ONTARIO POWER GENERATION

Document Number: FIN-FORM-PA-004*	Revision: R03**	Page: 1 of 1

REPORT OF EQUIPMENT IN-SERVICE: Capital Projects Only

Instructions: Forward completed and signed copy to your Controller. Controller to review and issue to Asset Management

Date 15-Oct-14

Project / Asset Description
D2O Storage and Drum Handling Facility

Project no. 16-31555

Approved Project Amount	Date of project release	Work order no. (if app.)	Project Management Group
$160,015k	14-May-2013	See attached	Nuclear Projects

In-service amount previously reported	% of work completed this report	% of work completed LTD	Capital in-service amount of this report	date placed in-service	date ready for service
0	5%	5%	$14,637,565 (NK38-CORR-38000-0517658)	August 20, 2014	August 20, 2014

Site/Location Name: Darlington GS

Interim In-Service Transfer Credit Account (Controller)

• Super Asset Number (Controller)	02151
• Super Asset Description (Controller)	Darlington GS
• Asset Class (Controller)	15340000
• Life To Date Actual Expenditures	$104,190K
• Description of key equipment installed including equipment code /SCI where applicable. Provide cost breakdown of key equipment.	See attached
• Company Code / Business Area (Controller)	9807
• Description of equipment that was removed as part of this project (in-service year, asset name, asset number, date installed, and date removed). Complete Surplus Asset Declaration form. (See Supply Chain Website under Investment Recovery).	
• Removal costs	

Authorized Plant

Date

BU

Phone #

Name (printed) & Empl #

Signature

Hydroelectric or Fossil – Production /Plant Manager
Nuclear – Station Director of Eng./Ops. & Mtce., OR
attach AFS Form (N-FORM-10091-R006)

Authorized – Project Manager

Oct 16, 2014
Date

Projects & Mods
BU

703-1336
Phone #

Julian Read [redacted]
Name (printed) & Empl. #

Signature

Project Manager

Controller Review

Reviewed by: K Brooks
Date: Oct 29/14
Station Controller

Reviewed by: Sherree Patterson
Date: Oct 17, 2014
Sherree Patterson, Controller for Project Organization

*Associated with: Project Accounting and Reporting Procedure FIN-PROC-PA-013 and Fixed Asset Accounting, FIN-PROC-PA-005
** Revised March 2007

Work Description	Design EC	SCI	WO number	Field Work Complete?	AFS (N-FORM-10091)	Attachment	Summary Description
Daylighting and C13 soil lay down pad		N/A	2924346	Yes	N/A	N/A	Daylighting of building footprint for identification/confirmation of underground services and installation of C13 soil laydown pad to support excavation for relocates
Abandoned Water Line	120365	84141	2895255	Yes	Complete - 20AUG2014	AFS Form	Cut and remove portion of underground abandoned lines (~10 feet below grade) to clear D2O building footprint.
Abandoned Air Line	120364	84141	2895256	Yes	Complete -20AUG2014		
Abandoned Steam & Condensate	120366	84141	2895257	Yes	Complete 20AUG2014		
Yard Drainage piping relocation	120353	15200	2895260	Yes	Complete – 2JUN2014	AFS Form	Yard drainage/storm sewer lines relocated from building footprint
LPSW line relocation	120404	72100	2817137	Yes	Complete - 10JAN2014	AFS Form	30" underground LPSW line permanently relocated out of D2O building footprint.
Helium line relocation	124052	75540	2817134	Yes	Complete – 2MAY2014	AFS Form	Underground line permanently relocated out of new D2O Building footprint
Argon Tank, piping relocation	120670	67555	2929921	Yes	Complete - 14JUL2014	Partial AFS – 120670	TRF Argon supply tank and associated piping permanently relocated to south/east corner of TRF. Note, the actual tank is leased through Air Products and is not owned by OPG. New valves/piping and I&C conduits installed/AFS'ed.
	122210	75550	2973065			AFS Form	
		75550	2817132				
Oxygen Tank, piping relocation	122212	67551	2817133	Partially	TCD End of October		Same as above, for TRF Oxygen tank and associated piping, valves and conduits. Tank is leased through Praxair. New tank is installed and supplying, old tank remains to be moved.
	120670	75510	3015041				
F1 soil lay down pad	N/A	N/A	3001097	Yes	In service declarations complete – Chamber#1-28FEB2014 Chamber#2-13MAR2014	F1 Chamber 1 F1 Chamber2	Installed and commissioned a large soil laydown pad outside of protected area for potentially contaminated soil management. This is expected to remain in place for atleast 10 years. AFS form (N-FORM-10091) was not signed off, as this did not follow ECC process for work outside PA. In Service declaration was completed instead via a memo to OPG PM.
Tie-in Feed & Product	120448	39340	2910095	Yes	Complete - 28FEB2014	AFS Form	Installed tie-in pipe, valve and cap in existing TRF/HWMB during the outage, to allow future connection of new D2O Building systems without this scheduling constraint
Tie-in Steam & Condensate	120719	73680	2917063	Yes	Complete - 02JAN2014	AFS Form	"
Tie-in Inactive Drainage	121579	79110	2917064	Yes	Complete - 22JAN2014	AFS Form	"

ONTARIO POWER GENERATION

OPG Confidential

October 15, 2014

File No.: NK38-CORR-38000-0517658

TO FILE

31555 – D_2O Storage Project REIS for relocates, outage tie-ins and F1 soil laydown pad

The D_2O Storage and Drum Handling Facility Project was divided into three phases, i.e. Design engineering (Phase 1), Site Preparation, Service relocates and procurement of long lead items (Phase 2), and HWMB-WA construction, commissioning and turnover (Phase 3). The Purchase Order (PO#217817) to the EPC Contractor, Black & McDonald, was also divided into line items to align with the project phases.
This memo to file is to document the REIS of work completed to support Site Preparation and Services relocates, briefly summarized as follows:-

Site Preparation and Services Relocates: Various services (tanks, pipes) interfering with the new building footprint were relocated/removed to allow the start of construction of the new HWMB-WA. A dedicated laydown pad (C13) was installed inside the protected area to temporarily store the potentially contaminated soil to support excavation and backfill for these services.
T1301 Outage tie-ins: Schedule for D_2O Storage Project is cosntrained by tie-ins to existing TRF/HWMB systems, some of which require a TRF outage. To mitigate this constraint, tie-ins requiring TRF outage were completed in T1301 with a valve and cap, which would provide standalone isolation in the future for connection to new HWMB-WA system.
F1 Soil Laydown pad: A large soil management pad (F1) was established outside the protected area and put in service to manage the potentially contaminated soil for the bulk excavation of the new building.

The cost to complete fieldwork noted above is **$14,637,565**. This includes majority of the costs from PO#217807, Line Item#2 excluding downpayment for long lead items (tanks, pumps) and a portion of costs from Line Item#3 related to F1 pad installation and commissioning. The OPG and RCMT Detailed Design costs to support the fieldwork are excluded as these costs are combined for entire project and unable to be segregated accurately. These costs will be capitalized at the time of final AFS of the new HWMB-WA.

The cost breakdown to support the REIS is as follows:-

Cost Description	Cost at Completion
B&M Direct Labour	$ 3,661,573
B&M Indirect Labour	$ 1,334,434
B&M Project Team (RNF May-Sept)	$ 1,949,755
ESPCA	$ 169,093
B&M Materials & Consumables	$ 275,932
B&M Rentals	$ 475,558
B&M Subcontractors	$ 2,391,392
RCMT PMT/Work Plans	$ 1,193,429
E-D Area F-1 (from PO Line item 3)	$ 3,186,399
TOTAL REIS	**$ 14,637,565**

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ONTARIOPOWER GENERATION

Records File Information:
Life of Facility

OPG Proprietary

N-FORM-10091-R015*

Available For Service Declaration or Operations Acceptance Declaration

For **Available For Service** (**AFS**), the Modification Team Leader (MTL) ensures the form and **all** signatures are completed.

For **Operations Acceptance**, MTL ensures Sections A through E are completed and signs in Section E. MTL also ensures Section F is completed, referring to Section F for signature instructions. Manager of Operations Production signs in Section G. Additional signatures are not required unless specified in the Operations Turnover Plan.

SECTION A: GENERAL	**Formal AFS:** ☐	**Operations Acceptance:** ☒	**Partial:** ☐	**Final:** ☒
Facility: DNGS	Unit: 0	Master EC No.: 118880	Rev.: 000	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number: NA			
Master EC Title:	0-38000-MASTER-DNGS HEAVY WATER MANAGEMENT BUILDING WEST ANNEX PROCESS SYSTEMS, SERVICE TIE-INS, POWER SUPPLY, INTERFACE, RELOCATION/REMOVAL OF INTERFERENCES, AND AUXILIARY SUPPORT SYSTEM			
Design EC No.(s) and Rev included in Walkdown:	120226 Rev 004			
List of Walkdown Participants: (include Name and Department)	See NK38-WPL-69040-0452328 and WO 2839455 documenting the completion of all tasks. Several walkdowns were completed at various stages by all stakeholders to verify installation.			
Date of Walkdown:	See above	Additional Comments Attached?	☐ Yes	☒ No

PACKAGE CONTENTS

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Note: Listed documents that have **not yet** been issued **should** be attached (for example and as required, Walkdown Minutes; N-TMP-10209 "AFS Report"). Listed documents that **have** been issued **may** be attached (for example and as required, N-FORM-10007 "COMS Stakeholder Declaration").

Document #	Title	Attached? Y/N

*Associated with N-PROC-MP-0090, Modification Process

ONTARIO POWER GENERATION

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OPG Proprietary

N-FORM-10091-R014*

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Facility: Darlington NGS	Unit: 0	Master EC No.: 118880	Rev.: 000	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number: NA			
Master EC Title:	0-38000-MASTER-DNGS HEAVY WATER MANAGEMENT BUILDING WEST ANNEX PROCESS SYSTEMS, SERVICE TIE-INS, POWER SUPPLY, INTERFACE, RELOCATION/REMOVAL OF INTERFERENCES, AND AUXILIARY SUPPORT			
Design EC No.(s) and Rev included in Walkdown:	120353 Rev 003: 0-15200-DESIGN EC FOR RELOCATION OF YARD DRAINAGE (CSP), CIVIL WORK, DRIVEWAY/SITE LAYOUT			
List of Walkdown Participants: (include Name and Department)	Stephen Tutsch - RCM			
Date of Walkdown: May 26th, 2014	Additional Comments Attached? ☐ Yes ☒ No			

PACKAGE CONTENTS

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Document #	Title	Attached? Y/N
N-FORM-10007	COMS Stakeholder Declaration	Y
NK38-CR-15200-10001	Commissioning Report: Yard Drainage Permanent Provision	N

SECTION B: DESIGN ISSUES

Issue	Yes/ No/NA	Description or Comments
1. If formal COMS was required by the Modification Outline, is N-FORM-10007 complete and has been signed by a representative of the responsible Design organization?	Yes	General Scoping COMS for Project held August 23, 2012. Detailed Design COMS held for Design EC 120353 January 10, 2013; COMS declaration signed by RCM Design and OPG Refurbishment Design.
2. Commissioning test results have been reviewed by the design engineer and the modification meets the modification performance requirements and intent?	Yes	Design Engineer has signed the commissioning report and completed the Design acceptance of Installation and Commissioning milestone in Asset Suite.
3. MEL Equipment minor revision ready for launch?	NA	No existing equipment modified as part of this modification. CBs and MHs are not listed in the MEL.
4. Abandoned and Removed components identified to be statused as RETIRED and REMOVED as applicable?	NA	No Components were abandoned or removed.
5. Equipment Bills of Material are updated?	NA	No existing equipment affected by this modification.
6. Commissioning Report written and accepted.	Yes	NK38-CR-15200-10001 was completed and accepted.
7. Pre-Start Health and Safety Review has been completed in accordance with Section 7, OHSA Reg. 851/2000?	NA	Pre-Start Health and Safety Review was not required in accordance with Master EC 118880.
8. Design verification of channelization and separation requirements for all ECs have been met?	NA	Modification does not impact any equipment with channelization and separation requirements.
9. All Pressure Boundary (PB) classification and registration processes (as required) are completed?	NA	This modification does not change or install any pressure boundary SSCs
10. On-line Wiring is Statused as Currently Built?	NA	This modification has no aspects that required statusing in OLW.
11. Air Supply List (ASL) update completed, or if appropriate,	NA	No Impact to ASL.

*Associated with N-PROC-MP-0090, Modification Process

ONTARIOPOWER GENERATION

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Life of Facility

OPG Proprietary

N-FORM-10091-R015*

Available For Service Declaration or Operations Acceptance Declaration

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For **Operations Acceptance**, MTL ensures Sections A through E are completed and signs in Section E. MTL also ensures Section F is completed, referring to Section F for signature instructions. Manager of Operations Production signs in Section G. Additional signatures are not required unless specified in the Operations Turnover Plan.

SECTION A: GENERAL	**Formal AFS:** ☐	**Operations Acceptance:** ☒	**Partial:** ☐	**Final:** ☒
Facility: DNGS	Unit: 0	Master EC No.: 118880	Rev.: 000	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number:			
Master EC Title:	0-38000-MASTER-DNGS Heavy Water Management Building West Annex Process Systems, Service Tie-Ins, Power Supply, Interface, Relocation/Removal of Interferences, and Auxiliary Support System			
Design EC No.(s) and Rev included in Walkdown:	DEC 120364 R001 DEC 120365 R001 DEC 120366 R001			
List of Walkdown Participants: (include Name and Department)	N/A			
Date of Walkdown: N/A	Additional Comments Attached? ☐ Yes ☒ No			

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Document #	Title	Attached? Y/N
N-FORM-10007	COMS Stakeholder Declaration	N
NK38-CORR-38000-0470952	MEC 118880 – DNGS D2O Management Building West Annex Process Systems, Service Tie-Ins, Power Supply, Interface, Relocation/Removal of Interferences, and Auxiliary Support Systems – AFS Strategy	N
NK38-CORR-38000-0476196	MEC 118880 – Exemptions from Requirement for Detailed Commissioning Specification & Commissioning Report	N

*Associated with N-PROC-MP-0090, Modification Process

ONTARIOPOWER GENERATION

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N-FORM-10091-R014*

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SECTION A: GENERAL	Formal AFS: ☒	Operations Acceptance: ☐	Partial: ☐	Final: ☒
Facility: Darlington NGS	Unit: 0 / TRF	Master EC No.: 119824	Rev.: 002	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number: NA			
Master EC Title:	0-38000-MASTER-PMOD FOR LPSW DISCHARGE LINE (SCI 72100), TIE-INS FOR MODERATOR & HTS D2O SUPPLY (SCI 38110) & RELOCATIONS OF TRF BULK GAS SYSTEMS (SCI 75510, 75540, 75550, 67550)			
Design EC No.(s) and Rev included in Walkdown:	120404 R03 0-72100-DESIGN-MODIFICATION OF LPSW LINE 0-72100-L921-W30A			
List of Walkdown Participants: (include Name and Department)	See NK38-CORR-72100-0484144.			
Date of Walkdown: NA	Additional Comments Attached?	☐ Yes	☒ No	

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Document #	Title	Attached? Y/N
N-FORM-10007	COMS Stakeholder Declaration	Y
NK38-DCS-72100-10002	Detailed Commissioning Specification: Relocation of LPSW Line 7210-L921-W30A	N
NK38-CR-72100-10013	Commissioning Report : Relocation of Buried NPS 30 LPSW Pipe 72100-L921-W30A per Design EC 120404	N
NK38-REF-72100-0453637	N-FORM-11003, Code Classification/Registration Approvals and Exemptions	N
NK38-REF-72100-0453638	N-FORM-10971, Reconciliation Statement	N
NK38-REP-72100-10048	AFS Report: Permanent Relocation of LPSW Discharge Line	N

SECTION B: DESIGN ISSUES

Issue	Yes/ No/NA	Description or Comments
1. If formal COMS was required by the Modification Outline, is N-FORM-10007 complete and has been signed by a representative of the responsible Design organization?	Yes	General Scoping COMS for Project held August 23, 2012. Detailed Design COMS held for Design EC 120404 December 14, 2012; COMS declaration signed by RCM Design and OPG Refurbishment Design.
2. Commissioning test results have been reviewed by the design engineer and the modification meets the modification performance requirements and intent?	Yes	Design Engineer has signed the commissioning report and completed the Design acceptance of Installation and Commissioning milestone in Asset Suite.
3. MEL Equipment minor revision ready for launch?	NA	No existing equipment codes were modified as a part of this design.
4. Abandoned and Removed components identified to be statused as RETIRED and REMOVED as applicable?	NA	No Components were abandoned or removed.
5. Equipment Bills of Material are updated?	NA	No Equipment Bills of Material changes are required.
6. Commissioning Report written and accepted.	Yes	NK38-CR-72100-10013 was completed and accepted.
7. Pre-Start Health and Safety Review has been completed in accordance with Section 7, OHSA Reg. 851/2000?	NA	Pre-Start Health and Safety Review was not required in accordance with Master EC 119824.
8. Design verification of channelization and separation requirements for all ECs have been met?	NA	Modification does not impact any equipment with channelization and separation requirements.
9. All Pressure Boundary (PB) classification and registration processes (as required) are completed?	Yes	N-FORM-11003 (NK38-REF-72100-0453637) and N-FORM-10971 (NK38-REF-72100-0453638)

*Associated with N-PROC-MP-0090, Modification Process

ONTARIOPOWER GENERATION

Records File Information:
Life of Facility

OPG Proprietary

N-FORM-10091-R014*

Available For Service Declaration or Operations Acceptance Declaration

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SECTION A: GENERAL	Formal AFS: ☐	Operations Acceptance: ☒	Partial: ☐	Final: ☒
Facility: DNGS	Unit: 0	Master EC No.: 118880	Rev.: 0	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number:			
Master EC Title:	0-38000-MASTER-DNGS HEAVY WATER MANAGEMENT BUILDING WEST ANNEX PROCESS SYSTEMS, SERVICE TIE-INS, POWER SUPPLY, INTERFACE, RELOCATION/REMOVAL OF INTERFERENCES, AND AUXILIARY SUPPORT SYSTEM			
Design EC No.(s) and Rev included in Walkdown:	120448 R03			
List of Walkdown Participants: (include Name and Department)	Stephen Tutsch; Glen Barton; Nicole Go			
Date of Walkdown: February 20, 2014	Additional Comments Attached? ☐ Yes ☒ No			

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Document #	Title	Attached? Y/N
N-FORM-10007	COMS STAKEHOLDER DECLARATION / ISSUES REPORT	Y
NK38-CR-39340-10001	COMMISSIONING REPORT: TIE-IN TO FEED AND PRODUCT EC 120448	Y

SECTION B: DESIGN ISSUES

Issue	Yes/ No/NA	Description or Comments
1. If formal COMS was required by the Modification Outline, is N-FORM-10007 complete and has been signed by a representative of the responsible Design organization?	Yes	General Scoping COMS for Project held August 23, 2012. Detailed Design COMS held for Design EC 120448 on December 19, 2012; COMS declaration signed by RCM Design and OPG Refurbishment Design.
2. Commissioning test results have been reviewed by the design engineer and the modification meets the modification performance requirements and intent?	Yes	NK38-CR-39340-10001 accepted. DESIGN I/C ACCPT milestone signed in passport.
3. MEL Equipment minor revision ready for launch?	Yes	No existing equipment codes modified
4. Abandoned and Removed components identified to be statused as RETIRED and REMOVED as applicable?	NA	No equipment or components retired or removed.
5. Equipment Bills of Material are updated?	Yes	All equipment is listed in AEL and no new CATIDs required.
6. Commissioning Report written and accepted.	Yes	NK38-CR-39340-10001 accepted.
7. Pre-Start Health and Safety Review has been completed in accordance with Section 7, OHSA Reg. 851/2000?	NA	Pre-Start Health and Safety Review was not required in accordance with Master EC 118880.
8. Design verification of channelization and separation requirements for all ECs have been met?	NA	Modification does not impact any equipment with channelization and separation requirements.
9. All Pressure Boundary (PB) classification and registration processes (as required) are completed?	Yes	N-FORM-11003 (NK38-REF-39340-0454160) and N-FORM-10971 (NK38-REF-39340-0454161) have been completed and the system is exempted from Registration.
10. On-line Wiring is Statused as Currently Built?	NA	No Impact to OLW.
11. Air Supply List (ASL) update completed, or if appropriate, update in progress?	NA	No Impact to ASL.
12. Power Supply List (PSL) update completed, or if appropriate, update in progress?	NA	No Impact to PSL.
13. EQ Completion Assurance is complete in accordance with N-GUID-03651-10000, Guide to Environmental Qualification Completion	NA	EQ Completion Assurance is not required for this modification as there is no impact to EQ.

*Associated with N-PROC-MP-0090, Modification Process

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SECTION A: GENERAL	Formal AFS: ☐	Operations Acceptance: ☒	Partial: ☐	Final: ☒
Facility: DNGS	Unit: 0	Master EC No.: 118880	Rev.: 00	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number:			
Master EC Title:	DNGS Heavy Water Management Building West Annex Process Systems, Service Tie-ins, Power Supply, Interface, Relocation/Removal of Interferences, and Auxiliary Aupports System			
Design EC No.(s) and Rev included in Walkdown:	120719 R04			
List of Walkdown Participants: (include Name and Department)	Stephen Tutsch			
Date of Walkdown:	Additional Comments Attached?	☐ Yes	☒ No	

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Document #	Title	Attached? Y/N

SECTION B: DESIGN ISSUES

Issue	Yes/ No/NA	Description or Comments
1. If formal COMS was required by the Modification Outline, is N-FORM-10007 complete and has been signed by a representative of the responsible Design organization?	Yes	COMS completed and signed by Jamil Ahmed
2. Commissioning test results have been reviewed by the design engineer and the modification meets the modification performance requirements and intent?	Yes	Commissioning Report NK38-CR-73680-10001 documents commissioning test results.
3. MEL Equipment minor revision ready for launch?	N/A	No existing equipment codes modified.
4. Abandoned and Removed components identified to be statused as RETIRED and REMOVED as applicable?	N/A	No equipment abandonded or removed as part of this modification.
5. Equipment Bills of Material are updated?	Yes	All new equipment is on the AEL in Asset Suite
6. Commissioning Report written and accepted.	Yes	NK38-CR-73680-10001
7. Pre-Start Health and Safety Review has been completed in accordance with Section 7, OHSA Reg. 851/2000?	N/A	Per the Modification Outline, no Pre-start health and Safety review is required.
8. Design verification of channelization and separation requirements for all ECs have been met?	N/A	Modification does not impact any equipment with channelization and separation requirements.
9. All Pressure Boundary (PB) classification and registration processes (as required) are completed?	Yes	NK38-REF-73680-0451546 & NK38-REF-73680-0451548 state that the modification does not change system classification and registration is not required.
10. On-line Wiring is Statused as Currently Built?	N/A	No changes to On-line Wiring
11. Air Supply List (ASL) update completed, or if appropriate, update in progress?	N/A	No impact on Air supply list
12. Power Supply List (PSL) update completed, or if appropriate, update in progress?	N/A	Modification has no impact on the Power Supply List
13. EQ Completion Assurance is complete in accordance with N-GUID-03651-10000, Guide to Environmental Qualification Completion Assurance?	N/A	Modification does not modify or add any equipment credited for post DBA safety functions
14 If applicable, has final Configuration Report been accepted by Design (e.g., for Engineer, Procure, Construct [EPC] contract)?	No	Configuration Report not required per contract.

For **AFS**: Recommended by Design Team Leader.
For **Operations Acceptance**: Signed in accordance with Operations Turnover Plan. **Otherwise**, recommended by MTL with

*Associated with N-PROC-MP-0090, Modification Process

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SECTION A: GENERAL	**Formal AFS:** ☐	**Operations Acceptance:** ☒	**Partial:** ☐	**Final:** ☒
Facility: DNGS	Unit: 0	Master EC No.: 118880	Rev.: 0	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number:			
Master EC Title:	0-38000-MASTER-DNGS HEAVY WATER MANAGEMENT BUILDING WEST ANNEX PROCESS SYSTEMS, SERVICE TIE-INS, POWER SUPPLY, INTERFACE, RELOCATION/REMOVAL OF INTERFERENCES, AND AUXILIARY SUPPORT SYSTEM			
Design EC No.(s) and Rev included in Walkdown:	121579 R04			
List of Walkdown Participants: (include Name and Department)	Stephen Tutsch Glen Barton Nicole Go			
Date of Walkdown: Jan 15, 2014	Additional Comments Attached? ☐ Yes ☒ No			

PACKAGE CONTENTS

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Note: Listed documents that have **not yet** been issued **should** be attached (for example and as required, Walkdown Minutes; N-TMP-10209 "AFS Report"). Listed documents that **have** been issued **may** be attached (for example and as required, N-FORM-10007 "COMS Stakeholder Declaration").

Document #	Title	Attached? Y/N
N-FORM-10007	COMS Stakeholder Declaration (Detailed Design)	Y
NK38-DCS-79110-10003	Detailed Commissioning Specification, Tie-in to Inactive Plant Drainage (Roof/Condensate), Design EC 121579	N
NK38-CR-79110-10003	Commissioning Report: Tie-In to Inactive Plant Drainage Design EC 121579	N
NK38-REF-72100-0461590	N-FORM-11003, Code Classification/Registration Approvals and Exemptions	N
NK38-REF-72100-0461591	N-FORM-10971, Reconciliation Statement	N

SECTION B: DESIGN ISSUES

Issue	Yes/ No/NA	Description or Comments
1. If formal COMS was required by the Modification Outline, is N-FORM-10007 complete and has been signed by a representative of the responsible Design organization?	Yes	General Scoping COMS for Project held August 23, 2012. Detailed Design COMS held for Design EC 120643 on March 1, 2013; DEC 120643's scope was later split into DEC 120643 and DEC 121579 so one N-FORM-10007 addresses both ECs. All stakeholders have signed a version of the COMS form stating that it is only for DEC 121579.
2. Commissioning test results have been reviewed by the design engineer and the modification meets the modification performance requirements and intent?	Yes	NK38-CR-79110-10003 accepted. DESIGN I/C ACCPT milestone signed in passport.
3. MEL Equipment minor revision ready for launch?	NA	No existing equipment codes modified
4. Abandoned and Removed components identified to be statused as RETIRED and REMOVED as applicable?	NA	No equipment or components retired or removed.
5. Equipment Bills of Material are updated?	Yes	All equipment in listed in AEL and no new CATIDs required.
6. Commissioning Report written and accepted.	Yes	NK38-CR-79110-10003 was completed and accepted.
7. Pre-Start Health and Safety Review has been completed in accordance with Section 7, OHSA Reg. 851/2000?	NA	Pre-Start Health and Safety Review was not required in accordance with Master EC 118880.
8. Design verification of channelization and separation requirements for all ECs have been met?	NA	Modification does not impact any equipment with channelization and separation requirements.
9. All Pressure Boundary (PB) classification and registration processes (as required) are completed?	Yes	N-FORM-11003 (NK38-REF-72100-0461590) and N-FORM-10971 (NK38-REF-72100-0461591)

*Associated with N-PROC-MP-0090, Modification Process

ONTARIOPOWER GENERATION

Records File Information:
Life of Facility

OPG Proprietary

N-FORM-10091-R015*

Available For Service Declaration or Operations Acceptance Declaration

For **Available For Service (AFS)**, the Modification Team Leader (MTL) ensures the form and **all** signatures are completed.
For **Operations Acceptance**, MTL ensures Sections A through E are completed and signs in Section E. MTL also ensures Section F is completed, referring to Section F for signature instructions. Manager of Operations Production signs in Section G. Additional signatures are not required unless specified in the Operations Turnover Plan.

SECTION A: GENERAL	**Formal AFS:** ☒	**Operations Acceptance:** ☐	**Partial:** ☐	**Final:** ☒
Facility: DNGS	Unit: 0	Master EC No.: 119824	Rev.: 002	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number: NA			
Master EC Title:	0-38000-MASTER-PMOD FOR LPSW DISCHARGE LINE (SCI 72100), TIE-INS FOR MODERATOR & HTS D2O SUPPLY (SCI 38110) & RELOCATIONS OF TRF BULK GAS SYSTEMS (SCI 75510, 75550, 67550)			
Design EC No.(s) and Rev included in Walkdown:	122210 Rev 006			
List of Walkdown Participants: (include Name and Department)	Rahul Nandi - RCM MTL Stephen Tutsch - RCM MTL Carmen Costache - RCM DTL Rob Stark - Constructor Nicole Go - OPG SRE Katherine Liao - OPG SRE Glen Barton - OPG OPS John Taylor - OPG Maintenance			
Date of Walkdown: April 11, 2014	Additional Comments Attached? ☐ Yes ☒ No			

PACKAGE CONTENTS

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Document #	Title	Attached? Y/N
NK38-CR-75550-10002	COMMISSIONING REPORT: RELOCATION OF ARGON TANK AND LINE	N
NK38-REP-75550-10001	AFS REPORT: ARGON TANK AND LINE RELOCATION	N

*Associated with N-PROC-MP-0090, Modification Process

ONTARIO POWER GENERATION

Records File Information:
Life of Facility

OPG Proprietary

N-FORM-10091-R014*

Available For Service Declaration or Operations Acceptance Declaration

For **Available For Service (AFS)**, the Modification Team Leader (MTL) ensures the form and **all** signatures are completed.
For **Operations Acceptance**, MTL ensures Sections A through E are completed and signs in Section E. MTL also ensures Section F is completed, referring to Section F for signature instructions. Manager of Operations Production signs in Section G. Additional signatures are not required unless specified in the Operations Turnover Plan.

SECTION A: GENERAL	**Formal AFS:** ☒	**Operations Acceptance:** ☐	**Partial:** ☐	**Final:** ☒
Facility: Darlington NGS	Unit: 0	Master EC No.: 119824	Rev.: 002	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number: N/A			
Master EC Title:	0-38000-MASTER-PMOD FOR LPSW DISCHARGE LINE (SCI 72100), TIE-INS FOR MODERATOR & HTS D20 SUPPLY (SCI 38110) & RELOCATIONS OF TRF BULK GAS SYSTEMS (SCI 75510, 75540, 75550, 67550)			
Design EC No.(s) and Rev included in Walkdown:	124052 R003			
List of Walkdown Participants: (include Name and Department)	See NK38-CORR-75540-0494524			
Date of Walkdown: NA	Additional Comments Attached?	☐ Yes	☒ No	

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Note: Listed documents that have **not yet** been issued **should** be attached (for example and as required, Walkdown Minutes; N-TMP-10209 "AFS Report"). Listed documents that **have** been issued **may** be attached (for example and as required, N-FORM-10007 "COMS Stakeholder Declaration").

Document #	Title	Attached? Y/N
NK38-REP-75540-10003	AFS Report: Relocation of Helium Supply Line	N
NK38-CR-75540-10001	Commissioning Report: Relocation of Helium Line	N

SECTION B: DESIGN ISSUES

Issue	Yes/ No/NA	Description or Comments
1. If formal COMS was required by the Modification Outline, is N-FORM-10007 complete and has been signed by a representative of the responsible Design organization?	Yes	Formal COMS has been completed. N-FORM-10007 has been signed by all appropriate stakeholders.
2. Commissioning test results have been reviewed by the design engineer and the modification meets the modification performance requirements and intent?	Yes	Commissioning Test Results have been reviewed by the DE. Modification meets the performance requirements and intent. DSGN I/C Accept Milestone - April 15, 2014
3. MEL Equipment minor revision ready for launch?	NA	No equipment tags affected as part of this design EC.
4. Abandoned and Removed components identified to be statused as RETIRED and REMOVED as applicable?	Yes	Portion of original piping was cut, capped and abandoned in place.
5. Equipment Bills of Material are updated?	NA	There is no impact to EBOM.
6. Commissioning Report written and accepted.	Yes	NK38-CR-75540-10001 has been written and OPG Accepted.
7. Pre-Start Health and Safety Review has been completed in accordance with Section 7, OHSA Reg. 851/2000?	NA	No PSR required.
8. Design verification of channelization and separation requirements for all ECs have been met?	NA	Modification does not impact any equipment with channelization & separation requirements.
9. All Pressure Boundary (PB) classification and registration processes (as required) are completed?	Yes	All PB classification and registration requirements are addressed as part of Design EC.
10. On-line Wiring is Statused as Currently Built?	NA	No impact to OLW.
11. Air Supply List (ASL) update completed, or if appropriate, update in progress?	NA	No impact to ASL.
12. Power Supply List (PSL) update completed, or if appropriate, update in progress?	NA	No impact to PSL.
13. EQ Completion Assurance is complete in accordance with N-GUID-03651-10000, Guide to Environmental Qualification Completion Assurance?	NA	EQ Completion Assurance is not required for this modification as there is no impact to EQ.

*Associated with N-PROC-MP-0090, Modification Process

ONTARIOPOWER GENERATION

Records File Information:
Life of Facility

OPG Proprietary

N-FORM-10091-R014*

Available For Service Declaration or Operations Acceptance Declaration

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SECTION A: GENERAL	Formal AFS: ☐	Operations Acceptance: ☒	Partial: ☒	Final: ☐
Facility: DNGS	Unit: 0	Master EC No.: 119824	Rev.: 002	
Temporary Modification? Yes ☐ No ☒	If Temporary Modification, enter TCR number:			
Master EC Title:	0-38000-MASTER-PMOD FOR LPSW DISCHARGE LINE (SCI 72100), TIE-INS FOR MODERATOR & HTS D2O SUPPLY (SCI 38110) & RELOCATIONS OF TRF BULK GAS SYSTEMS (SCI 75510, 75540, 75550, 67550)			
Design EC No.(s) and Rev included in Walkdown:	120670 R00 - This partial AFS constitutes the installation and commissioning of the Argon Tank Instrumentation and Cabling design			
List of Walkdown Participants: (include Name and Department)	Stephen Tutsch - RCM Rahul Nandi - RCM Glen Barton - OPG Nicole Go - OPG Rob Stark - B&M			
Date of Walkdown: April 11, 2014	Additional Comments Attached? ☐ Yes ☒ No			

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Document #	Title	Attached? Y/N
N-FORM-10007	COMS STAKEHOLDER DECLARATION / ISSUES REPORT	Y
NK38-CR-67550-10001	COMMISSIONING REPORT: RELOCATION OF ARGON LINE AND INSTRUMENTATION	~~Y~~ N S.T

153984 Issued in Asset suite May 7/2014

SECTION B: DESIGN ISSUES

Issue	Yes/ No/NA	Description or Comments
1. If formal COMS was required by the Modification Outline, is N-FORM-10007 complete and has been signed by a representative of the responsible Design organization?	Yes	General Scoping COMS for Project held August 23, 2012. Detailed Design COMS held for Design EC 120670 on June 20th, 2013; COMS declaration signed by RCM Design and OPG Refurbishment Design.
2. Commissioning test results have been reviewed by the design engineer and the modification meets the modification performance requirements and intent?	Yes	DSGN I/C ACCEPT milestone signed off by designer
3. MEL Equipment minor revision ready for launch?	NA	No existing equipment codes modified.
4. Abandoned and Removed components identified to be statused as RETIRED and REMOVED as applicable?	NA	No equipment abandoned in the field. Components were removed per Waste Management Plan 48070014-WMP
5. Equipment Bills of Material are updated?	NA	Modification does not impact an EBOM
6. Commissioning Report written and accepted.	Yes	NK38-CR-67550-10001 has been written and accepted. AR to track issuance in PassPort
7. Pre-Start Health and Safety Review has been completed in accordance with Section 7, OHSA Reg. 851/2000?	NA	Pre-start health and safety review was not required in accordance with Master EC 119824
8. Design verification of channelization and separation requirements for all ECs have been met?	NA	The cables in DEC 120670 are control cables which are on the same channel (channel B). No separation requirements in design.
9. All Pressure Boundary (PB) classification and registration processes (as required) are completed?	NA	This modification does not impact any pressure boundary components

*Associated with N-PROC-MP-0090, Modification Process