in Feb 2015.

4 Tray/WW supports quantity increased by 1,402 per trend 15-1444 in Jan 2015.

5 This value includes COMB Assembly load/support points, which are design complete when the COMB Assembly support design is issued and which are installed with the entire COMB Assembly support. Trend 15-1444 forecast a quantity of 4,099 such support points. 68,037 + 4,099 = 72,136

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Engineering Highlights (con't)

<u>Status</u>

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Engineering Title II:

 Cumulative design production for ISO piping although slightly behind the month end cumulative plan is considered as tracking to its completion date. Completion dates are as follows:

ISOsDecember2015Tray/WireWay SuppDecember2015Pipe SupportsMarch2016

This is consistent with quantities on the previous slide "MOX Engineering Production Quantities"

Path Forward

Engineering Title II:

- Ongoing planned Title II PDS/Seismic design for ISO Piping, and Cable Tray/WW supports are on track for December 2015 completion.
- Pipe Supports are planned to complete in March 2016, ~3 months after ISOs are completed.



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Engineering Highlights (con't)

Engineering Title III:

- Engineering has setup weekly coordination meetings for B-303 corridor. These meetings are essential to establishing clear communications and direction/path forward. Design changes (FCRs) requested from the duct and duct support installation sub-contractor must be reviewed prior to engineering proceeding to prevent unnecessary rework while optimizing space to permit routing of conduit in the B-303 corridor.
- Completed the executive summary write up (DCS01-BMF-DS-NTF-B-01346) on cumulative effects analysis. This was forwarded to NRC to resolve one of the 2 outstanding requests on the cumulative effects analysis inspection performed by them in the month of September 2015.
- Updated and released normal control system programmable logic controller software; AP Liquid Waste Unit KWJ; for integration testing.
- Completed the migration of software for the Pelletizing Units NPG & NPH density measurement Process PC from Windows XP to Windows 7.





Procurement



Procurement Highlights

Awards were made for: \$2.9M

Nelson studs

MOX

- Wide Flange Auxiliary Support Steel
- Industrial Coatings
- Various Scaffolding items
- ANSYS Software License Agreement
- Intergraph Software License Lease Renewal
- Construction Management Personnel

Modifications were made for: \$145K

 Changes to Primary Dosing Unit (NDP) GB1000 Shell & Ventilation, Scrap Processing Unit (NCR) GB1000 Glovebox Shell & Ventilation, QL-1

RFPs were made for: \$11.6M

- Magnetic Flowmeters
- PPE and Consumables
- BEG/UEF Concrete Construction
- Concrete Hydro Demolition

Opportunities and Challenges:

- Review of Doc Packages at ALD-F (France) may be reconsidered given the events on November 13, 2015
- FMC is having difficulty completing IEEE final testing on Emergency Diesel Generators which will slip ship dates to next spring, no impact to construction
- Successfully awarded 2 subcontracts to Peterson for AISC steel fabrication as an alternative source for SMCI work

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Area Project Mgmt/Construction Work Control QA/QC



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Area Project Mgmt Highlights

Commodity	Total at Completion	Project to Date Quantities 01Nov15	FY16 Stretch Goal	FY16 Annual Plan	FY16 Plan To Date as of 01Nov15	FY16 Actuals To Date	Complete To Date as of 01Nov15
AG Pipe (LF)	80,388	30,731	10,011	8,166	350	777	222%
Pen Plates (EA)	342	110	0	45	4	0	0%
AG Equipment (EA)	576	45	0	16	1	1	100%
Balance Pipe (LF)	375,425	14,281	9,989	8,052	496	611	123%
Duct (LBS)	1,321,968	353,789	101,500	81,304	6,280	7,680	122%
Fire Dampers (EA)	1,185	416	0	64	5	9	188%
Glove Box Mech Phase 1 Complete (EA)	429	156	0	50	2	2	100%
Cable Tray & WW (LF)	89,567	7,283	706	616	60	1,029	1716%
Conduit (LF)	745,787	25,977	8,400	7,276	0	0	N/A
Electrical Equipment	3,967	109	0	39	6	8	133%
Fire Protection Pipe (LF)	25,378	13,804	0	1,101	114	3	2%

MOX Commodity Performance vs. FY16 Execution Plan (EP) Unit Rates FY16 Data To Date (OCT15 Report)

Commodity	FING PAR	Outonities Outonities	COLOUTE CONTRACTOR	Monthur	Trend Remarks on Trend
Pipe	16,219 LF	8.6%		+	The actual unit rate (U/R) for OCT15 was 19% less than the FY16 EP.
Pipe Supports	1,060 EA	8.0%		+	The actual unit rate (U/R) for OCT15 was 53% higher than the FY16 EP. The U/R in the Active Gallery (C234) is trending higher than projected primarily due to complexity of supports (comb assemblies). This trend will reverse when installation of normal supports resumes. In the BMP, the complex corridor supports installed in B136 requires more MNHRs to install than the average pipe support. Support installation scope going forward is projected to be less complex on average causing the U/R to fall closer in line with the FY16 EP.
HVAC Duct	81,304 LB	9.4%		٠	The actual unit rate (U/R) for OCT15 was 38% less than the FY16 EP. This is partly due to installing a higher than normal number of bolted companion ductwork during the period. This is easier work and contributes to a lower U/R. Also, a large portion of the work performed during the period was on BMP level 3. These were all rooms where no duct had previously been installed. This allowed for easier installation and minimal rework driving the overall U/R down for the period.
HVAC Duct Supports	481 EA	3.8%		1	The actual unit rate (U/R) for OCT15 was 61% higher than the FY16 EP due to legacy supports requiring Added Steps, and shimming (additional welding of last legs and shims required to meet duct to support tolerances) which is driving up the U/R in the BMP more than projected.
Balancing Dampers	75 EA	8.7%	â	•	The actual unit rate (U/R) for OCT15 was 51% less than the FY16 EP due to less complex work performed in the BMP during the period. The dampers installed in the BMP were bolted as opposed to the dampers that require welding.
Fire Dampers	64 EA	14.7%	5)(4)	•	The actual unit rate (U/R) for OCT15 was significantly higher than the FY16 EP. This is mostly due to a substantial amount of flashing rework performed during the period. This rework comprised over 15% of the work performed during the period. The U/R excluding the rework was Another factor contributing to the higher than projected U/R is that a large portion of the work performed was dedicated to Final Attributes. Progress for this work will be credited in a later period after the QC inspection.
Cable Tray	617 LF	166.9%		+	The actual unit rate (U/R) for OCT15 was 85% less than the FY16 EP. This is because a majority of the work for the progress claimed in room D001 during the period was performed in FY15. Per the Rules of Credit (ROC's), cable tray installation consists of two weighted work steps measuring progress at a 95% complete milestone for installation of cable tray and a 100% complete milestone upon Final Inspection of that installation. The majority of the cable tray installation within Room D001 progressed to the 95% milestone during the reporting period and was claimed accordingly.
Cable Tray Supports	112 EA	9.2%		$\langle \rangle$	The actual unit rate for OCT15 was within 7% of the FY16 EP.
Conduit / Conduit Supports	7,276 LF	0.0%		\Leftrightarrow	There was no conduit installed during the OCT15 reporting period.
Coatings	326,662 SF	3.9%		\Leftrightarrow	The actual unit rate for OCT15 was within 6% of the FY16 EP.
Comparison of FY16 I	EP to Current	Month's A	ctual Unit Rate.		U/R less than EV15 EP +15% U/R greater than EV15 EP -15% EV (15 EP -15%)

Note:

Unit rates represent the craft hours per unit of measure to install one unit.

The current month and FY16 actual unit rates include rework due to craft errors as well as rework due to: out-of-sequence installation, stacking of tolerances, and previous management decisions to install "at risk" commodities. A revision to the rework procedure is underway to isolate these conditions from rework caused by craft errors and poor workmanship. This revision will be implemented in the November 2015 reporting cycle.

MOX Processing Building – BAP

– Overview

- Work on process units, HVAC, electrical and piping installations continued
- Work has been suspended in the center rooms of the first and second levels due to the ledger plate issue. Repair work is proceeding. This has resulted in a forecast delay of 24 weeks to the original schedule for these rooms. There is no impact to the critical path.

- Major Accomplishments

- Completed installation of process unit KPB*GB2000 in room C233
- Started piping installation on Active Gallery Module 20 ahead of schedule

Issues

- Installation of piping in level 1 of the BAP continues to lag behind the FY15 plan as we transition into FY16. (Impact largely due to sequencing issues in areas started prior to 2012)
- Ledger plate repairs are taking longer than anticipated due to application issues
 associated with epoxy grouting

Initiatives

- Development of effective material staging processes for upcoming work (currently staging pipe materiel for rooms C133, C135 & C136)
- Continued development of additional schedule detail for piping in complex rooms based on model reviews (rooms C145 & C139 are complete)

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MOX Processing Building – BMP

Overview

- Progress continues on all three floors for both commodity and equipment installation
- B 115 : Commodity installation/room prep continues for PFE/PFF Furnaces.
- B115b: Installation of PML GB0200/0300, planning of PWRS9600 in progress
- B123 : NTM bellows and link modules are being installed
- B135 : PSI build out for all commodities in progress
- B149 :KDR Platform , Aux steel, and crane installation begun
- B211 : HEPA filter base and unit installation continues
- B264 : GME glovebox and auxiliary steel final inspection continues
- B267 : Electrical cable tray and wireway in progress
- B360 : Large HSA (supply) HVAC headers are being installed in support of FY'16

Major Accomplishments

- Completed electrical tray and wireway in B265
- Completed installation of Link Module 2000D
- Completed final location and pin grouting of all installed NTM tunnel modules
- Completed GME EQ1000A in B264



Area Pi

Area Project Mgmt Highlights (con't)

MOX Processing Building – BMP (con't)

- Issues
 - FY 15 AOP milestone for (6) HEPA filter installations was missed due to vendor quality issues.
 Repair and recovery actions are underway to achieve the milestone in the first quarter of FY16.
- Initiatives
 - Room buildout planning for B152, DCE are underway. Large glovebox mockups will be built and transported into the room to verify rigging and safety of the installation. The heaviest portions of these gloveboxes weigh over 45 tons.
 - Field BFC meetings with Project Management, Construction, Engineering, and Craft will continue to improve efficiency and installation methods for commodities and equipment.
 - Lessons learned in the B135 buildout are being used to streamline the B115 room buildout.



MOX Process Building – BSR & BOF

- Overview

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• Continued to install the fire main system and duct banks around the MFFF.

- Major Accomplishments

- BEG fire line to west hydrant completed and backfilled
- Placed 2 BEG duct banks (8 of 13 placed)
- Bids received for BEG/UEF Concrete, rebar and embeds.

Issues

- Resolve NCR for bolts on Fire header.
- Resolve vendor issue with #89 stone.

Initiatives

- · Complete fire lines on south side of MFFF
- Complete conduit field route design in D-001 and begin installation



Construction

Issues

- Anticipate short term challenges due to the realignment of support craft to improve efficiency.
- Initiatives
 - Refining work efficiency improvements utilizing Work Control Expeditors in the field with all major work groups.
 - Working with new QC inspectors for better integration and work coordination.

Accomplishments

- Initiated weekly safety package program to ensure consistent communication of daily safety topics to all crafts.
- Continued the leadership training program senior management driven initiative to promote standards and expectations.
- Phased approach to plant construction power re-alignment to reduce and/or eliminate many temporary power sources – 2 successful power outages to date.



Work Control

Actions

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- Work Planning:
 - A total of 622 work tasks were routed for approval during the month of October. Work Planning efficiency continues to improve as new Traveler style templates are now being used to plan the installation of select commodities.
 - Recovery Plan for the Conversion to New Pipe Work Packages (C234) Total 1,838 to convert, 213 complete and 180 in planning.
- Work Package Closure Legacy
 - FY16 Legacy Scope is 130 Alberici/Baker (Scheduled completion 31Mar16) Total closed = 34
- Work Package Closure
 - Closed 48 Work Packets/Packages.

*Note: 3 Packages Sent to PRC awaiting Submittal to Documentum









HUEL FABRICATION FACILITY

Work Control

	s Completed as of	egacy W		ages	
QL-1 Legacy Work Packages	No of WP's To Work	No of WP's Completed	No of WP's Remaining	Total % Complete	
CIVIL	187	187	0	100%	
CIVIL-ALBERICI	184	162	22	88%	
CIVIL-BAKER	74	0	74	0%	
TANKS	52	52	0	100%	
MECHANICAL	113	113	0	100%	
ELECTRICAL	182	182	0	100%	
Total	792	696	96	88%	
QL-4 Legacy Work Packages	No of WP's To Work	No of WP's Completed	No of WP's Remaining	Total % Complete	
CIVIL	114	114	0	100%	
MECHANICAL	73	73	0	100%	
ELECTRICAL	266	266	0	100%	
Total	453	453	0	100%	
	1245	1149	96	92%	
Totals	No of WP's To Work	No of WP's Completed	No of WP's Remaining	Total % Complete	

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Project Assurance Performance Indicators

- Favorable Quality Performance continues based on six consecutive years of positive NRC Annual Performance Reports (NRC assessment – "no improvements needed") and weekly QC inspections. FY To Date (October 2015) there have been 6.088 QC inspections of HVAC, Pipe, Civil, Electrical, and Equipment Installation and of these, 96.0% (5,863) have been satisfactory.
- Work on CR 15-112 (SMCI ledger plates) is tracking well. Repairs are being completed with minimal errors. QA has been involved extensively with Flanders on the filter housings and items have been released to ship with no issues.
- QC has been able to hire and qualify 4 new inspectors thus alleviating a strain on keeping up with inspections in addition off Friday • work has been implemented to closeout any open inspections to assure there are no rollovers to Monday.
- QC and Engineering are developing sampling plans to review inspections performed by two inspectors who were released from the project because of recent poor performance.





QA/QC Activity						
Oversight Activity	October	Fiscal Year - To - Date				
Field Inspections	6,088	6,088				
Shop Inspections	27	27				
Receipt Inspections	95	95				
Audits (Internal + External) ⁴	11	11				
Surveillances (QA/QC + Line)	50	50				
SDR	2	2				
CR	48	48				
NCR	57	57				

Blue (5-10 Annual)

Level B Projection

Notes:

- 1. A Level III or higher NRC Violation will increase performance levels to RED.
- 2. A Level A CR will increase performance levels to RED.
- 3. QA identified-Level B CRs also include external sources NRC, DOE, EPA, etc
- 4. Internal Audit + External Audit /Surveys/ Evaluations.

CBI AREVA



Commissioning



MOX Commissioning Highlights

Glovebox fabrication, delivery and testing continued and progress is as indicated in the table below.

	October 2015		Cumul	At Completion	
	Planned	Actual	Planned	Actual	At completion
Gloveboxes Delivered to MOX Site	0	0	227*	182	325
Gloveboxes Available to Install in MFFF	0	3	198*	140	325
In Advance Testing (AP/MP Systems)	0	0	27	27	28

*Note: The FY16 Execution Plan was implemented in the month of September. Cumulative planned value for glovebox deliveries and glovebox available to install has been reduced by four (4) gloveboxes to account for the vendor de-scope boxes which have been re-planned in the FY16 Execution Plan. These include KWD GB4000/GB4010, KCD GB4000, and KPA GB3000.

• Deliveries:

- October Variance The FY16 Execution Plan had no glove boxes to be delivered in October.
- The baseline had 227 glove boxes to be delivered through October and of that 182 have been achieved. Delays include: KDD GB7000 due to a material issues at the vendor, KDB GB1200 and KDD GB1200 reprioritization and re-planning with the vendor which has pushed this work out, eight (8) glove boxes related to PFE/PFF units associated with the ALD-F contract, NBX GB1000 and NBY GB1000 due to technical issues associated with the foreign liquid found within the tube structure, and the remaining thirty three (33) PML gloveboxes due to a delay at the restart of the vendor contract.
- Problem Areas/Improvement Plans: Challenges on the manufacturing of glovebox units still exist, however, recovery plans have been implemented and accounted for within the FY16 Execution Planning effort. Additional vendor shop visits as well as active management of contract recovery plans and vendor issues continue to be effective.
- Critical Path Analysis: The late deliveries stated above currently have no impact on the critical path. However, delays in GB deliveries have caused some rescheduling of construction activities. MC continually communicates with the construction organization to plan work-arounds for these delays.

CRI ARE
MOX Commissioning Highlights (con't)

Available to Install:

- October Variance The FY16 Execution Plan had no gloveboxes to be made available in October. However, three (3) were achieved from different months including: PFE GB8000 (Sept 2015), and PML GB0500A and PML GB0600A (Nov 2015) a month ahead of schedule.
- Cumulative Variance The baseline had 198 gloveboxes available for installation in the MFFF through October and of that 140 have been achieved. Cumulative delays include: Six (6) NPG gloveboxes and GDE GB1000 due to a reprioritization of assembly activities, thirty three (33) previously scheduled PML gloveboxes due to a delay at the restart of the vendor contract, nine (9) gloveboxes related to the PFE/PFF units associated with the ALD-F contract, KDD GB1200 and KDB GB1200 due to re-prioritization at the vendor shop, KDD GB7000 is delayed due to a welding issue holding up shipments from the vendor, and KPA GB2000/ GB2010 are delayed due to final records packaging.
- Problem Areas/Improvement Plans: Available for site delays will be corrected by the actions taken to improve glovebox deliveries as discussed on the previous slide.
- In Advance Milestone Testing:
 - October Variance No milestone IATs were planned for October.
 - Cumulative Variance All but one IAT has completed. DCE IAT is currently planned in FY17.



Aqueous Polishing Glovebox & Tank Status (Current)









Program Interactions



Program Interactions

- Representatives of MOX Services S&S actively participated with other NRC licensees in two NRC public meetings on cyber rule-making. MOX Services is aggressively participating in the development of this rule in an effort to minimize the potential for dual regulation of the cyber program. The MOX Services Security Director met individually with the industry NEI cyber resource to ensure that the MOX cyber program was understood and accurately represented in communications with the NRC.
- MOX Services hosted a meeting (Nuclear Security Information Exchange) of the contractor Security Directors from across the DOE enterprise during October. Many topics of interest to the MOX project were identified and tagged for further work by NSIE.
- MOX Services S&S personnel participated in meetings with NRC on draft RAIs against both the Physical Protection Plan (PPP) and the Fundamental Nuclear Material Control Plan (FNMCP) submitted in January of this year. In most cases, MOX Services and the NRC reviewers were able to reach a position that will address the RAIs without significant impacts to the MOX program.
- MOX Services received ARIES Oxide Production Blend Lot book revision for review

- MOX Services reviewed and approved LANL procedure updates to Milling, Blending, Sieving and Sampling
- MOX services provided comments to LANL procedure for DMO furnace operation
- MOX Services reviewed and approved LANL revision to CoA for blend lot 2 for review and approval
- MOX Services reviewed and approved several documents related to AFS-1 certification
- MOX Services received several documents related to AFS-1 certification for review
- MOX Services received SRNL QA Management Plan, QA Assurance Manual Table of Contents and Material Science and Technology Procedures for review.
- MOX Services scheduled final crimper testing (scheduled for 18 Nov 15).

AREVA



Project Controls Performance Measurement FY16 Cash Flow Forecast



Project Status

23.5 Million Safe Work Hours without a lost time accident. Two OSHA Recordable Incidents were reported this month.

Construction:

Execution of the FY16 execution plan has commenced. Commodity installation for October met or exceeded the planned quantity for all commodities except Penetration Plates and Fire Protection Piping. Unit rates have met or underrun the FY16 plan except for Pipe, HVAC Supports and Fire Dampers. The current months performance has been impacted by \$3.6M as a result of the incorporation of a PCN to reallocate the budget for duct fabrication. The Construction Testing and Turnover organization continues planned activities. **Engineering:**

Progress continues toward final completion of design in March of 2016. Title III support of construction is staffing to maintain acceptable levels of support.

Support Organizations:

QA/QC is increasing staff to eliminate construction delays due to overdue inspections.

Process Equipment:

Numerous pieces of Process Equipment are in assembly prior to in advance testing. Currently 7 process units with multiple gloveboxes are being assembled in the PAF and 15 systems with multiple gloveboxes are being assembled in vendor facilities. During the month of October one non-milestone IAT was performed at a vendor for the PSI Y-table. In addition, one IAT SPLC test was in process in the PAF for the process unit KPG. To Date, 27 of 28 system IATs have been completed. DCE was previously deferred due to funding but has since been replanned and is now scheduled for the end of FY16.

EVM Narrative

Overall cost/schedule performance as measured against BCP 12-121 Rev 1 Project Re-baseline and Plutonium Metal Feed Option modified by authorized PCNs is as follows: Monthly CPI = 0.69 (-\$11,704) SPI = 0.75 (-\$8,637); Cumulative CPI = 0.96 (-\$54,122) and SPI = 0.95 (-\$70,213). All current month variances reflect the implementation of the FY16 Execution Plan.

Current month CV: Construction (-\$7,274) driven by duct fabrication budget reallocation, pipe and HVAC support productivity, corrections to duct bank and piping material progress, non-manual staffing; Engineering (-\$110) driven by pipe support production overruns offset by correction for under reported earnings for Normal PLCs; MOX Commissioning (-\$4,040) driven by vendor settlement costs not earnable and NNSA support contractor cost overruns; and Support Services (-\$280) driven by overruns for Security, Relocations, higher than normal NRC Headquarters charges, and legal expenses.

Current month SV: Construction (-\$7,036) driven by duct fabrication budget reallocation, corrections to duct bank and piping material progress, time phasing of budget for completed structural work; Engineering (-\$478) driven by equipment delays; and MOX Commissioning (-\$1,123) driven by correction of overstated earnings for Lab Units and delays associated with several vendor contracts.

	Budge	et / EAC / F/	AC (\$ in millions))					Т	otal	Pro	ject	Su	mm	ary			
РМВ	<u>Budget</u>		EAC	FAC	ive Data	4,750 4,600 (sc 4,450 4,300			*	_			_		-			_
TEC OPC TPC	5,766.8 <u>849.3</u> 6,616.1		6,093.5 <u>886.3</u> 6,979.7	6,093.5 <u>886.3</u> 6,979.7	Cumulati	4,150 4,000 3,850 3,700 BCWS to Da	Feb-15 te 4,336	Mar-15 4,360	Apr-15 4,386	May-15 4,413	Jun-15 4,439	Jul-15 4,470	Aug-15 4,495	Sep-15 4,524	Oct-15 4,559	Nov-15 4,585	Dec-15 4,613	Jan-16 4,644
Managemen	t Reserve/	Contingend	ies & Fee			BCWP to Da ACWP to Da	te 4,294 te 4,289	4,320 4,318	4,347 4,346	4,374 4,381	4,400 4,411	4,424 4,442	4,447 4,472	4,463 4,505	4,489 4,543			
TEC OPC TPC Total w/Con	237.8 <u>564.4</u> 802.2 tingencies				Monthly Data (\$ in Millions)	50 40 30 20 10												
TEC OPC TPC	6,004.7 <u>1,413.6</u> 7,418.3					0 Fel BCWS 24 BCWP 24 ACWP 25	⊢15 Mar 1.1 23 1.0 27 1.2 28	15 Apr 6 25 0 26 6 28	-15 Ma .7 27 .7 27 .2 35	y-15 Jur 7.1 24 5.3 3(h-15 Ju 3.2 3 5.5 2 0.4 3	uF15 A 30.7 24.2 30.3	Aug-15 25.5 22.8 29.9	Sep-15 28.8 15.9 33.3	Oct-15 35.0 26.4 38.1	Nov-15 26.2	Dec-15 27.4	Jan-16 31.2
				Performance St	atus (D	Dollars	s in M	illion	s)									
Mont	h	BCWS	<u>BCWP</u>	ACW	<u>P</u>							<u>cv</u>		<u>C</u>	<u>PI</u>		<u>sv</u>	<u>SPI</u>
TE(OP(TP(с с с	33.1 <u>1.9</u> 35.0	24.5 <u>1.9</u> 26.4	35. <u>2</u> 38.	.8 . <u>3</u> .1							-11. <u>-0.4</u> -11.	3 <u>1</u> 7	0. <u>0.</u> 0.	.69 . <u>81</u> .69		-8.6 <u>0.0</u> -8.6	0.74 <u>0.98</u> 0.75
Proje	ect To Date																	
TEO OPO TPO	C C C	4,315.5 <u>243.9</u> 4,559.4	4,246.1 <u>243.1</u> 4,489.2	4,305 <u>237</u> 4,543	6 <u>7</u> 3							-59. <u>5.4</u> -54.	5 1	0. <u>1.</u> 0.	.99 <u>02</u> .99		69.4 <u>-0.8</u> 70.2	0.98 <u>1.00</u> 0.98

MOX Fuel Fabrication Facility

Dashboard Indicators October 2015



		Cur	nulative-To-l	Date		At	Completio	on				
erformance Measurement Baseline (PMB) (\$ x 1,000)												
	BCWS	<u>SPI</u>	BCWP	<u>CPI</u>	ACWP	Budget	Estimate	Forecast				
TEC	4,315,489	0.98	4,246,094	0.99	4,305,633	5,766,846	6,093,481	6,093,481				
OPC	243,937	1.00	243,114	1.02	237,714	849,260	886,257	886,257				
PMB Total	4,559,425	0.98	4,489,208	0.99	4,543,348	6,616,105	6,979,737	6,979,737				
MR						29,971						
Contingency						324,147						
Fee					<u>166,588</u>	<u>448,067</u>						
TPC Total					4,709,935	7,418,290						

MOX Fuel Fabrication Facility Project to Date Status October 2015 Dollars in Thousands

Management Area	BCWS	BCWP	ACWP	SV	SPI	CV	CPI
01 - MFFF Design	510,608.5	510,860.5	518,231.8	252.0	1.00	-7,371.3	0.99
06 - Project Management	527,427.7	527,427.7	516,594.0	0.0	1.00	10,833.7	1.02
10 - Title III Engineering	569,553.4	546,381.6	548,983.8	-23,171.8	0.96	-2,602.2	1.00
11 - Regulatory Affairs	104,238.3	103,995.1	104,582.9	-243.2	1.00	-587.8	0.99
12 - Procurement Engineering	130,510.0	129,567.9	128,251.4	-942.0	0.99	1,316.5	1.01
13 - Manufacturing Design	182,862.1	182,862.1	182,806.3	0.0	1.00	55.8	1.00
14 - Software Design	140,347.8	139,355.5	139,320.0	-992.3	0.99	35.5	1.00
15 - Construction Management	150,261.3	150,261.3	153,600.0	0.0	1.00	-3,338.7	0.98
16 - Process Unit Management and Support	70,336.2	70,177.3	69,005.0	-158.9	1.00	1,172.3	1.02
17 - Permanent Facility & Infrastructure	1,628,555.1	1,586,239.2	1,641,773.8	-42,315.9	0.97	-55,534.6	0.97
18 - Temporary Facilities / Services	157,740.1	157,740.1	165,830.4	0.0	1.00	-8,090.3	0.95
19 - Quality Assurance / Quality Control	114,749.6	114,749.6	114,246.2	0.0	1.00	503.5	1.00
20 - Cold startup	48,688.8	46,183.2	43,996.5	-2,505.6	0.95	2,186.6	1.05
21 - (OPC) Operations Preparation	78,364.8	78,225.7	76,281.4	-139.1	1.00	1,944.3	1.03
22 - ES&H Program Management	22,691.0	22,691.0	20,676.3	0.0	1.00	2,014.7	1.10
90 - DOE / SRNS Cost	122,490.6	122,490.6	119,167.8	0.0	1.00	3,322.8	1.03
**** REPORT TOTALS ****	4,559,425.2	4,489,208.3	4,543,347.6	-70,216.9	0.98	-54,139.3	0.99



Project to Date Performance Discrete - Oct15 (\$ in Thousands)





					TO	TAL TO DATE						EAC_calc	TCPI
	CPI	SPI	%	BCWS	BCWP	ACWP	SV	CV	BUDGET	EAC	VAC	(cpi)	(eac)
MA 01 - MFFF Design	0.99	1.00	99.2%	\$423,495.8	\$423,747.8	\$428,162.3	\$252.0	(\$4,414.5)	\$427,272.2	\$431,580.6	(\$4,308.4)	\$431,723.4	1.03
MA 06 - Project Management	-	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.00
MA 10 - Title III Engineering	0.97	0.92	64.8%	\$296,752.5	\$273,580.8	\$281,340.9	(\$23,171.8)	(\$7,760.2)	\$422,451.3	\$448,501.7	(\$26,050.4)	\$434,434.2	0.89
MA 11L - Licensing	1.00	1.00	100.0%	\$912.9	\$912.9	\$911.5	\$0.0	\$1.4	\$912.9	\$911.5	\$1.4	\$911.5	0.00
MA 11N - Nuclear Safety	1.00	0.99	99.1%	\$27,475.0	\$27,231.7	\$27,341.8	(\$243.2)	(\$110.1)	\$27,475.0	\$27,606.5	(\$131.5)	\$27,586.1	0.92
MA 11S - Security	0.99	1.00	100.0%	\$4,768.0	\$4,768.0	\$4,814.6	\$0.0	(\$46.7)	\$4,768.0	\$4,814.6	(\$46.7)	\$4,814.6	0.00
MA 12 - Procurement Engineering	1.01	1.00	100.0%	\$48,597.5	\$48,597.5	\$48,144.2	\$0.0	\$453.3	\$48,597.5	\$48,227.4	\$370.1	\$48,144.2	0.00
MA 13A - Manufacturing Design	1.00	1.00	100.0%	\$103,568.2	\$103,568.2	\$103,280.5	\$0.0	\$287.8	\$103,568.2	\$103,280.5	\$287.8	\$103,280.5	0.00
MA 13B - Multifuel Lab K Unit Design	0.94	1.00	100.0%	\$7,673.9	\$7,673.9	\$8,150.6	\$0.0	(\$476.7)	\$7,673.9	\$8,150.5	(\$476.6)	\$8,150.6	0.00
MA 14 - Software Design	0.98	0.99	94.9%	\$77,554.3	\$76,562.0	\$78,138.1	(\$992.3)	(\$1,576.1)	\$80,667.8	\$87,554.6	(\$6,886.8)	\$82,328.5	0.44
MA 15 - Construction Management	1.02	1.00	100.0%	\$219.0	\$219.0	\$215.2	\$0.0	\$3.8	\$219.0	\$215.2	\$3.8	\$215.2	0.00
MA 16 - Process Unit Assembly	1.00	0.99	93.6%	\$15,888.6	\$15,729.7	\$15,717.6	(\$158.9)	\$12.1	\$16,808.9	\$16,808.9	(\$0.0)	\$16,795.9	0.99
MA 17A - Assembly Group	1.00	0.99	82.9%	\$581,425.3	\$573,496.8	\$573,984.5	(\$7,928.5)	(\$487.7)	\$692,080.7	\$716,716.6	(\$24,636.0)	\$692,669.2	0.83
MA 17C - Perm. Facility & Infrastructure	0.95	0.96	56.6%	\$888,506.0	\$854,118.6	\$898,052.7	(\$34,387.4)	(\$43,934.1)	\$1,509,220.3	\$1,638,989.0	(\$129,768.7)	\$1,586,851.4	0.88
MA 18 - Temporary Facilities/ Services	1.01	1.00	100.0%	\$65,294.1	\$65,294.1	\$64,875.9	\$0.0	\$418.2	\$65,294.1	\$64,957.0	\$337.2	\$64,875.9	0.00
MA 19 - Quality Assurance/Quality Control	-	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.00
MA 20 - Cold Startup	1.04	0.90	15.6%	\$26,069.6	\$23,564.1	\$22,747.9	(\$2,505.6)	\$816.2	\$150,909.7	\$188,173.1	(\$37,263.4)	\$188,173.1	0.77
MA 21 - Operations Preparation	1.00	1.00	45.5%	\$52,351.5	\$52,212.4	\$52,150.4	(\$139.1)	\$62.1	\$114,800.0	\$114,738.4	\$61.6	\$114,663.5	1.00
MA 22 - ES & H	-	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0.00
MA 90 - DOE / SRNS Costs	1.00	1.00	100.0%	\$14,531.9	\$14,531.9	\$14,531.9	\$0.0	\$0.0	\$14,531.9	\$14,531.9	\$0.0	\$14,531.9	0.00
TOTAL	0.98	0.97	69.6%	\$2,635,084.1	\$2,565,809.3	\$2,622,560.6	(\$69,274.8)	(\$56,751.3)	\$3,687,251.2	\$3,915,757.8	(\$228,506.6)	\$3,820,149.7	0.87

Note: Earned value and resulting cost variances as shown are influenced by the downturn in funding as compared to the 2012 re-baseline. LOE accounts for future periods are being replanned each year in accordance with NNSA direction and available funding.



Project to Date Performance LOE - Oct15 (\$ in Thousands)



					TO	TAL TO DATE						EAC_calc	TCPI
	CPI	SPI	%	BCWS	BCWP	ACWP	SV	CV	BUDGET	EAC	VAC	(cpi)	(eac)
MA 01 - MFFF Design	0.97	1.00	100.0%	\$87,112.7	\$87,112.7	\$90,069.5	\$0.0	(\$2,956.8)	\$87,112.7	\$90,069.2	(\$2,956.5)	\$90,069.5	0.00
MA 06 - Project Management	1.02	1.00	73.2%	\$527,427.7	\$527,427.7	\$516,594.0	\$0.0	\$10,833.7	\$720,515.3	\$724,191.5	(\$3,676.2)	\$705,715.5	0.93
MA 10 - Title III Engineering	1.02	1.00	73.4%	\$272,800.8	\$272,800.8	\$267,642.9	\$0.0	\$5,158.0	\$371,673.7	\$377,283.2	(\$5,609.4)	\$364,646.3	0.90
MA 11L - Licensing	1.01	1.00	61.4%	\$44,831.1	\$44,831.1	\$44,478.0	\$0.0	\$353.1	\$73,022.9	\$73,022.4	\$0.5	\$72,447.6	0.99
MA 11N - Nuclear Safety	0.97	1.00	66.3%	\$16,378.8	\$16,378.8	\$16,804.0	\$0.0	(\$425.2)	\$24,701.7	\$26,496.7	(\$1,795.0)	\$25,342.9	0.86
MA 11S - Security	0.96	1.00	38.1%	\$9,872.6	\$9,872.6	\$10,233.0	\$0.0	(\$360.4)	\$25,902.5	\$26,810.6	(\$908.2)	\$26,848.0	0.97
MA 12 - Procurement Engineering	1.01	1.00	95.8%	\$80,970.4	\$80,970.4	\$80,107.2	\$0.0	\$863.3	\$84,561.1	\$90,847.1	(\$6,286.0)	\$83,659.5	0.33
MA 13A - Manufacturing Design	1.00	1.00	100.0%	\$66,774.9	\$66,774.9	\$66,467.5	\$0.0	\$307.4	\$66,774.9	\$66,578.5	\$196.4	\$66,467.5	0.00
MA 13B - Multifuel Lab K Unit Design	0.99	1.00	100.0%	\$4,845.1	\$4,845.1	\$4,907.7	\$0.0	(\$62.6)	\$4,845.1	\$4,907.2	(\$62.1)	\$4,907.7	0.00
MA 14 - Software Design	1.03	1.00	93.7%	\$62,793.5	\$62,793.5	\$61,181.9	\$0.0	\$1,611.6	\$66,991.7	\$66,954.2	\$37.5	\$65,272.3	0.73
MA 15 - Construction Management	0.98	1.00	68.2%	\$150,042.3	\$150,042.3	\$153,384.8	\$0.0	(\$3,342.5)	\$220,157.9	\$222,739.6	(\$2,581.7)	\$225,062.3	1.01
MA 16 - Process Unit Assembly	1.02	1.00	91.8%	\$54,447.6	\$54,447.6	\$53,287.4	\$0.0	\$1,160.2	\$59,279.3	\$58,049.5	\$1,229.8	\$58,016.2	1.01
MA 17A - Assembly Group	0.87	1.00	72.3%	\$11,488.7	\$11,488.7	\$13,153.8	\$0.0	(\$1,665.1)	\$15,896.9	\$15,873.4	\$23.5	\$18,200.8	1.62
MA 17C - Perm. Facility & Infrastructure	0.94	1.00	69.0%	\$147,135.1	\$147,135.1	\$156,581.9	\$0.0	(\$9,446.9)	\$213,137.1	\$245,141.8	(\$32,004.8)	\$226,821.7	0.75
MA 18 - Temporary Facilities/ Services	0.92	1.00	81.6%	\$92,445.9	\$92,445.9	\$100,954.5	\$0.0	(\$8,508.6)	\$113,315.8	\$123,691.9	(\$10,376.0)	\$123,745.2	0.92
MA 19 - Quality Assurance/Quality Control	1.00	1.00	68.7%	\$114,749.6	\$114,749.6	\$114,246.2	\$0.0	\$503.5	\$166,931.9	\$169,377.1	(\$2,445.3)	\$166,199.4	0.95
MA 20 - Cold Startup	1.06	1.00	32.7%	\$22,619.1	\$22,619.1	\$21,248.6	\$0.0	\$1,370.5	\$69,261.9	\$68,466.1	\$795.8	\$65,065.4	0.99
MA 21 - Operations Preparation	1.08	1.00	26.1%	\$26,013.3	\$26,013.3	\$24,131.0	\$0.0	\$1,882.3	\$99,698.6	\$98,836.9	\$861.6	\$92,484.6	0.99
MA 22 - ES & H	1.10	1.00	41.2%	\$22,691.0	\$22,691.0	\$20,676.3	\$0.0	\$2,014.7	\$55,025.7	\$55,054.2	(\$28.6)	\$50,140.0	0.94
MA 90 - DOE / SRNS Costs	1.03	1.00	48.8%	\$107,958.7	\$107,958.7	\$104,636.0	\$0.0	\$3,322.8	\$221,022.3	\$222,507.6	(\$1,485.3)	\$214,219.6	0.96
TOTAL	1.00	1.00	69.7%	\$1,923,399.1	\$1,923,399.1	\$1,920,786.2	\$0.0	\$2,612.9	\$2,759,828.7	\$2,826,898.8	(\$67,070.1)	\$2,745,332.0	0.92

Note: Earned value and resulting cost variances as shown are influenced by the downturn in funding as compared to the 2012 re-baseline. LOE accounts for future periods are being replanned each year in accordance with NNSA direction and available funding.

FUNDS STATUS REPORT (\$ X 1000)

1. TITLE: Mixed Oxide (MOX) Fuel	Project	2. REPORTING	PERIOD:			3. IDENTIFICATION NUMBER:					
			28 September 1	5 - 1 November 15		DE-AC02-99C	H10888				
4. PARTICIPANT NAME AND ADD	DRESS:	5. APPROPRIA	TION:			6. START DATE	:	22-Mar-99			
CB&I AREVA MOX Services, LI	_C										
Savannah River Site						7. COMPLETIC	ON DATE:	TBD			
F-Area, Bldg. 706-1F		Construction	\$ 4,492,813.5	Thru Mod # A247							
Aiken, SC 29808		Operating	\$ 250,571.2	Thru Mod # A247							
		Total	\$ 4,743,384.8								
8.	9.	10.	11.	12.	13.	14.	15.	16.	17.		
						Current FY					
	Prior Year	Prior Year	(BA - Costs)	Current Year BA	Funds Avail.	Cumulative	Current FY	Est Costs Bai	Estimated C/O		
Funding Category	BA	COSIS	(BA - COSIS)		C/O + BA	Costs	Remaining \$	ULL			
TEC											
MA 1 - MFFF (TEC)		\$ 478,312.8				\$ 1,829.9		\$ 3,110.0			
MA 6 - Proj. Mgmt & Admin (TEC)		\$ 509,272.9				\$ 5,170.3		\$ 47,951.8			
MA 10 - Title III Engineering (TEC)		\$ 543,787.6				\$ 4,985.8		\$ 91,257.1			
MA 11 - Regulatory Affairs		\$ 54,819.5				\$ 354.4		\$ 3,320.0			
MA 12 - PEG		\$ 127,669.4				\$ 259.9		\$ 2,510.0			
MA 13 - MDG		\$ 182,789.3				\$-		\$ -			
MA 14 - SDG		\$ 138,735.8				\$ 583.7		\$ 4,193.8			
MA 15 - Construction Management		\$ 149,973.7				\$ 3,626.4		\$ 38,587.3			
MA 16 - Process Unit Assembly		\$ 68,031.6				\$ 398.1		\$ 4,070.0			
MA 17 - Permanent Fac. & Infrastructure		\$ 1,590,755.7				\$ 13,695.8		\$ 151,920.0			
MA 18 - Temporary Facilities/Services	S	\$ 156,705.3				\$ 2,545.3		\$ 23,920.2			
MA 19 - QA / QC		\$ 112,582.7				\$ 1,600.4		\$ 16,110.0			
MA 20 - Cold Startup		\$ 38,376.6				\$ 99.0		\$ 2,422.1			
MA 22 - ES&H		\$ 18,906.6				\$ 219.9		\$ 2,464.0			
Fixed Fee (TEC)		\$ 59,107.1				\$-		\$ -			
Incentive Fee (TEC)		\$ 29,100.0				\$-		\$-			
Milestone Fee (TEC)		\$ 23,000.0				\$-		\$-			
Technology Transfer Fee (TEC)		\$ 10,018.7				\$-		\$-			
Total Construction (TEC)	\$ 4,492,813.5	\$ 4,291,945.3	\$ 200,868.2	\$-	\$ 200,868.2	\$ 35,368.9	\$ 165,499.3	\$ 391,836.2	-\$ 226,336.9		
OPC											
MA 1 - MFFF (OPC)		\$ 38.073.6				-\$ 0.0		\$ -			
MA 06 - Project Management (OPC)		\$ 239.8				\$ -		\$ -			
MA 10 - Title III Engineering (OPC)		\$ 82.9				\$ 0.7		\$ -			
MA 11 - Regulatory Affairs		\$ 48.578.5				\$ 697.0		\$ 4.901.3			
MA 20 - Cold Startup		\$ 5.214.7				\$ 272.0		\$ 3.068.6			
MA 21 - Operations Preparation		\$ 75.711.4				\$ 509.8		\$ 6.047.9			
MA 22 - ES&H (OPC)		\$ 1.474.2				\$ 1.8		\$ 100.7			
Fixed Fee (OPC)		\$ 4.956.2				\$ 15.4		\$ -			
Incentive Fee (OPC)		\$ -				\$ -		\$ -			
Milestone Fee (OPC)		\$ 13.573.3				\$ -		\$ 6.000.0			
Award Fee		\$ 26,817.1				\$ -		\$ 6,000.0			
Subtotal Operating	\$ 250.571.2	\$ 214,721.6	\$ 35,849.7	\$-	\$ 35,849.7	\$ 1,496.8	\$ 34,352.9	\$ 26,118.4	\$ 8,234.5		
18. TOTAL	\$ 4,743,384.8	\$ 4,506,666.9	\$ 236,717.9	\$-	\$ 236,717.9	\$ 36,865.6	\$ 199,852.2	\$ 417,954.6	-\$ 218,102.4		
		. , ,						,			



Management Reserve Analysis

Rebaseline	BAC	EAC	Variance
Known Scope and Fees	\$6,776,864.5	\$6,776,682.5	\$182.0
Management Reserve	\$311,049.6	The second s	
NNSA Contingency	\$330,375.6		
Totals	\$7,418,289.7		

October 2015 Status	BAC	EAC	Variance
Known Scope and Fees	\$7,064,172.2	\$7,427,804.4	(\$363,632.2)
Management Reserve	\$29,970.9		
NNSA Contingency	\$324,146.5		
Totals	\$7,418,289.6		

Change	BAC	EAC	Variance
Known Scope and Fees	\$287,307.7	\$651,121.9	(\$363,814.2)
Management Reserve	(\$281,078.7)		
NNSA Contingency	(\$6,229.0)		
Totals	\$0.0		

Note: Values shown include fee



Change Control Activity Impacting FY16

Trend Review Board Activity:

Fiscal year to date, the TRB has approved Project Change Notices (PCNs) that have decreased the budget for FY16 by \$7.9M. These PCNS are summarized in the table below.

Impacts FY16 Spend Plan	Туре	PCN	Description	Commissioning	Constn	Startup	Grand Total
No	Pricing	16-1184	Return Pipe Corrosion Budget to MR		(\$412)		(\$412)
	Pricing Total				(\$412)		(\$412)
	Scope	16-1189	PML GB3400 Award (DMO PTO)	\$201			\$201
	Scope Total			\$201			\$201
	Time Phasing 16-EX6		Constn Mgmt		(\$7,010)		(\$7,010)
		16-1187	Duct Fabrication	1	(\$569)		(\$569)
		16-1188	Data Correction			(\$99)	(\$99)
	Time Phasing	Total			(\$7,579)	(\$99)	(\$7,678)
No Total				\$201	(\$7,991)	(\$99)	(\$7,889)
Grand Total				\$201	(\$7,991)	(\$99)	(\$7,889)

* EVMS requires all historal adjustments to be made in the current reporting period thereby impacting the FY16 budget. This will not alter the approved spend plan but any comparisons against the approved FY16 Budget will need to be adjusted to negate the budget impact.



Project Schedule

Data Date: 05-Nov-15 Print Date: 05-Nov-15 FE_	6.		MFFF Level 1 TASK filter. 5W Level 1. Sort by Seq	
Activity Name	Start	Finish	2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 20 0 1 0 2 0 3 0 4 0 1 0 2	26 2027 2028 20 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1
Complete Construction: BEG CP-18		12-Oct-20	Complete Construction: BEG CP-15 International Complete Construction: BEG CP-15	
Complete Construction: CP-23 MFFF HVAC		26-Jun-23	Complete Construction: CP-23 MFFF HVAC	
Complete Construction: Non Halogen Fire Suppression CP26-3		18-Jan-21	Complète Construction: Non Halogen Fire Suppression CP26-3 🔶	
Complete Construction: Halogen Fire Suppression CP26-4		23-Aug-22	Complete Construction: Halogen Fire Suppression CP26-4	
Complete Construction: Fire Protection Water CP-26-1		05-Apr-23	Complete Construction: Fire Protection Water CP-26-1 III	
Complete Construction: Process Piping BMP & BSR CP-09		24-May-22	Complete Construction: Process Piping BMP & BSR CP-89 Image State Stat	
Complete Construction: BAP Chem Process & Utl - Eq & Piping CP-27		31-May-23	Complete Construction: BAP Chem Process & Util - Eq & Piping CP-27 🔶	
Complete Construction: MFFF I&C CP-22		23-Aug-23	Complete Construction: MFFF 1&C CP-22 ◆	
Complete Construction: BAP I&C CP-28		23-Aug-23	Complete Construction: BAP 18C CP-28	
Complete Construction: MFFF Electrical CP-21		27-Sep-23	Complete Construction: MFFF Electrical CP-21	
Complete Construction: MFFF Security CP-32		24-Apr-25	Complete Construction: MFFF Security CP-32	
Rm B121 - NPH - Mechanical Installation Complete		12-Jun-17	nical installation Complete 🔶	
Rm B123 - NTM - Mechanical Installation Complete		08-Nov-16	ation Complete	
PML - Mechanical Installation Complete		30-Jun-21	PML - Mechanical Installation Complete	
PML - CP 24 Electrical Complete		30-Jun-21	PML - CP 24 Electrical Complete 🔹	
Mechanical Installation Complete: AP Process Unit Gloveboxes		23-Oct-19	Mechanical Instalation Complete: AP Process Unit Gloveboxes 🔶	
Complete Construction: Glovebox Installation CP-24		13-Jul-22	Complete Construction: Glovebox Installation CP-24	
BAP level 2 TCO Closures	02-Aug-12 A	20-May-20		
BAP level 3 TCO Closures	05-Nov-15	05-Aug-19		
BAP level 1 TCO Closures	12-Apr-16	04-Nov-19		
BAP level 4 TCO Closures	03-Oct-16	05-Aug-21		
BAP level 5 TCO Closures	11-Apr-18	02-Jun-22		
BAP Roof TCO Closures	13-Jun-18	24-Jan-19		
BMP level 2 TCO Closures	05-Nov-15	15-Jul-21		
BMP level 3 TCO Closures	05-Nov-15	29-Aug-22		
BMP level 1 TCO Closures	03-Oct-16	12-Aug-20		
BSR Level 1 TCO Closures	06-Nov-17	19-Dec-18		
BSR Level 3 TCO Closures	26-Jul-18	26-Sep-18		
BSR Level 2 TCO Closures	28-Jun-21	26-Aug-21		
Gabion Wall TCO Closures	29-Aug-22	13-Dec-22		
EBA-QT401: Normal 250VDC EBA CHGR1000 Initial Energization (x5) 8d		08-Dec-23	EBA-QT401: Normal 250VDC EBA CHQR1000 Initial Energization (x5) 8d. 🔶	
EAA-QT401: EAA/EAB SWG1000 Initial Energization		17-Jan-24	EAA-QT401: EAA/EAB SW/G1000 Initial Energization 🔶	
EAA-QT402: EAA/EAB SWG2000 Initial Energization		17-Jan-24	EAA-QT402: EAA/EAB SWG2000 Initial Energization 🔶	
Begin Cold Startup Testing	28-Nov-23		Begin Cold Startup Testing 🔹	
In-Plant Testing - MP Receiving Area Energization & Comprehensive Testing	31-May-24	23-Oct-26		
In-Plant Testing - MP Pelet Process Units Energization & Comprehensive Testing In-Plant Testing - MP Fuel Assembly Process Units Energization & Comprehensive Testino	31-May-24 31-May-24	20-Nov-26 18-Dec-26		
In-Plant Testing - MP Rod Process Linits Energization & Comprehensive Testing	31-May-24	14-Jan-27		
In-Plant Testing - MP Powder Process Lints Energization & Comprehensive Testing	31-May-24	17-Feb-27		
MP Receiving Area Process Linits Confinement and Leak Tests Complete		08-Jan-27	VIP Receiving Area Process, Units Confinement and Leak Tests Con	npiete
MP Fuel Rod Process Lints Confinement and Leak Tests Complete		12-Apr-27	MP Fuel Rod Process Units Confinement and Leak Test	s Complete
MP Powder Process Units Confinement and Leak Tests Complete		26-Oct-27	MP Powder Process Units Confinement and	Leak Tests Complete
MP Pelet Process Units Confinement and Leak Tests Complete		24-Feb-28	MP Peter Process Lints Confinem	ent and Leak Tests Complete
In-Plant Testing - BOP Electrical Systems	28-Nov-23	13-Aug-24		
In-Plant Testing - Process Water / Bidg Services	17-Jan-24	15-Nov-24		
In-Plant Testing - BOP Alarms and Communications	31-May-24	30-Sep-24		
In-Plant Testing - BOP Air Systems	31-May-24	24-Oct-24		
In-Plant Testing - BOP Fire Detection	31-May-24	28-JUH25		
In-Plant Testing - BOP Gaseous Reagents	31-May-24	20-Nov-26		
In-Plant Testing - BOP Liquid Reagents	31-May-24	01-Jan-27		
In-Plant Testing - Rad Protection / Monitoring	24-Sep-21	13-May-27		
In-Plant Testing - LAB	15-Jan-25	05-Jan-26		
RGI (Response to General Incidents) Tests	24-Feb-28	29-Feb-28		8
Preps for RP and REFERENCE PERIOD (Final ORR)	01-Mar-28	19-Apr-28		
Milestone: COLD STARTUP COMPLETE		19-Apr-28"	Milestone	COLD STARTUP COMPLETE
		1	The second se	
Remaining LOE (ata Hammock) Remaining Work Actual	LOE (aka Hamm	ock)	Available for Site	
Critical Remaining Work Actual Work Mileste	re		T	Page 1 of 1
				05-Nov-15
				00.1404-12

MOX SERVICES, LLC

Upcoming Events

FUEL FABRICATION FACILITY

•	Complete BEG duct bank 6 (excavate, install, backfill) COMPLETE	Nov 15
•	Complete Insulating HSA (supply system) HVAC duct in C114	Nov 15
•	Complete installation of two of four major pieces of electrical equipment in C312 (remainder if FY17) COMPLETE	Nov 15
•	Complete BEG duct banks 8 and 10 (excavate, install, backfill)	Dec 15
•	Award BEG/UEF civil/structural contract	Jan 16
•	Complete C334 drip tray installation	Mar 16
•	Complete Testing POE (exhaust system) HVAC duct in C114	Oct 16



AOP Milestones

DESCRIPTION	DUE DATE	CURRENT FORECAST DATE as of 01Nov15	FLOAT - CALENDAR DAYS
Set 3 Pipe Modules in the Active Gallery room C-234	30-Sep-16	9-Jan-16	265
Close 3 Temporary Construction Openings (TCO's)	31-Aug-16	22-Dec-15	253
Complete installation of the Drip Tray in room C-141	30-Sep-16	6-Apr-16	177
Rough set 3 process gloveboxes.	30-Sep-16	20-Sep-16	10
Install 12,800 LF of pipe	30-Sep-16	13-Jun-16	109
Install 70,000 LB of HVAC duct	30-Sep-16	8-Aug-16	53
Install 5,760 LF of conduit	30-Sep-16	17-Jul-16	75
Complete installation of 3 electrical ductbanks	31-Jul-16	10-Dec-15	234



Project Performance Since Rebaseline Summary

	_		Octobe	r 2015				Cumulative Since Rebaseline (June 2012 through October 2015)					
Func	Budget	Earned	Actual	Sched Variance	Cost Variance	SPI	CPI	Sched Variance	Cost Variance	SPI	СРІ		
Constn	\$14,783,122	\$7,747,093	\$15,020,872	(\$7,036,029)	(\$7,273,779)	0.52	0.52	(\$34,400,983)	(\$64,810,020)	0.92	0.86		
Engrng	\$8,288,014	\$7,809,949	\$7,919,982	(\$478,065)	(\$110,033)	0.94	0.99	(\$25,097,437)	(\$9,101,007)	0.94	0.98		
MOX Comm	\$3,504,884	\$2,381,727	\$6,145,547	(\$1,123,157)	(\$3,763,820)	0.68	0.39	(\$10,714,785)	\$3,166,919	0.97	1.01		
NNSA	\$934,060	\$934,060	\$1,210,709	\$0	(\$276,649)	1.00	0.77	\$0	\$3,322,792	1.00	1.09		
Sprt Serv	\$7,505,771	\$7,505,771	\$7,785,456	\$0	(\$279,685)	1.00	0.96	\$0	\$13,299,323	1.00	1.05		
Grand Total	\$35,015,851	\$26,378,600	\$38,082,566	(\$8,637,251)	(\$11,703,966)	0.75	0.69	(\$70,213,205)	(\$54,121,993)	0.95	0.96		

Project to date ACWP = \$4,543,347,595 Rebaseline to Date ACWP = \$1,495,455,075

Note: Earned value and resulting cost variances as shown are influenced by the downturn in funding as compared to the 2012 re-baseline. LOE accounts for future periods are being replanned each year in accordance with NNSA direction and available funding.

CBI AREVA

Project Performance Since Rebaseline (con't) Discrete Activity by Mgmt Area

			TOTAL TO DATE								
Jun12 - Oct15	CPI	SPI	BCWS	BCWP	ACWP	SV	CV				
MA 01 - MFFF Design	0.88	1.01	\$33,286.4	\$33,538.3	\$37,952.8	\$252.0	(\$4,414.5)				
MA 06 - Project Management	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0				
MA 10 - Title III Engineering	0.96	0.89	\$213,953.6	\$190,781.8	\$198,542.0	(\$23,171.8)	(\$7,760.2)				
MA 11L - Licensing	0.00	-	\$0.0	\$0.0	-\$1.4	\$0.0	\$1.4				
MA 11N - Nuclear Safety	0.97	0.94	\$3,946.1	\$3,702.8	\$3,812.9	(\$243.2)	(\$110.1)				
MA 11S - Security	0.83	1.00	\$229.5	\$229.5	\$276.2	\$0.0	(\$46.7)				
MA 12 - Procurement Engineering	1.55	1.00	\$1,270.6	\$1,270.6	\$817.4	\$0.0	\$453.3				
MA 13A - Manufacturing Design	0.00	-	\$0.0	\$0.0	-\$287.8	\$0.0	\$287.8				
MA 13B - Multifuel Lab K Unit Design	0.00	-	\$0.0	\$0.0	\$476.7	\$0.0	(\$476.7)				
MA 14 - Software Design	0.91	0.94	\$16,207.3	\$15,214.9	\$16,791.1	(\$992.3)	(\$1,576.1)				
MA 15 - Construction Management	0.00	-	\$0.0	\$0.0	-\$3.8	\$0.0	\$3.8				
MA 16 - Process Unit Assembly	1.01	0.86	\$1,143.8	\$984.9	\$972.8	(\$158.9)	\$12.1				
MA 17A - Assembly Group	1.00	0.97	\$246,054.5	\$238,126.0	\$238,613.7	(\$7,928.5)	(\$487.7)				
MA 17C - Perm. Facility & Infrastructure	0.79	0.82	\$195,545.3	\$161,157.9	\$205,092.0	(\$34,387.4)	(\$43,934.1)				
MA 18 - Temporary Facilities/ Services	1.07	1.00	\$6,505.2	\$6,505.2	\$6,086.9	\$0.0	\$418.2				
MA 19 - Quality Assurance/Quality Control	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0				
MA 20 - Cold Startup	1.07	0.83	\$14,897.5	\$12,392.0	\$11,575.8	(\$2,505.6)	\$816.2				
MA 21 - Operations Preparation	1.00	0.99	\$17,657.9	\$17,518.8	\$17,456.7	(\$139.1)	\$62.1				
MA 22 - ES & H	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0				
MA 90 - DOE / SRNS Costs	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0				
TOTAL	0.92	0.91	\$750,697.7	\$681,422.9	\$738,174.2	<mark>(\$69,274.8)</mark>	(\$56,751.3)				

CEL AREVA

Project Performance Since Rebaseline (con't) LOE Activity by Mgmt Area

		TOTAL TO DATE								
Jun12 - Oct15	CPI	SPI	BCWS	BCWP	ACWP	SV	CV			
MA 01 - MFFF Design	0.62	1.00	\$4,784.3	\$4,784.3	\$7,741.1	\$0.0	(\$2,956.8)			
MA 06 - Project Management	1.06	1.00	\$179,718.0	\$179,718.0	\$168,884.4	\$0.0	\$10,833.7			
MA 10 - Title III Engineering	1.04	1.00	\$133,608.2	\$133,608.2	\$128,450.2	\$0.0	\$5,158.0			
MA 11L - Licensing	1.03	1.00	\$12,584.3	\$12,584.3	\$12,231.2	\$0.0	\$353.1			
MA 11N - Nuclear Safety	0.93	1.00	\$6,099.2	\$6,099.2	\$6,524.3	\$0.0	(\$425.2)			
MA 11S - Security	0.95	1.00	\$6,676.2	\$6,676.2	\$7,036.6	\$0.0	(\$360.4)			
MA 12 - Procurement Engineering	1.08	1.00	\$11,713.2	\$11,713.2	\$10,850.0	\$0.0	\$863.3			
MA 13A - Manufacturing Design	0.00	-	\$0.0	\$0.0	-\$307.4	\$0.0	\$307.4			
MA 13B - Multifuel Lab K Unit Design	0.00	-	\$0.0	\$0.0	\$62.6	\$0.0	(\$62.6)			
MA 14 - Software Design	1.15	1.00	\$12,377.5	\$12,377.5	\$10,766.0	\$0.0	\$1,611.6			
MA 15 - Construction Management	0.96	1.00	\$83,162.7	\$83,162.7	\$86,505.2	\$0.0	(\$3,342.5)			
MA 16 - Process Unit Assembly	1.08	1.00	\$16,623.5	\$16,623.5	\$15,463.3	\$0.0	\$1,160.2			
MA 17A - Assembly Group	0.32	1.00	\$794.8	\$794.8	\$2,459.9	\$0.0	(\$1,665.1)			
MA 17C - Perm. Facility & Infrastructure	0.91	1.00	\$94,671.0	\$94,671.0	\$104,117.9	\$0.0	(\$9,446.9)			
MA 18 - Temporary Facilities/ Services	0.89	1.00	\$65,539.5	\$65,539.5	\$74,048.1	\$0.0	(\$8,508.6)			
MA 19 - Quality Assurance/Quality Control	1.01	1.00	\$54,288.3	\$54,288.3	\$53,784.8	\$0.0	\$503.5			
MA 20 - Cold Startup	1.13	1.00	\$11,655.9	\$11,655.9	\$10,285.4	\$0.0	\$1,370.5			
MA 21 - Operations Preparation	1.15	1.00	\$14,317.8	\$14,317.8	\$12,435.5	\$0.0	\$1,882.3			
MA 22 - ES & H	1.20	1.00	\$12,237.5	\$12,237.5	\$10,222.8	\$0.0	\$2,014.7			
MA 90 - DOE / SRNS Costs	1.09	1.00	\$39,041.0	\$39,041.0	\$35,718.2	\$0.0	\$3,322.8			
TOTAL	1.00	1.00	\$759,892.9	\$759,892.9	\$757,280.1	\$0.0	\$2,612.9			

FY16 Performance Discussion

			Octobe	r 2015						FY16 Yea	r to Date			
Func	Budget	Earned	Actual	Sched Variance	Cost Variance	SPI	CPI	YTD Budget	YTD Earned	YTD Actual	Sched Variance	Cost Variance	SPI	CPI
Constn	\$14,783,122	\$7,747,093	\$15,020,872	(\$7,036,029)	(\$7,273,779)	0.52	0.52	\$14,783,122	\$7,747,093	\$15,020,872	(\$7,036,029)	(\$7,273,779)	0.52	0.52
Engrng	\$8,288,014	\$7,809,949	\$7,919,982	(\$478,065)	(\$110,033)	0.94	0.99	\$8,288,014	\$7,809,949	\$7,919,982	(\$478,065)	(\$110,033)	0.94	0.99
MOX Comm	\$3,504,884	\$2,381,727	\$6,145,547	(\$1,123,157)	(\$3,763,820)	0.68	0.39	\$3,504,884	\$2,381,727	\$6,145,547	(\$1,123,157)	(\$3,763,820)	0.68	0.39
NNSA	\$934,060	\$934,060	\$1,210,709	\$0	(\$276,649)	1.00	0.77	\$934,060	\$934,060	\$1,210,709	\$0	(\$276,649)	1.00	0.77
Sprt Serv	\$7,505,771	\$7,505,771	\$7,785,456	\$ 0	(\$279,685)	1.00	0.96	\$7,505,771	\$7,505,771	\$7,785,456	\$0	(\$279,685)	1.00	0.96
Grand Total	\$35,015,851	\$26,378,600	\$38,082,566	(\$8,637,251)	(\$11,703,966)	0.75	0.69	\$35,015,851	\$26,378,600	\$38,082,566	(\$8,637,251)	(\$11,703,966)	0.75	0.69

October incremental schedule performance against the Execution Plan is 0.75.

- Favorable performance was achieved in:
 - Piping support design was ahead of plan for the current period
- Challenges include:

MOX

- Previously overstated earnings on lab contracts which have been deferred were corrected resulting in negative current period variance
- Delays in discrete startup procedure preparation activities are the result of resources diverted to support of the out-year schedule effort
- Challenges in vendor delays for the sintering furnace continue as well as process unit PRF
- Engineered Equipment delays for QL1 Fans, Motors, and VFDs due to manufacturer's facility relocation activity and welder qualification issues, and QL1 HEPA Filters due to lifting lug issues.
- Cleanup of the planned budget for concrete structure installation completed in prior periods
- Reduction in earned value due to the implementation of the Intermech duct fabrication trend to align the fabrication budget to the correct distribution by building and floor
- Reduction in earned value to correct the over-claimed progress of duct bank installation from the previous month
- Liburdi Diametric Welding Machine and the Active Gallery Trolley that had been received in prior periods.
- \$630K catchup for installation that is ahead of the plan for the Active Gallery pipe & pipe supports, crane and hoists, module pipe supports, and Drip tray fabrication

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FY16 Performance Discussion (con't)

October incremental cost performance against the Execution Plan is 0.69.

- Challenges include:
 - Higher than planned unit costs for Title II piping support production
 - Support Services: monthly overruns occurred in general counsel and relocation due to time phasing issues. A monthly overrun occurred in business services due to an accrual that was inadvertently doubled.
 - Settlement payout to a glove box vendor this month exceeded the established budget for same resulting in a negative variance
 - · Vacancies in QA/QC contributed to cost underruns
 - NRC Charges exceeded plan due to higher than normal headquarters activity
 - Reduction in earned value due to the implementation of the Intermech duct fabrication trend to align the fabrication budget to the correct distribution by building and floor
 - Reduction in earned value to correct the over-claimed progress of duct bank installation from the previous month
 - Active Gallery pipe and pipe supports U/R's are higher than the budget causing a negative variance. The piping U/R is 35% less than the FY16 Execution Plan U/R but offset by the pipe support U/R which is 85% higher than the FY16 Execution Plan U/R due to the complexity of the installation of the comb assembly supports during the month.
 - Piping subcontractor overhead is not in the FY16 budget causing a variance
 - Work Control actual costs are greater than planned. Contributing to the variance is the recent reorganization which added additional material expeditors and the Strategic Planning Group to this organization.
 - Unplanned purchase of two concrete mixing trucks and a motor grader.
 - Temporary Maintenance and cleanup is greater than planned

FY16 Performance Discussion (con't)

FY16 YTD schedule performance against the execution plan is 0.75.

- Favorable performance was achieved in:
 - See monthly analysis on prior page as fiscal year to date performance reflects only the first month of the year
- · Challenges include:
 - See monthly analysis on prior page as fiscal year to date performance reflects only the first month of the year

FY16 YTD cost performance against the execution plan is 0.69.

- Favorable performance was achieved in:
 - See monthly analysis on prior page as fiscal year to date performance reflects only the first month of the year
- · Challenges include:
 - See monthly analysis on prior page as fiscal year to date performance reflects only the first month of the year





FY16 Performance

Total Project Performance

	FY16 to Date							EVIC PURCET	16 BUDGET October 2015						
MA Alt	CPI	SPI	BCWS	BCWP	ACWP	SV	CV	FTIGBUUGET	CPI	SPI	BCWS	BCWP	ACWP	SV	CV
01 - MFFF Design	0.64	1.12	\$1,048.0	\$1,173.3	\$1,829.9	\$125.4	(\$656.6)	\$3,304.3	0.64	1.12	\$1,048.0	\$1,173.3	\$1,829.9	\$125.4	(\$656.6)
06 - Project Management	0.95	1.00	\$4,900.1	\$4,900.1	\$5,170.3	\$0.0	(\$270.2)	\$51,574.9	0.95	1.00	\$4,900.1	\$4,900.1	\$5,170.3	\$0.0	(\$270.2)
10 - Title III Engineering	1.14	0.91	\$6,228.4	\$5,679.3	\$4,986.2	(\$549.0)	\$693.1	\$86,844.1	1.14	0.91	\$6,228.4	\$5,679.3	\$4,986.2	(\$549.0)	\$693.1
11L - Licensing	1.20	1.00	\$113.8	\$113.8	\$94.8	\$0.0	\$19.0	\$1,173.1	1.20	1.00	\$113.8	\$113.8	\$94.8	\$0.0	\$19.0
11N - Nuclear Safety	1.03	1.16	\$230.9	\$267.2	\$259.5	\$36.4	\$7.7	\$2,367.3	1.03	1.16	\$230.9	\$267.2	\$259.5	\$36.4	\$7.7
12 - Procurement Engineering	1.03	1.00	\$266.4	\$266.4	\$259.9	\$0.0	\$6.6	\$2,771.0	1.03	1.00	\$266.4	\$266.4	\$259.9	\$0.0	\$6.6
13A - MDG	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
13B - Multifuel-Lab-K Design	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
14 - Software Design	0.73	0.82	\$514.4	\$423.6	\$583.7	(\$90.8)	(\$160.1)	\$4,574.4	0.73	0.82	\$514.4	\$423.6	\$583.7	(\$90.8)	(\$160.1)
15 - Construction Management	0.67	1.00	\$2,446.8	\$2,446.8	\$3,626.4	\$0.0	(\$1,179.5)	\$28,374.3	0.67	1.00	\$2,446.8	\$2,446.8	\$3,626.4	\$0.0	(\$1,179.5)
16 - Process Unit Management and Support	0.84	0.99	\$338.4	\$333.5	\$398.1	(\$4.9)	(\$64.6)	\$4,335.9	0.84	0.99	\$338.4	\$333.5	\$398.1	(\$4.9)	(\$64.6)
17A - Fabrication and Assembly	0.23	0.52	\$2,153.3	\$1,125.6	\$4,866.4	(\$1,027.7)	(\$3,740.7)	\$36,397.4	0.23	0.52	\$2,153.3	\$1,125.6	\$4,866.4	(\$1,027.7)	(\$3,740.7)
17C - Construction	0.41	0.34	\$10,636.6	\$3,600.6	\$8,841.1	(\$7,036.0)	(\$5,240.6)	\$87,080.8	0.41	0.34	\$10,636.6	\$3,600.6	\$8,841.1	(\$7,036.0)	(\$5,240.6)
18 - Temporary Facilities	0.67	1.00	\$1,699.7	\$1,699.7	\$2,553.4	\$0.0	(\$853.7)	\$19,429.3	0.67	1.00	\$1,699.7	\$1,699.7	\$2,553.4	\$0.0	(\$853.7)
19 - Quality Assurance / Quality Control	1.07	1.00	\$1,716.8	\$1,716.8	\$1,600.9	\$0.0	\$115.9	\$17,692.2	1.07	1.00	\$1,716.8	\$1,716.8	\$1,600.9	\$0.0	\$115.9
20 - Cold Startup	1.31	0.68	\$189.7	\$129.4	\$99.0	(\$60.3)	\$30.4	\$1,942.7	1.31	0.68	\$189.7	\$129.4	\$99.0	(\$60.3)	\$30.4
22 - ES&H Program Management	1.20	1.00	\$264.8	\$264.8	\$220.7	\$0.0	\$44.1	\$2,728.8	1.20	1.00	\$264.8	\$264.8	\$220.7	\$0.0	\$44.1
90 - DOE / SRNS Cost	0.99	1.00	\$366.7	\$366.7	\$372.0	\$0.0	(\$5.3)	\$4,400.0	0.99	1.00	\$366.7	\$366.7	\$372.0	\$0.0	(\$5.3)
TEC Total	0.69	0.74	\$33,114.8	\$24,507.7	\$35,762.4	(\$8,607.0)	(\$11,254.6)	\$354,990.5	0.69	0.74	\$33,114.8	\$24,507.7	\$35,762.4	(\$8,607.0)	(\$11,254.6)
01 - MFFF Design	-	-	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0		-	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0
06 - Project Management	÷.	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	÷		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
10 - Title III Engineering		-	\$0.0	\$0.0	\$0.7	\$0.0	(\$0.7)	\$0.0	-	-	\$0.0	\$0.0	\$0.7	\$0.0	(\$0.7)
11L - Licensing	0.39	1.00	\$186.5	\$186.5	\$478.4	\$0.0	(\$291.9)	\$1,921.8	0.39	1.00	\$186.5	\$186.5	\$478.4	\$0.0	(\$291.9)
11N - Nuclear Safety	-		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
115 - Security	1.48	1.00	\$323.8	\$323.8	\$218.6	\$0.0	\$105.2	\$3,455.7	1.48	1.00	\$323.8	\$323.8	\$218.6	\$0.0	\$105.2
12 - Procurement Engineering	-	1.1.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	12	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
19 - Quality Assurance / Quality Control	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 - Cold Startup	0.87	0.89	\$268.2	\$238.0	\$272.0	(\$30.2)	(\$34.0)	\$2,952.4	0.87	0.89	\$268.2	\$238.0	\$272.0	(\$30.2)	(\$34.0)
21 - (OPC) Operations Preparation	1.09	1.00	\$555.2	\$555.2	\$510.0	\$0.0	\$45.2	\$6,473.9	1.09	1.00	\$555.2	\$555.2	\$510.0	\$0.0	\$45.2
22 - ES&H Program Management	1.1	-	\$0.0	\$0.0	\$1.8	\$0.0	(\$1.8)	\$0.0			\$0.0	\$0.0	\$1.8	\$0.0	(\$1.8)
90 - DOE / SRNS Cost	0.68	1.00	\$567.4	\$567.4	\$838.7	\$0.0	(\$271.3)	\$6,700.0	0.68	1.00	\$567.4	\$567.4	\$838.7	\$0.0	(\$271.3)
OPC Total	0.81	0.98	\$1,901.1	\$1,870.9	\$2,320.2	(\$30.2)	(\$449.3)	\$21,503.9	0.81	0.98	\$1,901.1	\$1,870.9	\$2,320.2	(\$30.2)	(\$449.3)
Grand Total	0.69	0.75	\$35,015.9	\$26,378.6	\$38,082.6	(\$8,637.3)	(\$11,704.0)	\$376,494.4	0.69	0.75	\$35,015.9	\$26,378.6	\$38,082.6	(\$8,637.3)	(\$11,704.0)

FY16 Performance (con't)

Discrete Activity Performance by Management Area

				FY161	to Date			FY16 BUDGET	DGET October 2015						
MA Alt	CPI	SPI	BCWS	BCWP	ACWP	SV	CV		CPI	SPI	BCWS	BCWP	ACWP	SV	CV
01 - MFFF Design	0.64	1.12	\$1,048.0	\$1,173.3	\$1,829.9	\$125.4	(\$656.6)	\$3,304.3	0.64	1.12	\$1,048.0	\$1,173.3	\$1,829.9	\$125.4	(\$656.6)
06 - Project Management	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
10 - Title III Engineering	1.06	0.77	\$2,395.8	\$1,846.8	\$1,744.5	(\$549.0)	\$102.3	\$41,659.0	1.06	0.77	\$2,395.8	\$1,846.8	\$1,744.5	(\$549.0)	\$102.3
11L - Licensing	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
11N - Nuclear Safety	0.32	-	\$0.0	\$36.4	\$114.7	\$36.4	(\$78.3)	\$0.0	0.32	-	\$0.0	\$36.4	\$114.7	\$36.4	(\$78.3)
12 - Procurement Engineering	-	-	\$0.0	\$0.0	\$2.4	\$0.0	(\$2.4)	\$0.0	-	-	\$0.0	\$0.0	\$2.4	\$0.0	(\$2.4)
13A - MDG	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
13B - Multifuel-Lab-K Design	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
14 - Software Design	0.54	0.69	\$294.6	\$203.8	\$376.1	(\$90.8)	(\$172.3)	\$1,588.6	0.54	0.69	\$294.6	\$203.8	\$376.1	(\$90.8)	(\$172.3)
15 - Construction Management	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
16 - Process Unit Management and Support	0.31	0.78	\$22.3	\$17.4	\$55.2	(\$4.9)	(\$37.8)	\$277.0	0.31	0.78	\$22.3	\$17.4	\$55.2	(\$4.9)	(\$37.8)
17A - Fabrication and Assembly	0.23	0.52	\$2,153.3	\$1,125.6	\$4,830.2	(\$1,027.7)	(\$3,704.5)	\$36,377.4	0.23	0.52	\$2,153.3	\$1,125.6	\$4,830.2	(\$1,027.7)	(\$3,704.5)
17C - Construction	-0.22	-0.23	\$5,705.6	(\$1,330.4)	\$5,970.5	(\$7,036.0)	(\$7,300.9)	\$58,284.8	-0.22	-0.23	\$5,705.6	(\$1,330.4)	\$5,970.5	(\$7,036.0)	(\$7,300.9)
18 - Temporary Facilities	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
19 - Quality Assurance / Quality Control	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
20 - Cold Startup	1.16	0.64	\$168.9	\$108.6	\$93.8	(\$60.3)	\$14.8	\$1,722.3	1.16	0.64	\$168.9	\$108.6	\$93.8	(\$60.3)	\$14.8
22 - ES&H Program Management	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
90 - DOE / SRNS Cost	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
TEC Total	0.21	0.27	\$11,788.5	\$3,181.5	\$15,017.3	(\$8,607.0)	(\$11,835.8)	\$143,213.4	0.21	0.27	\$11,788.5	\$3,181.5	\$15,017.3	(\$8,607.0)	(\$11,835.8)
01 - MFFF Design	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
06 - Project Management	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
10 - Title III Engineering	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
11L - Licensing	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
11S - Security	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 - Cold Startup	0.70	0.57	\$69.7	\$39.4	\$56.7	(\$30.2)	(\$17.2)	\$859.0	0.70	0.57	\$69.7	\$39.4	\$56.7	(\$30.2)	(\$17.2)
21 - (OPC) Operations Preparation	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$6.2	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
22 - ES&H Program Management	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
90 - DOE / SRNS Cost	-	-				\$0.0	\$0.0		-	-				\$0.0	\$0.0
OPC Total	0.70	0.57	\$69.7	\$39.4	\$56.7	(\$30.2)	(\$17.2)	\$865.2	0.70	0.57	\$69.7	\$39.4	\$56.7	(\$30.2)	(\$17.2)
Grand Total	0.21	0.27	\$11,858.2	\$3,220.9	\$15,074.0	(\$8,637.3)	(\$11,853.1)	\$144,078.6	0.21	0.27	\$11,858.2	\$3,220.9	\$15,074.0	(\$8,637.3)	(\$11,853.1)

FY16 Performance (con't)

Level of Effort Activity Performance by Management Area

		FY16 to Date							FY16 BUDGET October 2015						
MA Alt	CPI	SPI	BCWS	BCWP	ACWP	SV	CV		CPI	SPI	BCWS	BCWP	ACWP	SV	cv
01 - MFFF Design	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
06 - Project Management	0.95	1.00	\$4,900.1	\$4,900.1	\$5,170.3	\$0.0	(\$270.2)	\$51,574.9	0.95	1.00	\$4,900.1	\$4,900.1	\$5,170.3	\$0.0	(\$270.2)
10 - Title III Engineering	1.18	1.00	\$3,832.6	\$3,832.6	\$3,241.7	\$0.0	\$590.8	\$45,185.1	1.18	1.00	\$3,832.6	\$3,832.6	\$3,241.7	\$0.0	\$590.8
11L - Licensing	1.20	1.00	\$113.8	\$113.8	\$94.8	\$0.0	\$19.0	\$1,173.1	1.20	1.00	\$113.8	\$113.8	\$94.8	\$0.0	\$19.0
11N - Nuclear Safety	1.59	1.00	\$230.9	\$230.9	\$144.9	\$0.0	\$86.0	\$2,367.3	1.59	1.00	\$230.9	\$230.9	\$144.9	\$0.0	\$86.0
12 - Procurement Engineering	1.03	1.00	\$266.4	\$266.4	\$257.4	\$0.0	\$9.0	\$2,771.0	1.03	1.00	\$266.4	\$266.4	\$257.4	\$0.0	\$9.0
13A - MDG	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
13B - Multifuel-Lab-K Design	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
14 - Software Design	1.06	1.00	\$219.8	\$219.8	\$207.6	\$0.0	\$12.2	\$2,985.8	1.06	1.00	\$219.8	\$219.8	\$207.6	\$0.0	\$12.2
15 - Construction Management	0.67	1.00	\$2,446.8	\$2,446.8	\$3,626.4	\$0.0	(\$1,179.5)	\$28,374.3	0.67	1.00	\$2,446.8	\$2,446.8	\$3,626.4	\$0.0	(\$1,179.5)
16 - Process Unit Management and Support	0.92	1.00	\$316.1	\$316.1	\$342.9	\$0.0	(\$26.8)	\$4,058.9	0.92	1.00	\$316.1	\$316.1	\$342.9	\$0.0	(\$26.8)
17A - Fabrication and Assembly	-	-	\$0.0	\$0.0	\$36.1	\$0.0	(\$36.1)	\$20.0	-	-	\$0.0	\$0.0	\$36.1	\$0.0	(\$36.1)
17C - Construction	1.72	1.00	\$4,930.9	\$4,930.9	\$2,870.6	\$0.0	\$2,060.3	\$28,612.8	1.72	1.00	\$4,930.9	\$4,930.9	\$2,870.6	\$0.0	\$2,060.3
18 - Temporary Facilities	0.67	1.00	\$1,699.7	\$1,699.7	\$2,553.4	\$0.0	(\$853.7)	\$19,429.3	0.67	1.00	\$1,699.7	\$1,699.7	\$2,553.4	\$0.0	(\$853.7)
19 - Quality Assurance / Quality Control	1.07	1.00	\$1,716.8	\$1,716.8	\$1,600.9	\$0.0	\$115.9	\$17,692.2	1.07	1.00	\$1,716.8	\$1,716.8	\$1,600.9	\$0.0	\$115.9
20 - Cold Startup	4.00	1.00	\$20.8	\$20.8	\$5.2	\$0.0	\$15.6	\$220.5	4.00	1.00	\$20.8	\$20.8	\$5.2	\$0.0	\$15.6
22 - ES&H Program Management	1.20	1.00	\$264.8	\$264.8	\$220.7	\$0.0	\$44.1	\$2,728.8	1.20	1.00	\$264.8	\$264.8	\$220.7	\$0.0	\$44.1
90 - DOE / SRNS Cost	0.99	1.00	\$366.7	\$366.7	\$372.0	\$0.0	(\$5.3)	\$4,400.0	0.99	1.00	\$366.7	\$366.7	\$372.0	\$0.0	(\$5.3)
TEC Total	1.03	1.00	\$21,326.3	\$21,326.3	\$20,745.0	\$0.0	\$ 581.3	\$211,594.0	1.03	1.00	\$21,326.3	\$21,326.3	\$20,745.0	\$0.0	\$581.3
01 - MFFF Design	-	-	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	(\$0.0)	\$0.0	\$0.0
06 - Project Management	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
10 - Title III Engineering	-	-	\$0.0	\$0.0	\$0.7	\$0.0	(\$0.7)	\$0.0	-	-	\$0.0	\$0.0	\$0.7	\$0.0	(\$0.7)
11L - Licensing	0.39	1.00	\$186.5	\$186.5	\$478.4	\$0.0	(\$291.9)	\$1,921.8	0.39	1.00	\$186.5	\$186.5	\$478.4	\$0.0	(\$291.9)
11N - Nuclear Safety	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
11S - Security	1.48	1.00	\$323.8	\$323.8	\$218.6	\$0.0	\$105.2	\$3,285.2	1.48	1.00	\$323.8	\$323.8	\$218.6	\$0.0	\$105.2
12 - Procurement Engineering	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
19 - Quality Assurance / Quality Control	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 - Cold Startup	0.92	1.00	\$198.6	\$198.6	\$215.3	\$0.0	(\$16.8)	\$2,093.4	0.92	1.00	\$198.6	\$198.6	\$215.3	\$0.0	(\$16.8)
21 - (OPC) Operations Preparation	1.09	1.00	\$555.2	\$555.2	\$510.0	\$0.0	\$45.2	\$6,467.7	1.09	1.00	\$555.2	\$555.2	\$510.0	\$0.0	\$45.2
22 - ES&H Program Management	-	-	\$0.0	\$0.0	\$1.8	\$0.0	(\$1.8)	\$0.0	-	-	\$0.0	\$0.0	\$1.8	\$0.0	(\$1.8)
90 - DOE / SRNS Cost	0.68	1.00	\$567.4	\$567.4	\$838.7	\$0.0	(\$271.3)	\$6,700.0	0.68	1.00	\$567.4	\$567.4	\$838.7	\$0.0	(\$271.3)
OPC Total	0.81	1.00	\$1,831.4	\$1,831.4	\$2,263.5	\$0.0	(\$432.1)	\$20,468.2	0.81	1.00	\$1,831.4	\$1,831.4	\$2,263.5	\$0.0	(\$432.1)
	1.01	1.00	\$23,157.7	\$23,157.7	\$23,008.5	\$0.0	\$149.2	\$232,062.2	1.01	1.00	\$23,157.7	\$2 3,157.7	\$23,008.5	\$0.0	\$149.2

FY16 Performance (con't)

Total Performance by Construction Package

			FY16 to Date								-		October 2015	5	14 M
CP Code and Description	CPI	SPI	BCWS	BCWP	ACWP	SV	CV	FY16 BUDGET	CPI	SPI	BCWS	BCWP	ACWP	SV	CV
C 05 -Roads and Parking	- 6-6	1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 06 -Radwaste Lines		-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 07 -UG Electrical Ductbanks	(7.05)	(40.49)	\$21.2	(\$857.5)	\$121.6	(\$878.7)	(\$979.2)	\$21.2	(7.05)	(40.49)	\$21.2	(\$857.5)	\$121.6	(\$878.7)	(\$979.2)
C 08 -UG Mechanical Utilities	0.67	2.33	\$22.1	\$51.6	\$76.8	\$29.5	(\$25.2)	\$110.5	0.67	2.33	\$22.1	\$51.6	\$76.8	\$29.5	(\$25.2)
C 09 -Proc Chill / Gas / MOX / BSR / Eq-Pipe	0.15	0.94	\$46.6	\$44.0	\$295.4	(\$2.6)	(\$251.4)	\$881.0	0.15	0.94	\$46.6	\$44.0	\$295.4	(\$2.6)	(\$251.4)
C 12 -Electric Power & Yard Lighting		-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	1.5	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 13 -Landscaping	-	15	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	100	1.00	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 14 -Administration Building	÷	1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	- ÷	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 16 -Technical Support Building	-		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	1.4.1		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 18 -Emerg DG Bidg Incl Emerg Pwr & Standby Elec Eq	0.76	0.49	\$33.0	\$16.1	\$21.3	(\$16.9)	(\$5.2)	\$3,361.9	0.76	0.49	\$33.0	\$16.1	\$21.3	(\$16.9)	(\$5.2)
C 19 -Reagent Building	18	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 20 -MFFF Structural	0.45	0.14	\$4,165.2	\$565.9	\$1,268.9	(\$3,599.2)	(\$703.0)	\$10,870.5	0.45	0.14	\$4,165.2	\$565.9	\$1,268.9	(\$3,599.2)	(\$703.0)
C 21 -MFFF Electrical	0.66	0.74	\$996.0	\$737.3	\$1,109.7	(\$258.8)	(\$372.4)	\$5,940.4	0.66	0.74	\$996.0	\$737.3	\$1,109.7	(\$258.8)	(\$372.4)
C 22 -MOX Proc / S&R Instr Outside Gloveboxes	18	-	\$21.2	\$0.0	\$0.0	(\$21.2)	\$0.0	\$254.5	-	-	\$21.2	\$0.0	\$0.0	(\$21.2)	\$0.0
C 23 -MFFF HVAC	0.50	0.53	\$2,486.8	\$1,323.3	\$2,648.6	(\$1,163.5)	(\$1,325.3)	\$30,189.4	0.50	0.53	\$2,486.8	\$1,323.3	\$2,648.6	(\$1,163.5)	(\$1,325.3)
C 24 -MOX Process Equipment Gloveboxes	0.39	1.00	\$298.9	\$298.6	\$760.2	(\$0.3)	(\$461.6)	\$6,651.7	0.39	1.00	\$298.9	\$298.6	\$760.2	(\$0.3)	(\$461.6)
C 26 -MFFF Fire Protection	7.48	0.60	\$520.7	\$313.7	\$41.9	(\$207.0)	\$271.7	\$4,762.2	7.48	0.60	\$520.7	\$313.7	\$41.9	(\$207.0)	\$271.7
C 27 -BAP Chem Process & Util - Eq & Piping	0.25	0.36	\$1,326.5	\$476.7	\$1,894.0	(\$849.8)	(\$1,417.3)	\$15,679.4	0.25	0.36	\$1,326.5	\$476.7	\$1,894.0	(\$849.8)	(\$1,417.3)
C 28 -BAP Process Instrumentation	-	-	\$0.0	\$0.0	\$5.2	\$0.0	(\$5.2)	\$0.0	12.1	-	\$0.0	\$0.0	\$5.2	\$0.0	(\$5.2)
C 30 -PIDAS & Vehicle Traps and Bollards			\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$626.9	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 31 -MFFF Structural Security Features	0.49	0.80	\$132.8	\$106.4	\$216.9	(\$26.4)	(\$110.5)	\$1,578.7	0.49	0.80	\$132.8	\$106.4	\$216.9	(\$26.4)	(\$110.5)
C 32 -Security Integration Construction	-	-	\$35.0	\$0.0	\$0.0	(\$35.0)	(\$0.0)	\$536.1	-	-	\$35.0	\$0.0	\$0.0	(\$35.0)	(\$0.0)
C 45 -HVAC Long Lead Equipment	-	. 47	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 46 – Direct Construction Support	1.38	1.00	\$524.5	\$524.5	\$380.5	\$0.0	\$144.0	\$5,543.4	1.38	1.00	\$524.5	\$524.5	\$380.5	\$0.0	\$144.0
CD3B -CD 3B		- E	\$6.1	\$0.0	\$0.0	(\$6.1)	\$0.0	\$73.1			\$6.1	\$0.0	\$0.0	(\$6.1)	\$0.0
Total	0.41	0.34	\$10,636.6	\$3,600.6	\$8,841.1	(\$7,036.0)	(\$5,240.6)	\$87,080.8	0.41	0.34	\$10,636.6	\$3,600.6	\$8,841.1	(\$7,036.0)	(\$5,240.6)

FY16 Performance (con't) Discrete Activity Performance by Construction Package

MOX FUEL FABRICATION FACILITY

	1	-		-	FY16 to Date	-	-						October 2015		
CP Code and Description	CPI	SPI	BCWS	BCWP	ACWP	SV	CV	FY16 BUDGET	CPI	SPI	BCWS	BCWP	ACWP	SV	CV
C 05 -Roads and Parking	-	1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	1.5	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 06 -Radwaste Lines	-	3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	6	6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 07 -UG Electrical Ductbanks	(7.05)	(40.49)	\$21.2	(\$857.5)	\$121.6	(\$878.7)	(\$979.2)	\$21.2	(7.05)	(40.49)	\$21.2	(\$857.5)	\$121.6	(\$878.7)	(\$979.2)
C 08 -UG Mechanical Utilities	0.67	2.33	\$22.1	\$51.6	\$76.8	\$29.5	(\$25.2)	\$110.5	0.67	2.33	\$22.1	\$51.6	\$76.8	\$29.5	(\$25.2)
C 09 -Proc Chill / Gas / MOX / BSR / Eq-Pipe	0.15	0.94	\$46.6	\$44.0	\$295.4	(\$2.6)	(\$251.4)	\$881.0	0.15	0.94	\$46.6	\$44.0	\$295.4	(\$2.6)	(\$251.4)
C 12 -Electric Power & Yard Lighting	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	1.5	1.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 13 -Landscaping	-	3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	.51		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 14 -Administration Building	-		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0		-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 16 -Technical Support Building	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 18 -Emerg DG Bldg Incl Emerg Pwr & Standby Elec Eq	0.76	0.49	\$33.0	\$16.1	\$21.3	(\$16.9)	(\$5.2)	\$3,361.9	0.76	0.49	\$33.0	\$16.1	\$21.3	(\$16.9)	(\$5.2)
C 19 -Reagent Building		-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	141	1971	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 20 -MFFF Structural	0.51	0.12	\$4,069.6	\$470.3	\$926.0	(\$3,599.2)	(\$455.6)	\$9,862.5	0.51	0.12	\$4,069.6	\$470.3	\$926.0	(\$3,599.2)	(\$455.6)
C 21 -MFFF Electrical	0.84	0.72	\$912.7	\$653.9	\$774.9	(\$258.8)	(\$121.0)	\$4,940.4	0.84	0.72	\$912.7	\$653.9	\$774.9	(\$258.8)	(\$121.0)
C 22 -MOX Proc / S&R Instr Outside Gloveboxes	-		\$21.2	\$0.0	\$0.0	(\$21.2)	\$0.0	\$254.5	-		\$21.2	\$0.0	\$0.0	(\$21.2)	\$0.0
C 23 -MFFF HVAC	(2.13)	1.67	(\$1,725.1)	(\$2,888.6)	\$1,354.9	(\$1,163.5)	(\$4,243.5)	\$10,060.3	(2.13)	1.67	(\$1,725.1)	(\$2,888.6)	\$1,354.9	(\$1,163.5)	(\$4,243.5)
C 24 -MOX Process Equipment Gloveboxes	0.50	1.00	\$283.3	\$283.0	\$569.6	(\$0.3)	(\$286.5)	\$5,719.4	0.50	1.00	\$283.3	\$283.0	\$569.6	(\$0.3)	(\$286.5)
C 26 -MFFF Fire Protection	7.48	0.60	\$520.7	\$313.7	\$41.9	(\$207.0)	\$271.7	\$4,579.0	7.48	0.60	\$520.7	\$313.7	\$41.9	(\$207.0)	\$271.7
C 27 -BAP Chem Process & Util - Eq & Piping	0.30	0.36	\$1,326.5	\$476.7	\$1,566.1	(\$849.8)	(\$1,089.4)	\$15,679.4	0.30	0.36	\$1,326.5	\$476.7	\$1,566.1	(\$849.8)	(\$1,089.4)
C 28 -BAP Process Instrumentation	-	-	\$0.0	\$0.0	\$5.2	\$0.0	(\$5.2)	\$0.0	-	-	\$0.0	\$0.0	\$5.2	\$0.0	(\$5.2)
C 30 -PIDAS & Vehicle Traps and Bollards	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$626.9	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 31 -MFFF Structural Security Features	0.49	0.80	\$132.8	\$106.4	\$216.9	(\$26.4)	(\$110.5)	\$1,578.7	0.49	0.80	\$132.8	\$106.4	\$216.9	(\$26.4)	(\$110.5)
C 32 -Security Integration Construction	-	-	\$35.0	\$0.0	\$0.0	(\$35.0)	(\$0.0)	\$536.1	-	-	\$35.0	\$0.0	\$0.0	(\$35.0)	(\$0.0)
C 45 -HVAC Long Lead Equipment	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	-	-	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
C 46 Direct Construction Support	-	31	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	2	1641	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
CD3B -CD 3B	-	1	\$6.1	\$0.0	\$0.0	(\$6.1)	\$0.0	\$73.1	021	191	\$6.1	\$0.0	\$0.0	(\$6.1)	\$0.0
Total	(0.22)	(0.23)	\$5,705.6	(\$1,330.4)	\$5,970.5	(\$7,036.0)	(\$7,300.9)	\$58,284.8	(0.22)	(0,23)	\$5,705.6	(\$1,330,4)	\$5,970.5	(\$7,036.0)	(\$7,300.9)

LLC

CEL AREVA

MOX EVMS Performance Indicators

FY16	ост	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MOX Fuel Fabrication Facility												
Cost Performance Index												
Current Month	0.69											
Cumulative	0.99											
Schedule Performance Index												
Current Month	0.75											
Cumulative	0.98 🎔											
Contractor Mgt Reserve (\$Millions)	\$30											
DOE Contingency (\$Millions)	\$324											
Total Reserves	\$354											
Budget (BAC)	\$6,616											
Actuals to Date (ACWP)	\$4,543											
Costs to Go (BAC - ACWP)	\$2,073											
Remaining Reserves/Costs To Go	17.1%											
Monthly Cost Variance (\$Millions)	-11.7											
Cumulative Cost Variance (\$Millions)	-54.1											
Monthly Schedule Variance (\$Millions)	-8.6											
Cumulative Schedule Variance (\$Millions)	-70.2											
Percent Complete	67.9%											
Joule/PMM Target	TBD											
HVAC Duct (lbs) - Target	6,280	12,360	18,140	24,330	30,180	36,770	43,920	51,280	58,960	66,393	73,953	81,304
HVAC Duct (lbs) - Actual	7,680											
Electrical Conduit (LF) - Target	0	150	650	1,451	2,351	3,251	4,151	4,877	5,477	6,077	6,677	7,276
Electrical Conduit (LF) - Actual	0											
Pipe (LF) - Target	846	1,816	3,311	5,451	7,225	8,960	10,412	11,612	12,845	13,945	15,063	16,219
Pipe (LF) - Actual	1,388											

Health & Safety		
OSHA Recordable Incidents		
Report Month	2	
Fiscal Year to Date	2	
Lost Time Incidents		
Fiscal Year to Date	0	
Hours Since Last Lost Time Incident (in Millions)	23.5	



Remaining Reserves/Costs to go = remaining contingency and management reserves expressed as a percentage of remaining costs to go

October 2015

\$50.0 \$500.0 \$45.0 \$450.0 \$40.0 \$400.0 \$35.0 \$350.0 0 4 \$30.0 \$300.0 (Monthly Cumulative 4 \$25.0 \$250.0 Ω 0 \$20.0 \$200.0 \$15.0 4 \$150.0 --0 \$10.0 \$100.0 -8 O H-\$5.0 \$50.0 F 8 \$0.0 \$0.0 Oct 15 Nov 15 Dec 15 Jan 16 Feb 16 Mar 16 Apr 16 May 16 Jun 16 Jul 16 Aug 16 Sep 16 🗖 Inc Bud \$35.0 \$26.2 \$27.4 \$31.2 \$29.3 \$29.8 \$31.2 \$30.6 \$34.7 \$33.5 \$30.6 \$36.9 Inc Ern \$26.4 Inc Act \$38.1 Inc Fcst \$35.4 \$28.9 \$32.9 \$40.4 \$36.2 \$37.7 \$41.4 \$40.2 \$40.1 \$41.8 \$37.3 \$39.6 Cum Bud \$35.0 \$61.2 \$88.6 \$119.8 \$149.1 \$178.9 \$210.1 \$240.7 \$275.5 \$309.0 \$339.6 \$376.5 O Cum Ern \$26.4 Cum Act \$38.1 \$412.3 -O-Cum Fcst \$35.4 \$64.3 \$97.2 \$137.6 \$173.7 \$211.4 \$252.8 \$293.0 \$333.1 \$374.9 \$451.9 Inc CPI 0.69 Inc SPI 0.75 Cum CPI 0.69 Cum SPI 0.75 66

MOX Project FY16 Plan **Total TEC & OPC Cost and Schedule Indices (Excluding Fees)** (All Dollars in Millions)



MOX Project FY16 Plan **Total OPC Cost and Schedule Indices (Excluding Fees)**



MOX Project FY16 Plan **Total TEC Cost and Schedule Indices (Excluding Fees)**



MOX Project FY16 Plan Total TEC Cost and Schedule Indices for MAs 01, 10, 11N 12 and 14 - Engineering



MOX Project FY16 Plan Total TEC Cost and Schedule Indices for MA 10 - Subset for Engineered Equipment


MOX Project FY16 Plan Total TEC Cost and Schedule Indices for MA15, 17C & 18- Area Project Mgmt & Construction



MOX Project FY16 Plan Total TEC Cost and Schedule Indices for MAs 16, 17A, 20 & 21 - MOX Commissioning



MOX Project FY16 Plan Total TEC Cost and Schedule Indices for MA 17A - Subset for Equipment/Materials



MOX Project FY16 Plan Total TEC Cost and Schedule Indices for MAs 11L and 19 - Licensing and QA/QC

(All Dollars in Millions) \$8.0 \$80.0 \$7.2 \$72.0 \$64.0 \$6.4 8 \$5.6 \$56.0 0 \$4.8 \$48.0 1.0 Monthly Cumulative 0 \$40.0 \$4.0 O 0 -\$32.0 \$3.2 8 \$2.4 \$24.0 8 1 \$1.6 \$16.0 8 ∔ \$0.8 \$8.0 Ò \$0.0 \$0.0 Oct 15 Nov 15 Dec 15 Jan 16 Feb 16 Mar 16 Apr 16 May 16 Jun 16 Jul 16 Aug 16 Sep 16 Inc Bud \$5.5 \$4.1 \$4.2 \$5.4 \$4.4 \$4.6 \$4.5 \$4.5 \$4.4 \$5.5 \$4.8 \$6.6 🔲 Inc Ern \$5.5 Inc Act \$5.8 \$4.7 Inc Fcst \$5.8 \$4.5 \$4.5 \$5.6 \$4.7 \$4.9 \$4.7 \$4.7 \$5.7 \$4.9 \$5.4 Cum Bud \$5.5 \$9.7 \$13.8 \$19.3 \$23.7 \$28.3 \$32.9 \$37.4 \$41.8 \$47.3 \$52.1 \$58.7 O Cum Ern \$5.5 Cum Act \$5.8 -O-Cum Fcst \$5.8 \$10.4 \$14.8 \$20.5 \$25.2 \$30.1 \$34.8 \$39.5 \$44.1 \$49.8 \$54.7 \$60.1 Inc CPI 0.96 Inc SPI 1.00 Cum CPI 0.96 Cum SPI 1.00

MOX Project FY16 Plan Total TEC Cost and Schedule Indices for MA06, 22 & 90 - Support Services



Risk Management



Risk Management

Risk Report October 2015

C	MOX SERVICES, LLC	31-Oct	30-Sep
	Open High Risks	5	3
	Open Moderate Risks	26	28
	Open Low Risks	90	90
	Opportunities	4	4
	Estimated cost impact at 85% confidence. (Million)	(b)(4)	(b)(4)
	Open Watch List Risks	8	7
	Open Program Risks	18	18
	Estimated cost impact of program risks at 85% confidence. (Million)	(b)(4)	(b)(4)
	Proposed Risks, including Option 2 and MIFT	104	107

The increase in the 85% confidence value is primarily due to the revised estimate of potential impacts of staffing turnover, Risk 224. The increase in the 85% confidence value for "program" risks is a result of randomness in calculation-there were no significant revisions of "program" risks.

	Signficant Risk Changes		400000	Schedule		<u> </u>
	Risk Title	Probability	Cost Impact	Impact	Comments	
		Very Low	Marginal	Negligible		
	(b)(4)	Low	Marginal	Negligible		
		High	Critical	Critical	(b)(4)	
		Low	Significant	Negligible		
		Very Low	Marginal	Negligible		
		High	Critical	Marginal		
		Very High	Negligible	Negligible		

CEL AREVA



Progress Photographs







KPA GB4010



KDM GB6000/6200

KDM GB7200/7400

MOX SERVICES, LLC



C-138 Ledger Angle Plates Caulked and Grouted

C-118 Pipe Installation





C252 Pneumatic Transfer Units



HDE Filter Housings

