MFC Radiochemistry Laboratory GPP (C.R.20.20.11/C.R.30.20.11)

MAY 2008

Project Scope

The Radiochemistry Laboratory will house laboratory equipment and personnel for basic and applied research in aqueous separations, fuel development and associated activities. The lab spaces include actinide labs, glove box lab, instrument technologies lab, chemical and source storage, counting lab, and mechanical, electrical, and communication system support areas.

TEC = $ 4,374.2K

OPC = $ 543.8K (OPC C.R.20.20.11 = $317.4K)

TPC = $4,918.0K (TPC with C.R.20.20.11 = $5,235.4K)

Project to Date									Project At Completion			
Budgeted Cost			Variance									
BCWS	BCWP	ACWP	Schedule	%	Cost	%	SPI	CPI	BAC	EAC Proposed	EAC Approved	VAC
155,329	154,914	251,603	-415	-0.27	-96,689	-62.41	1.00	0.79	4,917,997	4,917,997		0

Project to Date

Schedule Variance (SV): -$415 ***SV%: -0.27***

Cause: The variance is within the reporting threshold.

Impact: None.

Corrective Action: None.

Cost Variance (CV): -$96,689 ***CV% :*** -62.641%

Cause: The variance is due to investigation, characterization and removal of an abandoned, contaminated industrial waste line that was originally planned as a non-contaminated removal activity. Additional costs were incurred due to the line being contaminated.

Impact: The project is over spent to date.

Corrective Action: Opportunity for efficiencies will be identified during execution of the design-build contract to recover the costs.

Baseline Change Control Actions:

None.

Accomplishments:

- Construction Field Representative, Project Coordinator, Project Manager and Architect-Engineering supported subcontractor design-build activities.
- Subcontractor executed mobilization, clearing and grubbing, excavation and design development.
- Subcontractor removed contaminated waste line during excavation of building footprint.

- Construction Field Representative and Project Coordinator directed performance of subsurface investigation to determine depth-to-basalt and to locate utilities.

Milestone Status:

The design-build subcontract was awarded February 22, 2008.

90-Day Look Ahead:

June:

- Excavate for foundation installation.
- Expose and protect utility piping and process piping.

July

- Complete building excavation.
- Reroute existing sanitary waste line.
- Install underground utilities rough-in.
- Form and place footings.
- Initiate foundation wall construction.

August

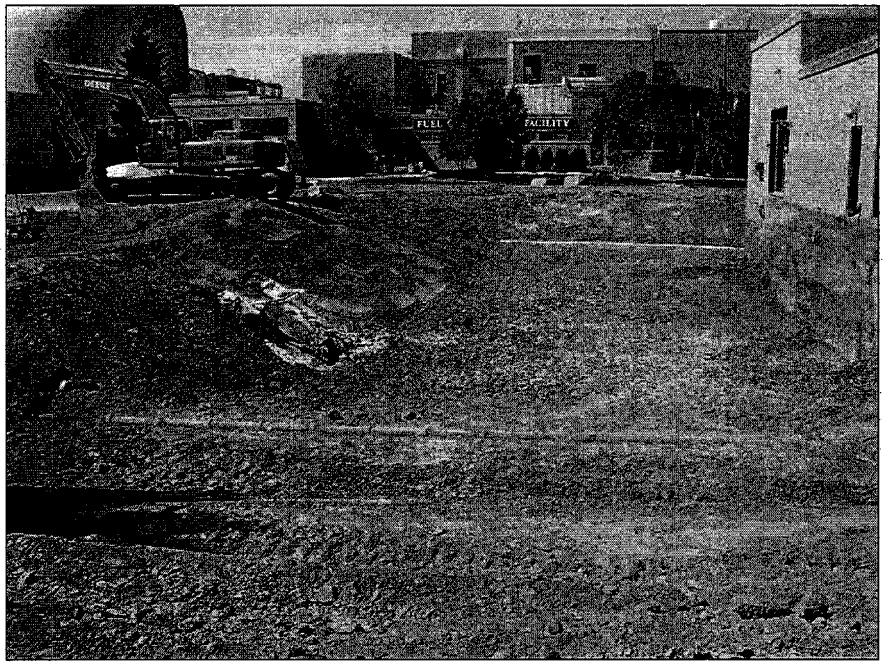
- Complete foundation walls.
- Place basement floors.
- Backfill and rough grade.
- Initiate main floor walls.

Issues:

Cause: None.

Impact: None.

Corrective Action: None.


FUEL
FACILITY

MFC Radiochemistry Laboratory GPP (C.R.20.20.11/C.R.30.20.11)

JUNE 2008

Project Scope

The Radiochemistry Laboratory will house laboratory equipment and personnel for basic and applied research in aqueous separations, fuel development and associated activities. The lab spaces include actinide labs, glove box lab, instrument technologies lab, chemical and source storage, counting lab, and mechanical, electrical, and communication system support areas.

TEC = $ 4,374.2K

OPC = $ 543.8K (OPC C.R.20.20.11 = $317.4K)

TPC = $4,918.0K (TPC with C.R.20.20.11 = $5,235.4K)

Project to Date									Project At Completion			
Budgeted Cost			Variance									
BCWS	BCWP	ACWP	Schedule	%	Cost	%	SPI	CPI	BAC	EAC Proposed	EAC Approved	VAC
269,506	380,499	449,400	110,993	41.18	-68,901	-18.11	1.41	.85	4,917,997	4,917,997		0

Project to Date

Schedule Variance (SV): $110,993 ***SV%:*** 41.18%

Cause: Overall performance has been ahead of schedule for design and for early mobilization and building excavation activity due to the work being executed more efficiently than planned.

Impact: None. Progress to date would indicate a potential for earlier completion of the project.

Corrective Action: None. Schedule performance will be monitored to support planning for subsequent activities.

Cost Variance (CV): -$68,901 ***CV%:*** -18.11%

Cause: The variance is due to investigation, characterization and removal of an abandoned, contaminated industrial waste line that was originally planned as a non-contaminated removal activity. Additional costs were incurred due to the requirements for handling and disposing the contaminated line. Further, more extensive efforts have been required to review design and to assess quality assurance compliance.

Impact: The project is over spent to date.

Corrective Action: Opportunity for efficiencies will be identified during execution of the design-build contract to recover the costs.

Baseline Change Control Actions:

None.

Accomplishments:

Subcontractor excavated to footing elevation and continued design development.

Subcontractor relocated sanitary waste line from the new building footprint.

Milestone Status:

None.

90-Day Look Ahead:

July:

- Mitigate effects of less than adequate soil conditions.
- Complete building excavation.
- Install underground utilities rough-in.
- Form and place footings.
- Initiate foundation wall construction.
- Initiate structural steel material fabrication.

August:

- Complete foundation walls.
- Place basement floors.
- Backfill and rough grade.
- Initiate main floor walls.
- Initiate mechanical piping.

September:

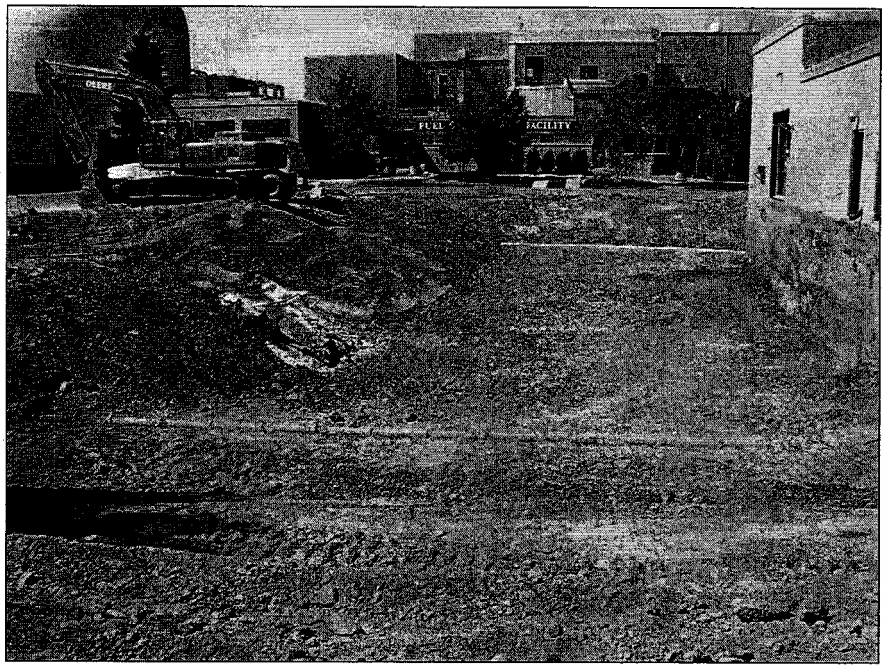
- Initiate main floor section placemen.
- Continue main floor walls construction.
- Extend utility rough-in from underground.
- Complete steam and condensate piping.
- Initiate electrical rough-in.

Issues:

Cause: None.

Impact: None.

Corrective Action: None.


FUEL
FACILITY

MFC Radiochemistry Laboratory GPP (C.R.20.20.11/C.R.30.20.11)

JULY 2008

Project Scope

The Radiochemistry Laboratory will house laboratory equipment and personnel for basic and applied research in aqueous separations, fuel development and associated activities. The lab spaces include actinide labs, glove box lab, instrument technologies lab, chemical and source storage, counting lab, and mechanical, electrical, and communication system support areas.

Type of Project: General Plant Project (GPP) **Scheduled Start Date:** April 2008 **Scheduled Completion Date:** December 2008

TEC = $ 4,374.2K

OPC = $ 543.8K (OPC C.R.20.20.11 = $317.4K)

TPC = $4,918.0K (TPC with C.R.20.20.11 = $5,235.4K)

Project to Date									Project At Completion			
Budgeted Cost			Variance									
BCWS	BCWP	ACWP	Schedule	%	Cost	%	SPI	CPI	BAC	EAC Proposed	EAC Approved	VAC
431,921	592,008	729,560	160,087	37.06	-137,522	-23.23	1.37	0.81	4,917,997	4,917,997		0

Project to Date

Schedule Variance (SV): $160,087 ***SV%:*** 37.06%

Cause: Overall performance has been ahead of schedule for design and for early mobilization and building excavation activity due to the work being executed more efficiently than planned. Completion of final design and excavation has been delayed due to unexpected soil conditions, resulting in approximately three week's delay in critical path activities.

Impact: None. Progress to date would indicate a potential for earlier completion of the project.

Corrective Action: Continue to identify critical path activities for the design-build subcontractor to complete early.

Cost Variance (CV): $-137,522 ***CV%:*** -23.23%

Cause: The variance is due to more extensive efforts than planned to review designs and to assess quality assurance compliance. The variance is also due to investigation, characterization and removal of an abandoned, contaminated industrial waste line that was originally planned as a non-contaminated removal activity. Additional costs were incurred due to the requirements for handling the contaminated line. Further, costs incurred by BEA to support the subcontractor during evaluations of soil conditions and foundation design have resulted in an increased negative cost variance from previous period.

Impact: The project is overspent to date.

Corrective Action: Opportunity for efficiencies will be identified during execution of the design-build contract to offset the negative cost variance.

Baseline Change Control Actions:

None.

Accomplishments:

Construction Field Representative, Project Coordinator, Project Manager and Architect-Engineering supported subcontractor design-build activities.

Subcontractor excavated to footing elevation and continued design development to account for unsatisfactory soil conditions.

Subcontractor removed unsatisfactory soil and basalt in the building footprint.

Milestone Status:

None.

90-Day Look Ahead:

August:

- Mitigate effects of less than adequate soil conditions.
- Complete building excavation.
- Install underground utilities rough-in.
- Form and place footings.
- Initiate foundation wall construction.
- Initiate structural steel material fabrication.
- Complete foundation walls.

September:

- Place basement floors.
- Backfill and rough grade.
- Initiate main floor walls.
- Initiate mechanical piping.

October:

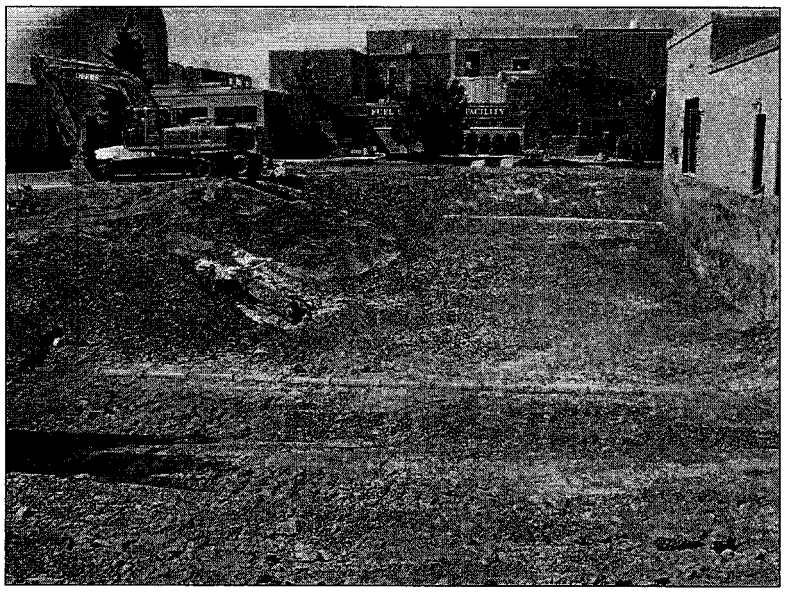
- Initiate main floor section placement.
- Continue main floor walls construction.
- Extend utility rough-in from underground.
- Complete steam and condensate piping.
- Initiate electrical rough-in.

Issues:

Cause: None.

Impact: None.

Corrective Action: None.



MFC Radiochemistry Laboratory GPP (C.R.20.20.11/C.R.30.20.11)

AUGUST 2008

Project Scope

The Radiochemistry Laboratory will house laboratory equipment and personnel for basic and applied research in aqueous separations, fuel development and associated activities. The lab spaces include actinide labs, glove box lab, instrument technologies lab, chemical and source storage, counting lab, and mechanical, electrical, and communication system support areas.

Type of Project: General Plant Project (GPP) **Scheduled Start Date:** April 2008 **Scheduled Completion Date:** April 2009

TEC = $ 4,374.2K

OPC = $ 543.8K (OPC C.R.20.20.11 = $317.4K)

TPC = $4,918.0K (TPC with C.R.20.20.11 = $5,235.4K)

With pending BCP CR-08-074 approval

TEC = $4,894,167

OPC = $ 292,619

TPC = $5,186,786

Project to Date									Project At Completion			
Budgeted Cost			Variance									
BCWS	BCWP	ACWP	Schedule	%	Cost	%	SPI	CPI	BAC	EAC Proposed	EAC Approved	VAC
1,979,173	757,094	891,130	-1,222,079	-61.75	-134,036	-17.70	0.38	0.85	4,917,997	5,186,786		-268,789

Project to Date

Schedule Variance (SV): -$1,222,079 ***SV%:*** -61.75%

Cause: The initial baseline schedule indicates the majority of construction activities completed in August and September, 2008. The project schedule was in process of being re-baselined during August, however; the Baseline Change Proposal was not finalized because the construction schedule was subject to negotiation due to changed site conditions that resulted in delays for removal of unsatisfactory soil and a hazardous underground pipe. This situation masks the project performance to date. Upon approval of the BCP, the schedule will be realigned to match the construction performance period. Normalizing August, the cumulative BCWS through August would be $464,867. If the BCP was approved prior to August, the variance would be at or near threshold value.

Impact: The project will complete behind schedule.

Corrective Action: Identify critical path activities for the design-build subcontractor to complete early to recover schedule.

Cost Variance (CV): -$134,036 ***CV%:*** -17.70%

Cause: Costs incurred by BEA to support the subcontractor during excavation of unsatisfactory soil have resulted in a negative cost variance. Additionally, premium (overtime) work is being supported by BEA to expedite the schedule which was not in the baseline.

Impact: The project will be overspent.

Corrective Action: Opportunity for efficiencies will continue to be identified during execution of the design-build contract to recover the costs.

Baseline Change Control Actions:

BCP CR-08-074 is pending approval at DOE-ID. The BCP aligns the project schedule with the construction schedule (award in Feb 2008 with a twelve-month performance period) and it aligns budget for the remainder of the project.

Accomplishments:

Subcontractor completed removal of unsatisfactory soils.

Subcontractor replaced soils with engineered fill material.

Subcontractor formed and placed footings.

Subcontractor initiated installation of foundation wall forms.

Construction Field Representative, Project Coordinator, Project Manager and Architect-Engineering supported subcontractor design-build activities.

Subcontractor submitted revised design documents for review.

Subcontractor continued to monitor delivery of long-lead equipment.

Subcontractor initiated structural steel material fabrication.

Milestone Status:

None.

90-Day Look Ahead:

September:

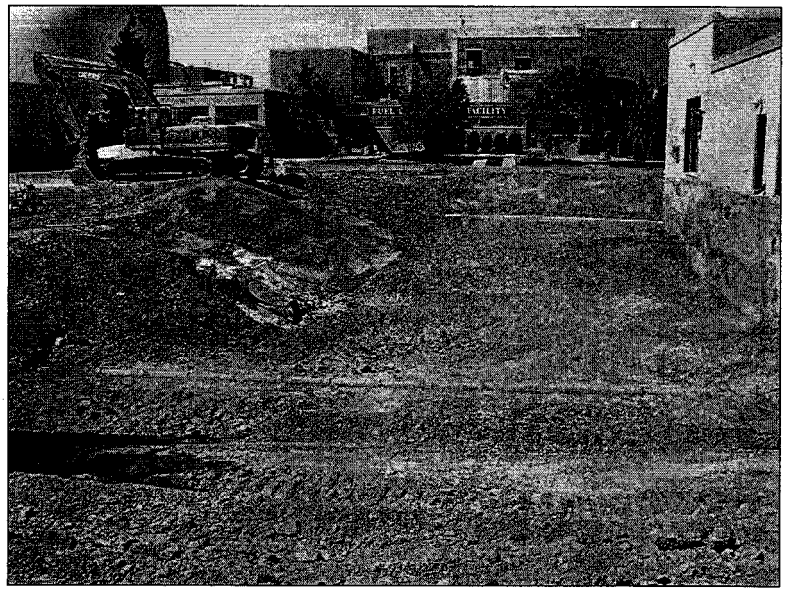
- Complete foundation walls.
- Place basement floors.
- Backfill and rough grade.
- Initiate main floor walls.
- Initiate mechanical piping.

October:

- Initiate main floor section placement.
- Continue main floor walls construction.
- Extend utility rough-in from underground.
- Complete steam and condensate piping.
- Initiate electrical rough-in.

November:

- Complete main floor walls construction.
- Initiate utility tie-ins.
- Complete electrical rough-in.
- Install roof.



Issues:

Cause: None.

Impact: None.

Corrective Action: None.

MFC Radiochemistry Laboratory GPP (C.R.20.20.11/C.R.30.20.11)

SEPTEMBER 2008

Project Scope

The Radiochemistry Laboratory will house laboratory equipment and personnel for basic and applied research in aqueous separations, fuel development and associated activities. The lab spaces include actinide labs, glove box lab, instrument technologies lab, chemical and source storage, counting lab, and mechanical, electrical, and communication system support areas.

Type of Project: General Plant Project (GPP) **Scheduled Start Date:** April 2008 **Scheduled Completion Date:** April 2009

Former Budget

TEC = $4,374.2K

OPC = $543.8K (OPC C.R.20.20.11 = $317.4K)

TPC = $4,918.0K (TPC with C.R.20.20.11 = $5,235.4K)

BCP CR-08-074 approval was received September 19, 2008

TEC = $4,894,167

OPC = $ 292,619 (OPC C.R.20.20.11 = $317.4K)

TPC = $5,186,786 (TPC with C.R.20.20.11 = $5,504.2K)

Project to Date									Project At Completion			
Budgeted Cost			Variance									
BCWS	BCWP	ACWP	Schedule	%	Cost	%	SPI	CPI	BAC	EAC Proposed	EAC Approved	VAC
1,361,656	911,503	900,318	-450,153	-33.06	11,185	1.23	0.67	1.01	5,186,786	5,186,786		0

Project to Date

Schedule Variance (SV): -$450,153 **SV%:** -33.06

Cause: Through September the subcontractor has accomplished approximately 12% of the total construction activity, resulting in earned value of approximately $540K. The subcontractor's performance to-date is delayed due to the time required to remove unsatisfactory soil and subsequent soil investigation, time required to complete additional excavation required to reach basalt near the MFC-752 tank room, time required to complete extensive vacuum excavation, inability to complete design development in a timely manner resulting in construction delays, and inadequate labor force to complete tasks to recover schedule.

The PM, CM, and AE support performance is measured as apportioned effort based on the design-build subcontractor's progress; thus, delays in the subcontract are reflected in the performance for each of those control accounts.

Impact: Unless critical path activities are accomplished ahead of schedule, the project delivery will continue to be approximately three weeks late.

Corrective Action: Identify critical path activities for the design-build subcontractor to complete early to recover schedule. Where possible, pre-fabrication of materials will be accomplished that

will support future critical activities, thus potentially reducing the duration of those critical activities.

Cost Variance (CV): $11,185 **CV%:** 1.23%

Cause: The variance is within the reporting threshold.

Impact: None.

Corrective Action: None.

Baseline Change Control Actions:

The Baseline Change Proposal, BCP CR-08-074, was approved September 19, 2008. The BCP aligns the project schedule with the construction schedule (award in Feb 2008 with a twelve-month performance period) and it aligns budget for the remainder of the project with experience to September, 2008.

Accomplishments:

- Subcontractor finished wall forms on 95% of the exterior foundation walls.
- Subcontractor placed concrete exterior foundation walls.
- Subcontractor stripped forms.
- Subcontractor initiated backfill, compaction, and rough grade.
- Subcontractor submitted information for evaluation with respect to MFC-752 operations and MFC systems.
- Subcontractor continued to monitor delivery of long-lead equipment.
- Subcontractor continued structural steel material fabrication.
- Construction Field Representative, Project Coordinator, Project Manager and Architect-Engineering supported subcontractor design-build activities.

Milestone Status:

None.

90-Day Look Ahead:

October:

- Complete foundation walls, exterior and interior.
- Complete under-slab piping.
- Continue backfill, compaction, and rough grade.
- Continue mechanical piping.
- Extend utility rough-in from underground.
- Initiate electrical rough-in.

November:

- Complete steam and condensate piping.
- Continue main floor walls construction.
- Place basement floors.

- Complete main floor walls construction..
- Initiate main floor section placement.
- Initiate utility tie-ins.
- Continue electrical rough-in.
- Install roof.

December:

- Continue roof installation.
- Complete electrical rough-in.
- Complete utility piping rough-in.
- Install HVAC units.
- Install ductwork.

Issues:

Cause: None.

Impact: None.

Corrective Action: None.

MFC Radiochemistry Laboratory GPP (C.R.20.20.11)

MFC Radiochemistry Laboratory GPP (C.R.20.20.11/C.R.30.20.11)

OCTOBER 2008

Project Scope

The Radiochemistry Laboratory will house laboratory equipment and personnel for basic and applied research in aqueous separations, fuel development and associated activities. The lab spaces include actinide labs, glove box lab, instrument technologies lab, chemical and source storage, counting lab, and mechanical, electrical, and communication system support areas.

Type of Project: General Plant Project (GPP) **Scheduled Start Date:** April 2008 **Scheduled Completion Date:** April 2009

TEC = $4,985K (including identified MR of $91K)

OPC = $ 465K (including identified MR of $172K) (OPC = $782K with C.R.20.20.11)

TPC = $5,450K (TPC = $5,767K with C.R.20.20.11)

Project to Date									Project At Completion			
Budgeted Cost			Variance									
BCWS	BCWP	ACWP	Schedule	%	Cost	%	SPI	CPI	BAC	EAC Proposed	EAC Approved	VAC
1,742,265	1,591,967	1,447,606	-150,298	-8.63	144,361	9.07	0.91	1.10	5,186,786	5,186,786		0

Project to Date

Schedule Variance (SV): -$150,298 **SV%:** -8.63%

Cause: The variance is within the reporting threshold.

Impact: None.

Corrective Action: None.

Cost Variance (CV): $144,361 **CV%:** 9.07

Cause: The variance is within the reporting threshold.

Impact: None.

Corrective Action: None.

Baseline Change Control Actions:

None.

Accomplishments:

- Completed foundation walls, exterior and interior, on schedule.
- Placed basement floor, on schedule.
- Completed under-slab piping, on schedule.
- Continued backfill, compaction, and rough grade, on schedule.
- Continued mechanical piping, behind schedule.

- Extended utility rough-in from underground, on schedule.
- Initiated electrical rough-in, on schedule.
- Subcontractor submitted information for evaluation with respect to MFC-752 operations and MFC systems, on schedule.
- Subcontractor continued to monitor delivery of long-lead equipment, on schedule.
- Subcontractor continued structural steel material fabrication, on schedule.
- Construction Field Representative, Project Coordinator, Project Manager and Architect-Engineering supported subcontractor design-build activities.

Milestone Status:

None.

90-Day Look Ahead:

November:

- Install structural steel.
- Initiate utility tie-ins.
- Complete electrical rough-in.
- Complete main floor precast concrete deck placement.
- Initiate utility tie-ins.
- Continue electrical rough-in.

December:

- Complete main floor walls construction.
- Complete steam and condensate piping.
- Initiate roof installation.
- Complete electrical rough-in.
- Complete utility piping rough-in.

January:

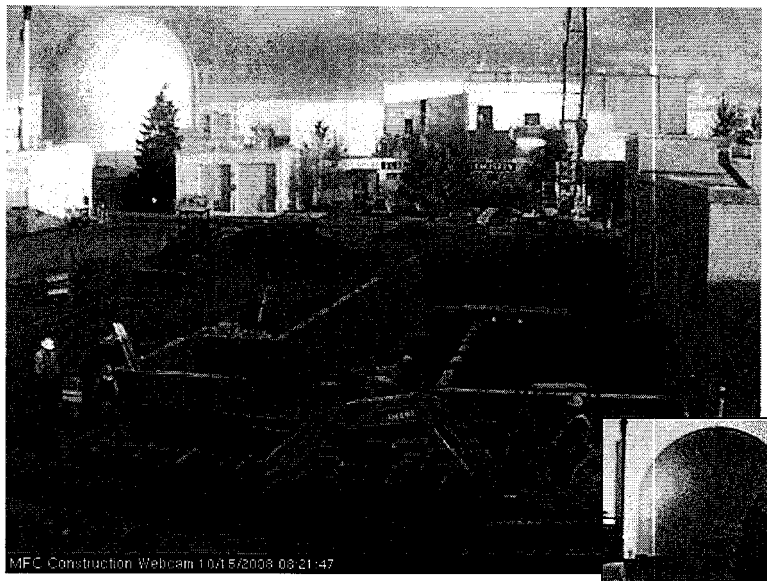
- Continue roof installation.
- Install HVAC units.
- Install ductwork.

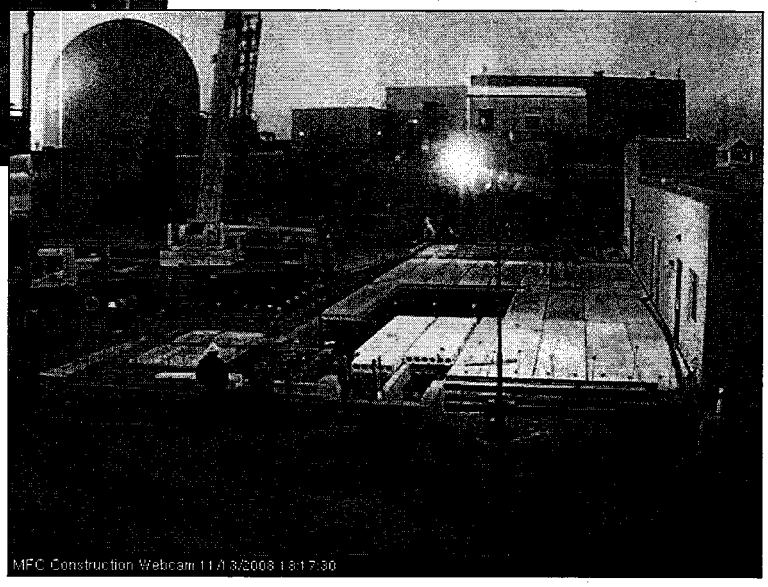
Issues:

Cause: None.

Impact: None.

Corrective Action: None.





MFC Radiochemistry Laboratory Project
Variance Analysis Report
November 2008

Project Scope

The Radiochemistry Laboratory will house laboratory equipment and personnel for basic and applied research in aqueous separations, fuel development and associated activities. The lab spaces include actinide labs, glove box lab, instrument technologies lab, chemical and source storage, counting lab, and mechanical, electrical, and communication system support areas.

Type of Project: General Plant Project (GPP) **Scheduled Start Date:** April 2008 **Scheduled Completion Date:** April 2009

Variance Threshold: Current Period & Cum to date equal to or exceeding +10% and -5%

WBS	Title	Project Manager
C.R.30.20.11	MFC Radiochemistry Laboratory GPP	Bob Waters

TEC = $4,985K (including identified MR of $91K)

OPC = $ 465K (including identified MR of $172K) (OPC = $782K with C.R.20.20.11)

TPC = $5,450K (TPC = $5,767K with C.R.20.20.11)

Project to Date									Project At Completion			
Budgeted Cost			Variance									
BCWS	BCWP	ACWP	Schedule	%	Cost	%	SPI	CPI	BAC	EAC Proposed	EAC Approved	VAC
2,192,446	1,634,849	1,554,411	(557,597)	-25.43	80,438	4.92	0.75	1.05				

Current Period

Schedule Variance (SV): -$407,299 **SV%:** -90.47%

Cause: The construction subcontract work is behind schedule. During the three-week duration of this reporting period, the majority of the work (sitework and concrete) has been performed by the general subcontractor. The onset of cold weather has adversely affected work efficiency, extending completion durations. Planned work by subtier subcontractors has been delayed while the critical path general subcontractor's work is being completed.

Impact: The project will continue behind schedule unless critical path activities are accomplished with less duration than planned.

Corrective Action: The general subcontractor has noted that once the concrete work is completed, a number of subtier subcontractors will be working concurrently, some on critical path activities, and the schedule will be recovered. The subtiers have initiated pre-fabrication of some of the ductwork, piping, and conduits that must be installed and they have staged materials to partially mitigate the delays.

Cost Variance (CV): -$63,923 **CV%:** -149.07%

Cause: Extensive reviews of vendor data by Contractor A/E, CM and PM have resulted in inordinately high costs with respect to subcontractor construction progress.

Impact: The vendor data reviews are more extensive than planned; consequently, the cost variance will not be corrected unless efficiencies are realized on other activities.

Corrective Action: Vendor data reviews are nearly complete. As construction activities are performed, other activities, such as A/E, CM, and PM oversight will be accomplished with greater efficiency due to the efforts on the vendor data at this time.

Project to Date

Schedule Variance (SV): -$557,597 **SV%:** -25.43%

Cause: The variance due to slower than planned construction progress is approximately $459K. PM, CM and other project support progress is apportioned to the construction progress, thus resulting in the remainder of the schedule variance. The construction continues to be approximately four weeks late.

Impact: The project will finish behind schedule without successful corrective action.

Corrective Action: The general subcontractor must finish the critical path work and enable the subtier subcontractors to work efficiently to regain schedule.

Cost Variance (CV): $80,438 **CV%:** 4.92%

Cause: This variance is within reporting limits.

Impact: None.

Corrective Action: None.

Baseline Change Control Actions:

None.

Accomplishments:

- Completed main floor precast concrete deck placement, behind schedule.
- Continued site work and concrete work, behind schedule.
- Continued backfill, compaction, and rough grade, behind schedule.
- Continued mechanical piping, behind schedule.
- Initiated concrete masonry unit wall construction, behind schedule.
- Initiated piping, ductwork, and conduit pre-fabrication, behind schedule.
- Initiated structural steel installation, behind schedule.
- Continued utility rough-in, on schedule.
- Continued electrical rough-in, on schedule.
- Subcontractor began installation of wall framing in the basement, on schedule.
- Subcontractor continued to monitor delivery of long-lead equipment, on schedule.
- Subcontractor completed structural steel material fabrication, on schedule.
- Construction Field Representative, Project Coordinator, Project Manager and Architect-Engineering supported subcontractor design-build activities.

Milestone Status:

None.

90-Day Look Ahead:

December:

- Complete structural steel installation.
- Complete electrical rough-in.