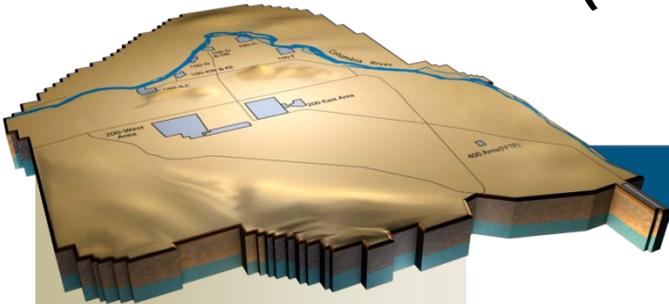


Section C

Solid Waste Stabilization and Disposition (RL-0013)



Monthly Performance Report

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Management Project

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and Construction

May 2010
DOE/RL-2008-69, Rev. 19
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

Mixed low-level
waste debris is
loaded into a
Department of
Transportation-
compliant box for
transport to
Perma-Fix
Northwest



4B Trench 11 Decon

TALON Robot
Demonstration



PROJECT SUMMARY

The Waste and Fuels Management Project (WFMP) focused on delivering safe, compliant performance.

American Recovery and Reinvestment Act (ARRA)

Weekly and monthly Recovery Act Reporting continued. Shipped 41m³ M/LLW and completed 183m³ of M/LLW waste during the month. TRU Retrieval developed schedule for 3A Trench 8 retrieval and initiated preparation of the Retrieval Plan. Next Generation Retrieval (NGR) completed 12B site preparations for the Trench Face Retrieval and Characterization System (TFRCS). Alpha Caisson Retrieval initiated plans to suspend work based on available funding to support the priority work scopes jointly developed between RL and the CHPRC for the remainder of the American Reinvestment and Recovery Act (ARRA) performance period. TRU Project repackaged 186 TRU containers, shipped 299 containers, and received 108 containers at T Plant. The Waste Receiving and Processing Facility (WRAP) completed non-destructive examination (NDE) for 397 drums and 396 non-destructive assay (NDA) drums. The mixed waste disposal trenches received 12 offsite shipments (42 containers) and shipped one leachate Beall tankers to the Effluent Treatment Facility (ETF).

Base

The WFMP continued maintaining facilities in a safe and compliant condition. The Waste Encapsulation and Storage Facility (WESF) continued support to Energy Savings Performance Contract construction demolition and upgrade activities. The Canister Storage Building completed MHM quarterly interlock checks. The Central Waste Complex (CWC) received 61 on-site transfers (956 containers), six off-site shipments (30 containers), shipped six off-site shipments (95 containers), and 61 on-site transfers (956 containers). Low Level Waste Burial Grounds (LLBG) completed RAD Rover surveys in 218-E-10B and posted area as Underground Radiological Material Area. The 200 Area Treated Effluent Disposal Facility (TEDF) discharged 58M gallons. Slightly Irradiated Fuel Project awarded Manitowoc 999 crane lease to Lampson International through Mission Support Alliance (MSA).

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
09-EMS-WFM-OB1-T1	Reduce the potential for releases from TRU Retrieval Waste repackaging activities in the LLBG.	Implement a point-of-generation approach to waste management that minimized the transport and handling of wastes.	10/1/11	On schedule
		No exceedances of permit conditions. Participate in readiness assessment and establish process to confirm permit levels have been met.	9/30/2010	On schedule
10-EMS-WFM-OB2-T1	Reduce the levels of air pollution and increase the energy efficiency of WESF Plant heating and cooling operations.	Eliminate the use of the refrigerant R22.	2/26/2010	Complete
		Inactivate the fuel oil fired steam plant and replace with heat recovery chiller and electrical resistance heaters.	2/26/2010	Complete
10-EMS-WFM-OB3-T1	Reduce the generation of waste through implementation of pollution prevention practices.	Conduct a pollution prevention assessment of waste packaging and other operations at T-Plant to identify waste minimization opportunities.	9/30/2010	On schedule

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	5	N/A
First Aid Cases	6	70	<p>5/3/10 an employee at ETF got some debris in the eye going from private vehicle into work location that morning. Employee reported to AMH, provided first aid treatment to remove the possible debris, and returned to work without restriction. Of note, this was an extremely high wind day. (20900)</p> <p>5/11/10 an employee was bitten on the cheek by an insect. The employee reported it to supervision and was taken to AMH for evaluation and provided first aid. The employee was returned to work without restriction. (20916)</p> <p>5/17/10 a teamster notified their supervision of an eye irritation and was taken to AMH for evaluation. AMH flushed the eye out with saline solution and returned the teamster to work without restriction. (20930)</p> <p>5/20/10 a millwright was torquing a bolt in a T-Plant filter housing and scraped a knuckle on the right hand finger when the worker's hand slipped off the ratchet. The area was posted as a CA and the worker was wearing proper PPE and leather gloves. No</p>

	Current Month	Rolling 12 Month	Comment
			contamination was found on wound, employee's gloves, or equipment being worked on. Millwright was treated at AMH and released with no restrictions or medications. (20936) 5/21/10 an NCO got a three inch scratch on right forearm while moving drums. Escorted to AMH, treated and released without restriction. (20939) 5/25/10 an NCO pinched the right ring finger while storing boxes of copy paper. The NCO was sent to AMH for evaluation, diagnosed with a strained finger, and returned to work without restrictions. (20948)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

ARRA

13.01 Project Management

- Continuing weekly and monthly ARRA reporting
- Continued Project Management support for fast track projects

13.02 Waste Encapsulation and Storage

- Disposition of cesium/strontium capsules
- Completed development and submittal of technical input for cesium and strontium capsule dry storage in the *Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single-Shell Tanks at the Hanford Site, Richland, WA (TC&WM EIS)*

13.04 Mixed Low Level Waste (MLLW) Treatment

- Shipped 41m³ of ARRA funded MLLW to treatment facilities, and completed 183m³
- The Site Specific LDR variance for the "P015" drum approved by the WDOE.
- M-91-42 TPA:
 - 18.8m³ shipped and 81.7m³ completed during month
 - 8,204m³ shipped and 8,118m³ completed since January 2003 (Base & ARRA)
- M-91-43 TPA:
 - 18.6m³ shipped and 24.9m³ completed during month
 - 728m³ shipped and 698m³ completed since January 2003 (Base & ARRA)

13.05 TRU Retrieval

- Completed pre-start corrective actions and resumed Trench 17 operations on 5/24.
- Completed 4B Trench 11 Recovery Plan obtaining SUMMA canister gas samples at the trench edges; results indicate no hazardous chemical at the edges of Trench 11.
- Kicked-off the development of the 3A Trench 8 Retrieval Plan.
- Completed disassembly and removal of the 4C Process Area tent.
- Received change trailer and restroom trailer and completed Ground Penetrating Radar (GPR) activities associated with power pole installation at 3A
- Next Generation Retrieval (NGR)
 - Received the Drum Warming Unit.
 - Completed 12B site preparations for the Trench Face Retrieval and Characterization System (TFRCS).

- Issued the Trench Face Process System (TFPS) Request for Proposal and conducted potential vendor meeting.
- Alpha Caisson Retrieval
 - Initiated plans to suspend work based reprioritization of work jointly developed between RL and the CHPRC for the remainder of the American Reinvestment and Recovery Act performance period.
 - Current planning case is to restart at the beginning of FY 2013.
 - FY 2013 restart supports completing retrieval from the four Alpha Caissons waste by the M-91-41 milestone date of December 31, 2018.
 - A project suspension plan has been developed to direct the orderly and timely suspension of work
 - Majority of activities suspended by June 30, 2010.
 - Document archival activities to complete by July 30, 2010.
 - All project activities to be fully suspended by September 30, 2010.

13.06 TRU Repackaging

- 216Z-9 Repack Campaign – T-Plant Operations have completed the OJT on the mock-up glove bag for all repack qualified NCOs, and completed the procedure modifications and Repack Qualification package addendum
- Canyon on standby (no processing or compacting) during 291-T HEPA filter replacement.
- Processed 155 parent drums
- Generated four drums from glovebag change outs
- Completed repairs to the Empty Drum Compactor and compacted 186 containers
- Shipped 11 containers from T Plant
- Received 108 containers at T Plant
- Shipped one ERDF containers and received an empty
- Shipped one empty roll off box to ERDF

13.07 Waste Receiving and Processing Facility (WRAP)

- NDE 397 drums
- NDA 396 Non-WIPP drums
- Received 57 drums from the Plutonium Finishing Plant (PFP)
- Continued OJT/OJE for TRUPACT II, NDE, NDA, Shipping/Receiving for nuclear chemical operators (NCOs)
- Completed installation of 3 additional office trailers as well as 2 restroom trailers (MO2159, MO-2160, MO-2161)
- Initiated WRAP Process Area HEPA filter replacement. Initial surveys indicate no contamination.
- Awarded contract for construction and electrical updates in support of the High Energy RTR.

13.15 TRU Disposition

- Negotiated loan of Standard Waste Boxes (SWBs) for use as shipping over packs for Idaho Campaign and submitted corresponding potential change notification to DOE.
- Received Ten Drum Over Pack containers at WRAP for Idaho shipment campaign
- CCP Support:
 - Public Release process: clearing documents on schedule at rate of 150 containers a week

13.21 Mixed Waste Disposal Trenches

- Shipped one leachate Beall tanker to ETF
- Received 12 offsite shipments, 42containers

Base**13.02 Capsule Storage & Disposition**

- WESF
 - Continued support to Energy Savings Performance Contract construction demolition and upgrade activities
 - Disposition of cesium (Cs)/strontium (Sr) capsules
 - FY 2012 Base-funded activities for Cs/Sr disposition will be deferred based on scope reprioritization

13.03 Canister Storage Building

- Provided support for Container Restraint System (CRS) construction activities

13.05 TRU Retrieval

- Level 3 Readiness Assessment will be performed prior to startup of Polyurea application onto FRP containers in the Central Waste Complex. Contractor readiness is scheduled to be completed June 15, 2010.

13.07 Waste Receiving and Processing Facility (WRAP)

- Maintained the facility in a safe and compliant condition

13.08 T Plant

- Maintained the facility in a safe and compliant condition

13.09 Central Waste Complex (CWC)

- Completed six off-site shipments, 30 containers
- Completed 61 on-site transfers, 956 containers
- Received 28 on-site transfers, 642 containers
- Received six off-site shipments, 95 containers
- CWC worked two swing shifts to accept road closure shipments from offsite generators. CWC worked on swing shift to support replacement of light clips in 2403WC and 2403WD.
- W&FM VP completed quarterly walk down at the Central Waste Complex, complementing conditions overall with a few minor issues noted.
- May 11, 2010 waste shipments from CWC achieved 6.4m³ of TPA M-091-42 and 17.3m³ of TPA M-091-43 for our customer.
- Completed replacement of three rolling gates at CWC. New gates are much lighter and better balanced thereby reducing strain to operate.
- Initiated installation of change trailer and survey shack to support box repairs in the CWC expansion area.
- LLBG
 - 218-E-10 – Working with Balance of Site (BOS) to survey E10 with Rad Rover Tractors to determine extent of conditions in attempt to mitigate contaminated areas/tumbleweeds and to eventually turnover E10 burial ground to BOS. Completed RAD Rover surveys in 218-E-10B and posted area as Underground Radiological Material Area. (URMA)

13.11 Liquid Effluent Facilities (LEF)

- Received (May) 40 tankers; (34K gallons)
- Treated (May) to SALDS: 1.6M gallons
- 200A TEDF discharged (May) 58M gallons
- Received ERDF leachate (66K gallons) at LERF Basin 43
- Received four drums of Waste Sampling and Characterization Facility wastewater
- Received two drums of Plutonium Finishing Plant shield water
- Maintenance activities
 - Initiated planning and prep work for change-out of Thin Film Dryer (TFD) rotor
 - Replaced valve packing on 3-way ball valve on Reverse Osmosis System
 - Cleaned and calibrated level switch on the evaporator body
 - Replaced Evaporator Pump P-2 expansion boot and viewing windows on evaporator vessel
 - Replaced lamp and tube on ultraviolet/oxidation unit 1B
 - Completed removal of sludge from Sump #1 and initiated waste package and completed repair of Sump #2 check valve
- 310/340 Facilities
 - Completed Operability Acceptance Testing; working punch list items
 - Operating the Retention Transfer System (RTS); 16 batches (476k gallons) discharged to City of Richland and continued performing preventive maintenance (PM) activities at 310/340 for systems that will remain active after turnover (HVAC, fire, and compressed air)

13.12 Integrated Disposal Facility

- Maintained the facility in a safe and compliant condition

13.16 Off Site Spent Nuclear Fuel (SNF) Disposition

- Slightly Irradiated Fuel
 - Completed mobilization and initiated construction for Project W-105, *Interim Storage Cask Pad #3 (Container Restraint System)*
 - Completed excavation for Pad #3 foundation
 - Awarded Manitowoc 999 crane lease to Lampson International through Mission Support Alliance (MSA)

13.21 Mixed Waste Disposal Trenches

- Maintained the trenches in a safe and compliant condition

MAJOR ISSUES

Issue Statement – Falling behind recovery plan to retrieve 2,500m³ by September 30, 2011.

Corrective Actions – Present strategy to Senior Management, HAMTC, and Implement new shift/overtime strategy.

Status – 451m³ removed, 431m³ shipped. Recovery schedule supports, TPA tentative agreement of 2,000m³ by September 30, 2011.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk

● Working - No Concerns
● Working - Concern
● Working - Critical

↑ Increased Confidence
↔ No Change
↓ Decreased Confidence

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
WSD-007: TRU Retrieval Complexities	Accelerate "next generation" retrieval	●	↓	Significant container degradation encountered; BCR in progress
WSD-008: Classified Waste Storage Limitations	Implement mobile shredding; evaluate establishing secure storage at CWC or other location	●	↓	Questionable mobile shredding feasibility, working with NNSA to define path forward
WSD-013A: TRU Waste Volumes or Characteristics - Retrieval	Implement in-trench assaying as part of Next Generation retrieval and explore stabilization techniques	●	↓	Encountering issues regarding unexpected waste volumes /characteristics; BCR in progress
WSD-013B: TRU Waste Volumes or Characteristics - Processing	Use ARRA funds to add additional process lines	●	↔	No issues regarding unexpected waste volumes or characteristics experienced to date
WSD-018: CSB Major Equipment Failure	Risk accepted without mitigation	●	↔	Risk is very unlikely.
WSD-025: Unexpected Waste Volumes/Characteristics	Work with generators to update forecasting data monthly/quarterly/semi-annually	●	↔	Waste volumes to ERDF significantly greater than projected due to ARRA work acceleration
WSD-043: Orphan Wastes	Obtain regulatory relief for "no path forward" wastes	●	↔	Working to identify treatment options for all waste currently in storage

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
MLLW Treatment	1.5	1.3	3.2	(0.2)	-12.8	(2.0)	-153.3
TRU Waste	8.1	8.4	10.2	0.3	4.1	(1.8)	-21.4
ARRA Total	9.6	9.7	13.5	0.1	1.5	(3.8)	-38.8
Base	<u>7.1</u>	<u>6.7</u>	<u>7.8</u>	<u>(0.5)</u>	<u>-6.5</u>	<u>(1.2)</u>	<u>-17.3</u>
Total	16.7	16.4	21.3	(0.3)	-1.9	5.0	-30.1

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance (+\$0.1M/+1.5%)

RL-0013 MLLW Treatment – Within Threshold – Mixed Low Level Waste is incurring costs associated with the "Back Half" return shipment of volume reduction from PermaFix Northwest (PFNW) and PermaFix Environmental (performance claimed in prior period), plus a mischarge of two super dump trucks to the Environmental Restoration Disposal Facility (ERDF) additional disposal capabilities

RL-13 TRU Waste – Within Threshold - TRU Retrieval corrective action and recovery planning continues, coupled with equipment, personnel and other support costs increased due to higher levels of sampling for industrial health and radiological controls and delays in the design of RH TRU Waste Retrieval Processing System due to design complications and contract startup issues

CM Cost Performance (-\$3.8M/-38.8%)

RL-0013 MLLW Treatment – Within Threshold – MLLW treatment costs incurred for previously claimed performance and costs assigned to ERDF that will be re-assigned to Solid Waste Base Ops next month.

RL-0013 TRU Waste – TRU Retrieval restart activities approved/started later than planned, delays in Next Gen RH Retrieval for design work for Waste Processing System and Waste Retrieval system, continuing to incur increased allocation for additional office space and other assessments as a result of increased ARRA expenditures; partially offset by actual costs associated with overstated performance for Next Generation Retrieval and efficiencies in TRU Characterization/Shipping.

Base

CM Schedule Performance (-\$0.5M/-6.5%)

Within Threshold, however, TRU Repackaging – Remote-handled (RH)/Large Box shipments of low gram TRU waste to commercial treatment facility is delayed pending contract establishment.

CM Cost Performance (-\$1.2M/-17.3%)

Assessments and Mission Support Alliance (MSA) services (under review for correction and possible cost transfers to responsible projects) above plan, Long-term Box storage is carrying the costs for painting and repair crews pending completion of readiness assessment and Hazard Review Board (HRB) meeting; partially offset by labor under-runs in Liquid Effluent Facilities (LEF) Base Ops.

Contract-to-Date (CTD) (\$M)

WBS 013/ RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
MLLW Treatment	28.4	29.5	27.4	1.1	3.8	2.1	7.1	50.5	45.9	4.6
TRU Waste	79.7	75.4	77.8	(4.3)	-5.4	(2.4)	-3.2	248.9	241.0	7.9
ARRA Total	108.1	104.9	105.2	(3.2)	-3.0	(0.3)	-0.3	299.3	286.8	12.5
Base	<u>208.4</u>	<u>204.0</u>	<u>201.8</u>	<u>(4.4)</u>	<u>-2.1</u>	<u>2.2</u>	<u>1.1</u>	<u>1,568.3</u>	<u>1,573.3</u>	<u>(5.1)</u>
Total	316.5	309.0	307.0	(7.6)	-2.4	2.0	0.6	1,867.6	1,860.2	7.4

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance (-\$3.2M/-3.0%)

RL-13 MLLW Treatment – Accelerated disposal of 435.1 Compliance waste; partially offset by fewer than planned MLLW shipments due to delay in receipt of waste from the Retrieval Project, and delayed procurement of Type A Waste container.

RL-0013 TRU Waste – Delayed progress in TRU Characterization and Shipping due to delays in the initiation of full Central Characterization Project (CCP) characterization, Next Generation Retrieval site preparation performed in series versus parallel and staff training delayed due to higher priority Retrieval activities, and delays in design of RH TRU Waste Retrieval and Processing System due to a slowdown in design, pending project deferral; partially offset by efficiencies in T-Plant Repack Line

CTD Cost Performance (-\$0.3M/-0.3%)

RL-0013 MLLW Treatment – Costs for MLLW are below plan due to efficiencies created by treating waste at ES-Clive rather than planned treatment at Perma-Fix Northwest (due to a waiver received from DOE), ERDF trucks received below planned costs; partially offset by higher costs for ERDF maintenance facility due to safety and environmental requirements.

RL-0013 TRU Waste – Increased allocations for additional office space and other assessments as a result of increased Recovery Act expenditures, increased TRU Retrieval project operational costs associated with inability to make progress due to upset conditions and TRU Retrieval support and management costs in support of deteriorated waste containers; partially offset by lower ramp up and training costs for TRU Characterization and Shipping.

Base

CTD Schedule Performance (-\$4.4M/-2.1%)

Contact-handled (CH) Waste Retrieval – RL determined that the Trench Face Process System (TFPS) is a low-level burial ground (LLBG) major modification caused more safety and hazards analyses than planned in the baseline. Extended review of the application of polyurea by the JET team and HRB review preparation have pushed out the schedule for long-term box storage, low-gram TRU shipments to an offsite repack facility to delays in obtaining procurement approvals, and Canister Storage Building (CSB) Performance Distribution Control System (DCS) design delay due to resources assigned to higher priority activities.

CTD Cost Performance (+\$2.2M/+1.1%)

Efficiencies in LEF, MLLW (due to treating waste at ES-Clive rather than planned treatment at PFNW (due to a waiver received from DOE), off site spent nuclear fuel (SNF) disposition and TRU repackaging, and General & Administrative distributions ; partially offset by higher than planned Mission Support Contract (MSC) services (under review for possible cost transfers to responsible projects), TRU Retrieval

additional resources to deal with the deteriorated containers and 85-gallon drum wedge issues, and WRAP incurring increased levels of corrective and preventive maintenance activities as a result of additional repack operations.

Contract Performance Report Formats are provided in Appendix A and Appendix A-1.

FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	FY 2010		
	Projected Funding	Spending Forecast	Variance
ARRA	151.7	132.4	19.3
Base	<u>108.7</u>	<u>101.4</u>	<u>7.9</u>
Total	260.4	233.8	27.2

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Projected funding includes FY 2009 uncosted and FY 2010 expected new budget authority.

Critical Path Schedule

Critical path analysis can be provided upon request.

Estimate at Completion (EAC)

The BAC and EAC now include FY 2009 through FY 2018.

Baseline Change Requests

BCR-013-10-007R0, Delete Replacement of WESF Detectors.

BCRA-013-10-005R0, Expense to Capital for Thin Film Vessel Replacement.

BCRA-013-10-006R0, Super Dump Truck Procurements, Capital.

MILESTONE STATUS

Tri-Party Agreement milestones represent significant events in project execution. RL Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PRC Baseline Revision 2, submitted in January, defines CHPRC planning with respect to TPA milestones.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-03D-01	Submit Annual Revision of TRUM and MLLW PMP to Ecology	TPA	6/30/10			On schedule
M-091-40G-T02	Retrieve CH-RSW 10,700 Cubic Meters (Cumulative)	TPA	9/30/10			Tentative Agreement approved on 4/20/10 will delete this milestone.
M-091-42J-T02	Treat 200 Cubic Meters of CH TRUM by 9/30/10	TPA	9/30/10			Tentative Agreement approved on 4/20/10 will delete this milestone.
M-091-44Z-001	Minimum Annual Project Manager Meeting Notification of Certification of CH/RH TRUM	TPA	12/31/10			On Schedule

SELF-PERFORMED WORK

The Section H. clause entitled, Self-Performed Work, is addressed in the Monthly Report Overview.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
J.12/C.2.3.6	PBS-13, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the CBFO.	Ongoing