

2017/18 & 2018/19 ELECTRIC GENERAL RATE APPLICATION**Manitoba Hydro Undertaking #60**

Mr. Bowen to provide a copy of the most recent monthly report that Mr. Bowen received that you've just talk to the Panel about. (TAKEN UNDER ADVISEMENT)

Response:

Please find attached the Monthly Construction Report dated December 2017 provided to the KHLP for public distribution.



Keyyask Generating Station
Keyyask Hydropower Limited Partnership
Monthly Construction Report
December 2017



View of structural steel progress on Powerhouse Units 1 to 3

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Executive Summary

Generating Station

The winter concrete continued until December 16. Work progresses on Unit 1 draft tube liner installation. The welding of joints was completed between the liner sections. The liner will be moved into the service bay. The contractor is working on the schedule for the second unit draft tube liner. Shut down for the holiday break was from December 19. Activity will ramp up again on January 4th.

Infrastructure

Work proceeded on the main camp expansion as new dormitories were installed to account for an anticipated higher peak employment in 2018. Water and sewer service is being hooked up to the dormitories.

Transmission Complex

The contract for the switching station has been recommended for award. The selected contractor should be mobilizing in February, after pre construction meetings. The transmission lines are under construction with foundations and towers proceeding.

Schedule

Overview

This month 2 milestones has been achieved, "Service Bay Enclosed" and "PH1 Superstructures, roofing & Cladding complete".

There are 3 critical paths that are being closely monitored that include concrete, earthworks, and the balance of plant.

Concrete work continues in the Powerhouse complex. A total of 31 placements totaling 3,316 m³ have been completed against the plan of 1,179m³. The project is on track to meet its goal for enclosure of Units 2, and 3 for February 2018. The Winter Work Plan, referred to as the "Full Throttle +10%" has been incorporated into the current schedule. Detailed planning for the winter work is ongoing. This performance continues to be closely monitored as it will impact the critical path.

The last concrete for the month was placed on Dec 16, 2017 before the shutdown for holidays.

During December, a total of 65,726m³ of excavation was done on South Dyke against the plan to 65,800m³. And 25,685m³ of fill has been placed in South Dyke against the plan of 65,000m³.

Spillway Gate Guides and Hoist Contractor CANMEC continued with the installation of Guides in the Spillway.

Turbine and Generator Contractor VOITH continued with the assembly of first Draft Tube inside the warehouse.

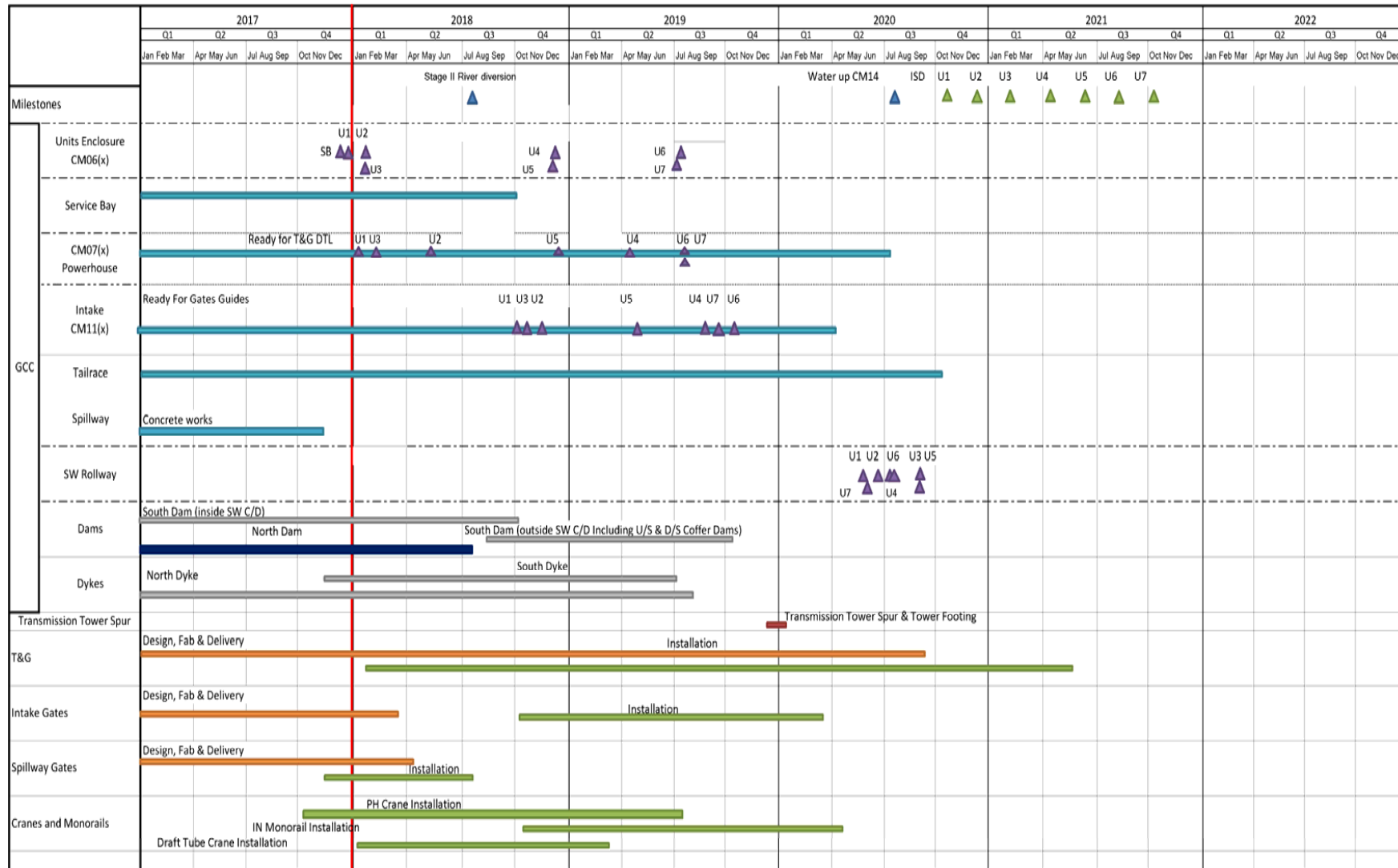
Embedded Balance of Plant work continues as concrete is placed. Planning for exposed Balance of Plant installations are underway.

Site was shutdown, except for primary services, on Dec 19, 2017 for the holidays.

Construction Schedule Overview – December, 2017

KEYASK LEVEL I SCHEDULE

December-2017

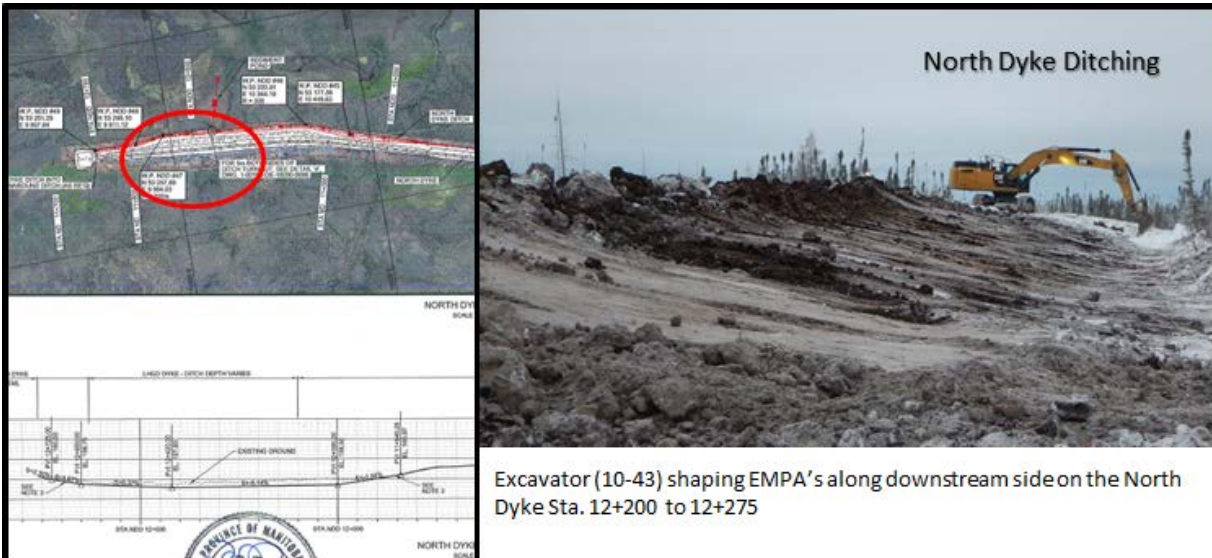


Contract Summary

Keyask Generating Station – General Civil Works 016203:

North Dyke

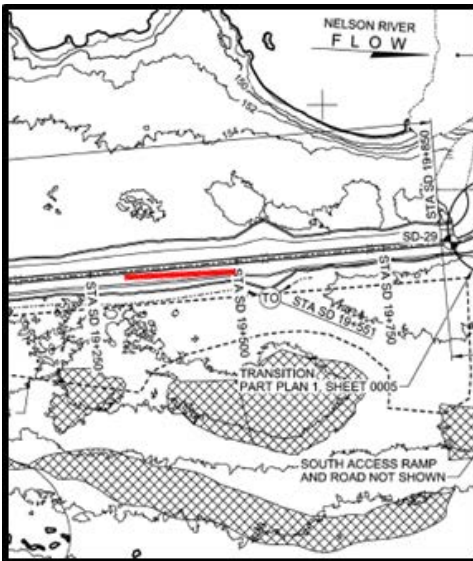
The Contractor completed ditch and sediment pond excavation at the North Dyke and completed shaping of several Excavated Material Placement Areas (EMPAs) along the dyke.



South Dyke

The Contractor dragged winter roads for access along the South Dyke alignment. The Zoned Impervious Core Dyke (ZICD) section between Sta. SD 19+380 to 19+600 was excavated and the first lifts of Class 6 rockfill were placed once suitable foundation was exposed. A total of 45,000 m³ of unclassified material was excavated and 15,000 m³ of rockfill was placed in December.

Construction of a winter access road to the Ellis Esker granular borrow source was ongoing by Iron North in December, including clearing and dragging the right-of-way, and flooding of a creek crossing.



Dozer (05-23) placing Class 6 material that is being hauled in by 773 haul trucks from Quarry Q1. Sta. SD 19+425 to SD 19+405



Ellis Esker Development

Dozers continued dragging roadway towards to Ellis Esker between Sta. 0+000 to approximately 5+700

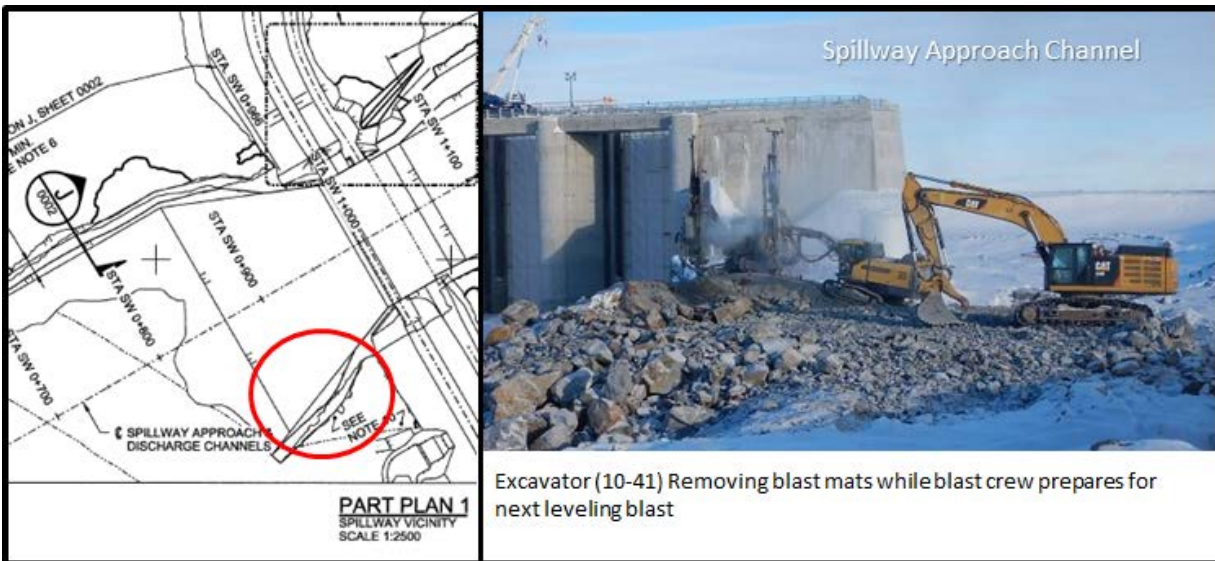
PEW-075: Mitigation Measures Material Supply

The Contractor hauled rockfill, riprap, and granular materials to stockpiles at the North Dyke and the upstream and downstream boat launches. The stockpiles will be used for construction by others in 2018.



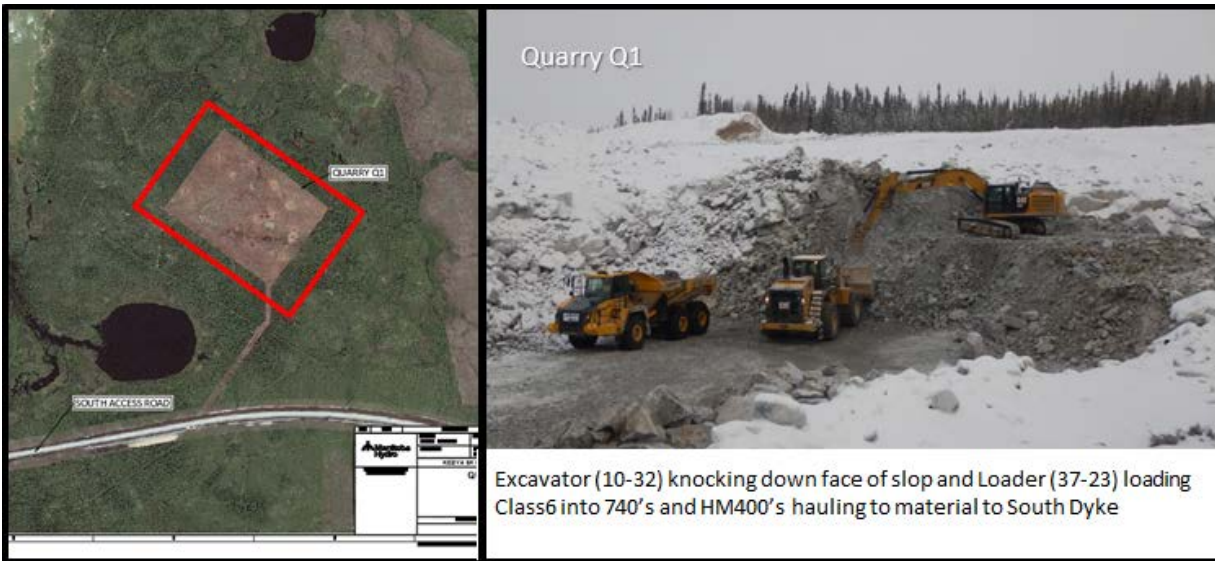
Rock and Unclassified Excavation

Rock excavation (micro-blasting) commenced in the Spillway Approach Channel, with the salvaged blast rock hauled to the Central Dam Re-alignment. Approximately one week of blasting remains to be completed in January 2018.



Quarry Development

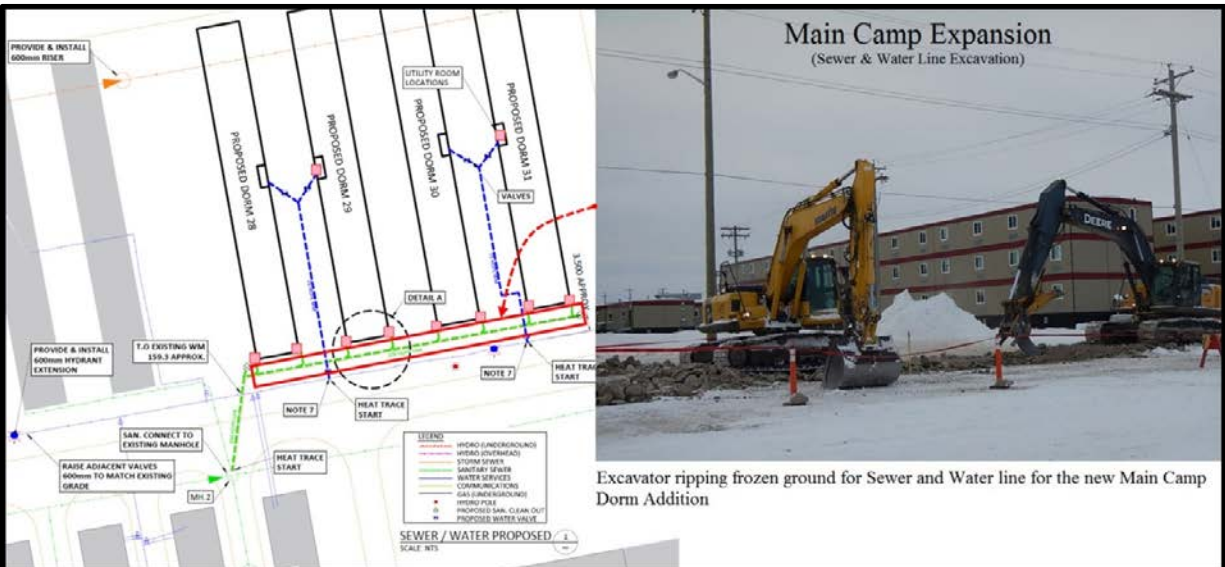
One blast was completed in December at Quarry Q1 on the south side of the river to produce rockfill for site development and South Dyke fill placement. The crusher was mobilized to the south side of the river and re-assembled to provide Class 4 filter material for South Dyke construction. Crushing operations began in mid-December.



Excavator (10-32) knocking down face of slop and Loader (37-23) loading Class6 into 740's and HM400's hauling to material to South Dyke

Main Camp Expansion

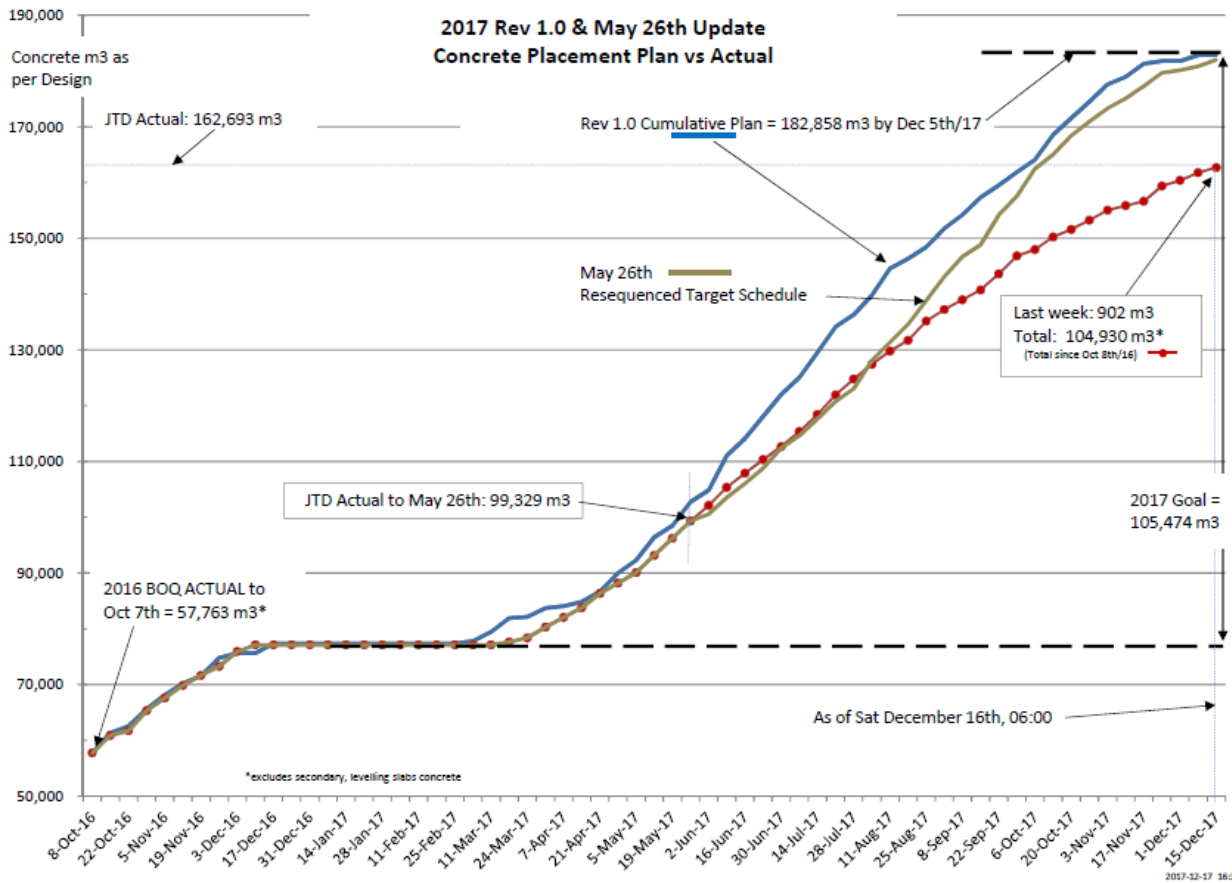
Gravity sewer line, sewer tie-ins, and potable water service were installed for Dorms 28 and 29. The water line and sewer service to Dorms 30 and 31 will be completed in early January 2018.



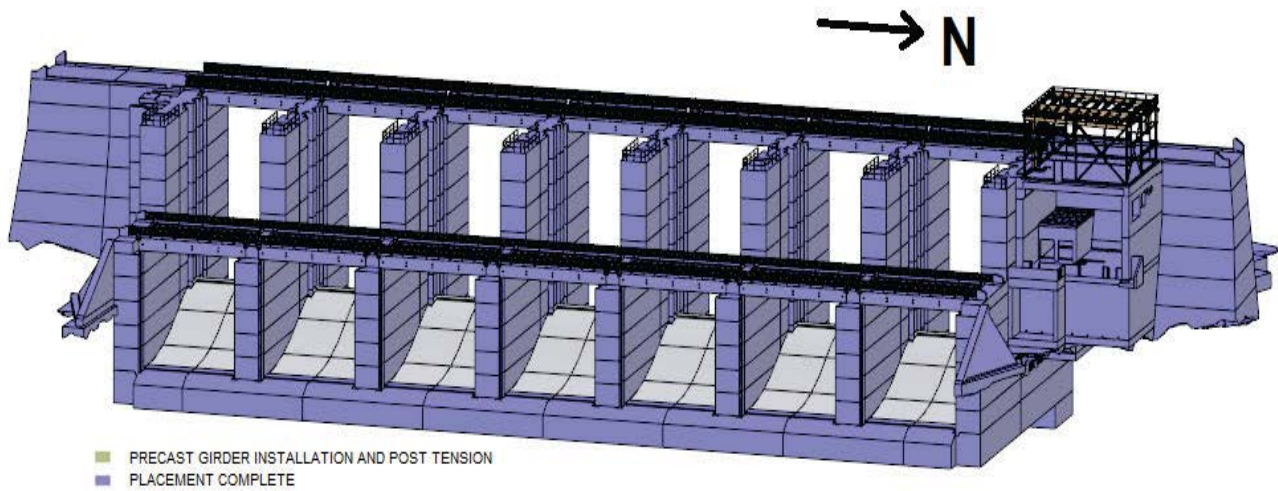
Excavator ripping frozen ground for Sewer and Water line for the new Main Camp Dorm Addition

Structures Quantities

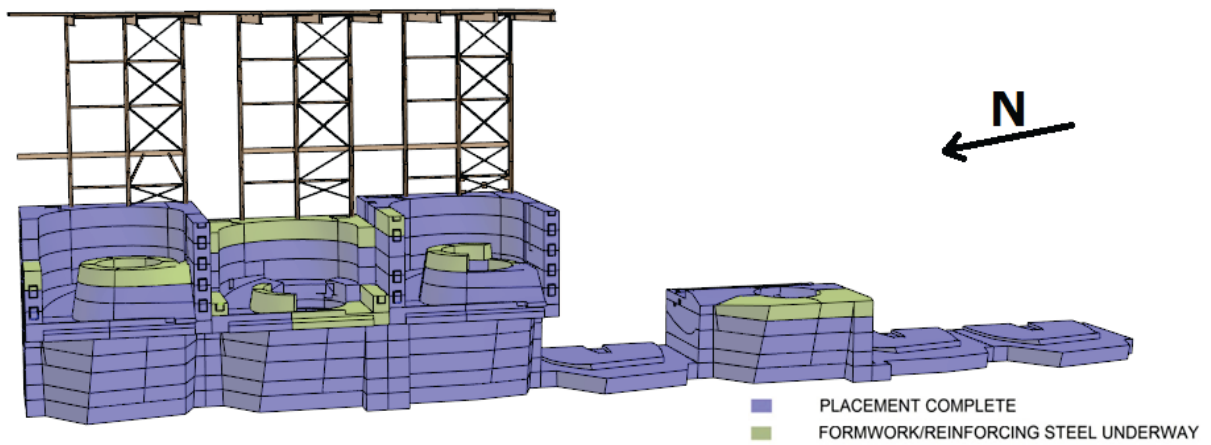
Structure	Finish Date	2017 Plan (Cubic Meter)	December 2017 Plan	Actual (Cubic Meter)	2017 Actuals
Powerhouse	14-Jul-20	32,997	813	2146	26,205
Intake	19-Oct-19	28,674	366	1044	18,453
Service Bay	18-May-18	11,623	0	126	17,456
Spillway	15-Nov-17	13,451	0	0	23,127
Tailrace	24-Jul-20	5,370	0	0	424
Transitions	15-Jun-19	13,359			
Total		105,474	1,179	3,316	85,665



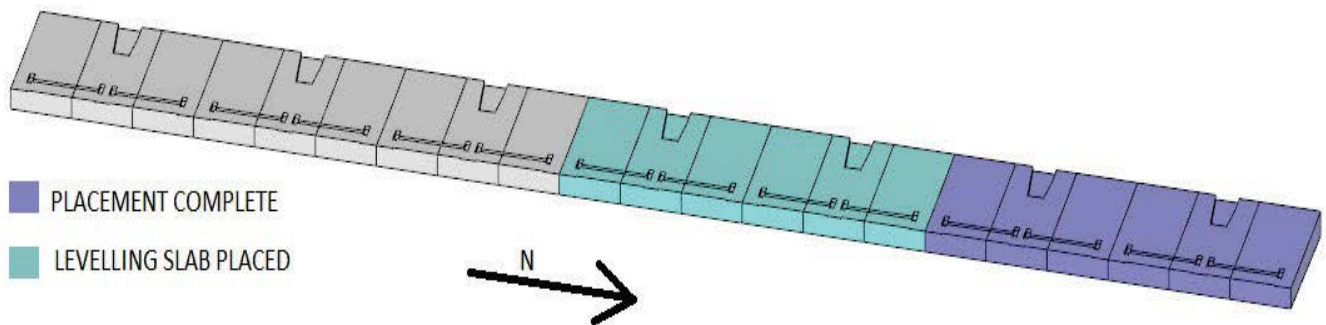
Spillway Concrete Structure



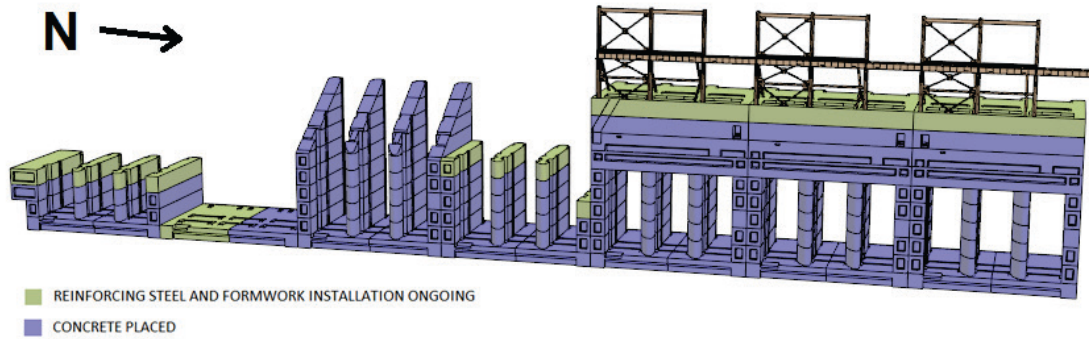
Powerhouse Concrete Structure



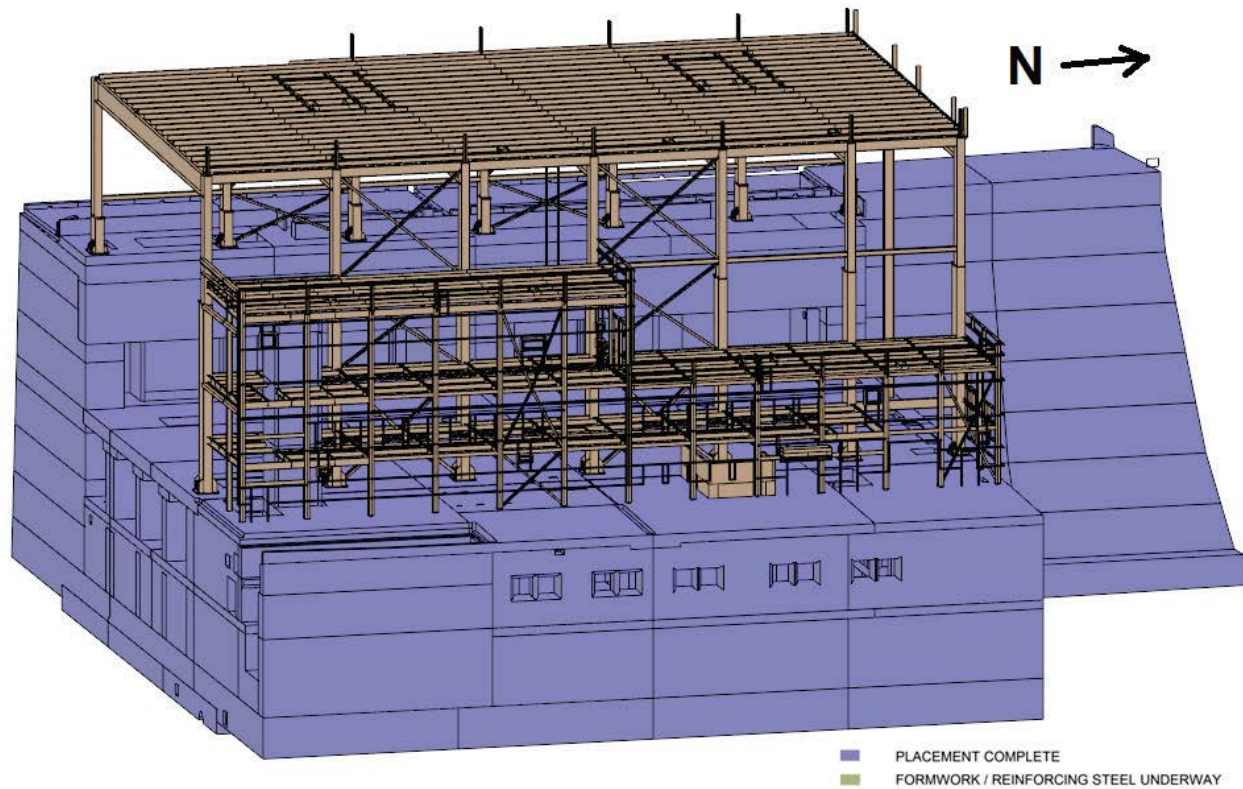
Tailrace Concrete Structure



Intake Concrete Structure



Service Bay Concrete Structure



Fox & York Keyask Joint Venture – Employee Retention and Support Services (ERS) 016124:

Aboriginal Awareness Training:

Refer to the Workplace Culture section for details of the Aboriginal Awareness Training (AAT).

KCN Site Member Orientation:

There was no KCN orientation sessions conducted for the month.

Counseling:

Contractor was unable to provide stats at the time of reporting.

Ceremonies:

There were two sweat lodge ceremonies held at the Keeyask Cultural Grounds (for both day and night shift workers).



Preparing Grandfather Stones for Sweat Lodge Ceremony

Keyyask Emergency Medical and Ambulance Services (EMS) Joint Venture 016125:

Keyyask workers seeing EMS staff for medical assistance.

Period	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Total
2015/16	288	232	133	219	232	255	387	363	231	311	358	363	3372
2016/17	455	486	618	652	665	621	640	602	302	291	390	562	6284
2017/18	608	704	670	904	718	718	845	854	447				6468

Forebay Clearing 016206

Amisk mobilized to site and began working on winter roads to access remaining clearing areas.

PR 280 (MI):

Manitoba Hydro depends on Provincial Road (PR) 280 to transport the project workforce, equipment, and materials to site. A number of initiatives are underway to help the province upgrade and maintain the road through peak phases of construction. Nevertheless, community concerns remain regarding project traffic, safety, and road conditions, in particular, speeding, truck weights, convoys, and dust. Manitoba Hydro continues to assess and implement several initiatives to reduce the impacts of project traffic on PR 280 and PR290. These include:

- road reconstruction and increased maintenance efforts
- monitoring weather and road conditions in consultation with Manitoba Infrastructure
- pre-hauling of construction materials to site during winter
- night hauling (not required to date)
- reductions in Manitoba Hydro truck weights (not required to date) and truck traffic when the road has significantly deteriorated
- operation of the Provincial Trunk Highway (PTH 6) weigh station
- contracting with Iron North to hire a Tataskweyak Cree Nation (TCN) community member to monitor road conditions and traffic behavior

- increased communications with staff, contractors, and other road users to provide an awareness of the initiatives being undertaken to improve road conditions and safety including a PR 280 and 290 web page on the corporate external [website](#)

Maintenance Activities

Manitoba Infrastructure continued to perform routine winter maintenance to the end of November. Beginning December 1 winter maintenance operations will only occur on an as needed basis until spring, 2018. The gravelling and calcium program is complete and will resume again in the spring of 2018. All spot grade improvements on PR 280 were completed by late October.

Construction Activities

Km 53 to 73: Manitoba Infrastructure awarded a contract for culvert replacements on October 24th to Smook Contractors Ltd. Work commenced in late November. The Contract required the installation of thirty two (32) thru grade pipes to be replaced or placed. Smook shut down for Christmas break on December 19th and they plan to return to the project on January 2, 2018. At the time of their Christmas break, they had successfully completed 27 of the 32 installations required in the contract.

The design and tender for the grade construction project from KM 53 to 73 is at the final review stage and has been submitted to MI Contracts Branch for advertisement by the end of this month. The estimate for this work is approximately 14 M.

Km 73 to 85: Work shut down for the season in early November. Trimming, seeding, erosion control measures, and 1 km of A-base will be completed when reconstruction resumes in 2018.

Km 85 to 105: Road reconstruction was completed in mid-October.

Manitoba Infrastructure is planning to continue with the reconstruction of additional sections of PR 280 between km 73 and km 45 in upcoming years. These upgrades will be cost shared between Manitoba Infrastructure and Manitoba Hydro.

Weigh Station

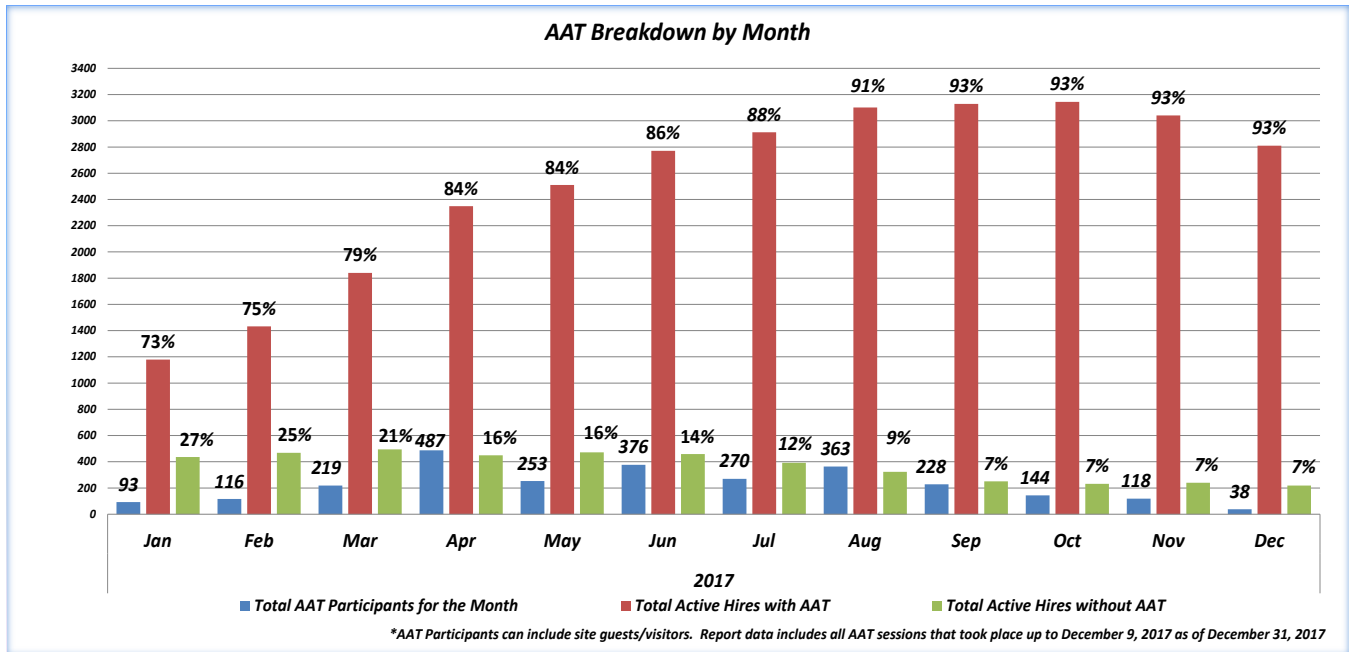
As of November 24th at 6:00pm, the station reverted to intermittent operation in conjunction with Manitoba's Winter Seasonal Weight Program which permits higher than normal weights on roads when the roadbed is frozen. The regional Motor Carrier Enforcement Officer will continue to monitor traffic, conduct inspections, and issue warnings and common offence notices. Carriers will not be required to submit a scale ticket at Manitoba Hydro project sites until full-time operation resumes in the spring.

During the last week of operation in late November, a mechanical failure with the scale prevented staff from weighing trucks. Options for the required repairs are currently being assessed and the hope is a plan of required action will be decided by the end of January 2018.

Workplace Culture

Aboriginal Awareness Sessions

Fewer participants attended in December but the relative participation is staying constant above 90%.

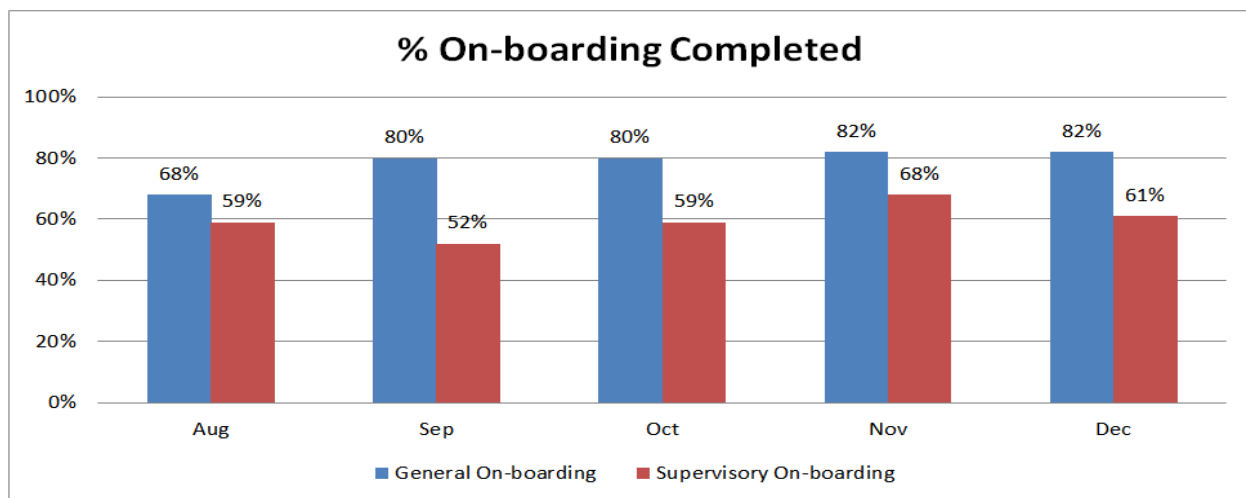


On-boarding Training Stats

General On-boarding:

The general completion rate is hold constant for staff at 82% this month. Supervisory staff dropped 7% relative to the previous month.

December 2017	All Staff *	Supervisory Staff
Staff at site	3008	541
Attended required On-boarding	2456	331
Has not attended required On-boarding	552	210
% complete	82%	61%



BBE Supervisory Training – PARC Program (Prairie Arctic Regional Council)

Foreman training is at 61%. In general the training rate for supervisors is in the mid 60% range on a monthly basis. There was a drop from November of 6%.

BBE General Foreman & Foreman Training

December 2017	Staff
General Foreman & Foreman currently at site	347
Attended training & currently at site	216
Has not attended training	131
% complete	61%

Site Activities

Total Project Hires

The table below provides a breakdown of the total Project hires by indigenous persons and by residency. This includes all hires to the Future Development/Implementation offices and on environmental and construction contracts from June 1, 2009 to December 31, 2017.

KEYYASK PROJECT EMPLOYMENT												
*BREAKDOWN OF TOTAL HIRES - December 2017												
Contract Number	Contract Description	Total Hires	Total Project Hires - June 1, 2009 to December 31, 2017									
			by Indigenous Persons				by Residency					
			KCN	% of Total Hires	Other Indigenous	% of Total Hires	Non-Indigenous	% of Total Hires	Manitobans	% of Total Hires	Non-Manitobans	% of Total Hires
Manitoba Hydro & Consultant Employees Totals (Pre-Construction)		43	<5	<1%	9	21%	34	79%	42	98%	<5	2%
Future Development - Transition (Pre-Construction) Totals		82	82	100%	<5	<1%	<5	<1%	82	100%	<5	<1%
016050	Future Development - FLCN	<5	<5	100%	<5	<1%	<5	<1%	<5	100%	<5	<1%
016052	Future Development - YFFN	8	8	100%	<5	<1%	<5	<1%	8	100%	<5	<1%
016053	Future Development - CNP	5	5	100%	<5	<1%	<5	<1%	5	100%	<5	<1%
Future Development - Implementation (Construction) Totals		16	16	100%	<5	<1%	<5	<1%	16	100%	<5	<1%
Environmental Licensing, Planning & Pre-Construction Monitoring Totals		424	243	57%	6	1%	175	41%	414	98%	10	2%
PR280 - Infrastructure Upgrade Totals		53	20	38%	7	13%	26	49%	48	91%	5	9%
Keeyask Infrastructure Project (KIP) Totals		1765	501	28%	530	30%	734	42%	1635	93%	130	7%
000000	Construction Management (Manitoba Hydro & Consultants)	220	18	8%	18	8%	184	84%	176	80%	44	20%
016121	Catering and Janitorial DNC (Part 2)	1442	1262	88%	109	8%	71	5%	1384	96%	58	4%
016122	Provision of Maintenance Services DNC (Part 2)	189	115	61%	28	15%	46	24%	180	95%	9	5%
016123	Provision of Security Services DNC (Part 2)	146	20	14%	32	22%	94	64%	145	99%	<5	1%
016124	Employee Retention and Support DNC (Part 2)	21	13	62%	8	38%	<5	<1%	21	100%	<5	<1%
016125	Provision of Emergency Medical and Ambulance Services DNC (Part 2)	210	7	3%	46	22%	157	75%	210	100%	<5	<1%
016127	Main Camp Facility (Phase 2/Phase 2 EWO)	558	18	3%	133	24%	407	73%	469	84%	89	16%
016132	MH and Contractor Work Area Site Development Installation DNC	73	25	34%	31	42%	17	23%	71	97%	<5	3%
016153	South Access Road DNC	465	203	44%	148	32%	114	25%	426	92%	39	8%
016180	Nurse Practitioners	7	<5	<1%	<5	<1%	7	100%	6	86%	<5	14%
016203	General Civil Contract (GCC)	6880	412	6%	1697	25%	4771	69%	3757	55%	3123	45%
016206	Forebay Clearing DNC	493	262	53%	101	20%	130	26%	385	78%	108	22%
016304	Spillway Gates Guides and Hoists	139	<5	1%	40	29%	97	70%	80	58%	59	42%
016321	Turbines and Generators	15	<5	7%	<5	13%	12	80%	10	67%	5	33%
Various	Environmental Mitigation and Monitoring (Construction)**	128	37	29%	<5	<1%	91	71%	109	85%	19	15%
Keeyask Generating Station (GS) Totals		10986	2395	22%	2393	22%	6198	56%	7429	68%	3557	32%
016601	Keeyask Construction Power Station Site Civil Construction DNC	104	54	52%	15	14%	35	34%	93	89%	11	11%
016602	Keeyask Construction Power 138 kV TL and GOT Lines Clearing	92	19	21%	40	43%	33	36%	82	89%	10	11%
016604	Keeyask Construction Power Station	9	<5	11%	<5	22%	6	67%	9	100%	<5	<1%
016613	Keeyask Switching Stations (KR2 KR3 KE1 KE2 KE3 KE4)	151	15	10%	49	32%	87	58%	89	59%	62	41%
039447	Keeyask Radisson 138kV TL (KR1) Construction Project DNC	164	32	20%	73	45%	59	36%	123	75%	41	25%
243735E	Keeyask Transmission Facilities - Licensing & Environment	7	<5	43%	<5	<1%	<5	57%	7	100%	<5	<1%
Keeyask Transmission Totals		527	124	24%	179	34%	224	43%	403	76%	124	24%
TOTAL KEYYASK PROJECT EMPLOYMENT		13896	3381	24%	3124	22%	7391	53%	10069	72%	3827	28%

*Data as entered by contractors into the Construction Employee Database (CED) to: January 10, 2018

**Includes all environmental mitigation & monitoring contracts

Completed contracts.

016132 MH and Contractor Work Area Site Development Installation DNC reopened with EWO August 2017.

Indigenous refers to Indian, Inuit or Metis Peoples of Canada including status, treaty or registered persons as well as non-status and non-registered people.

Indigenous Hires by Community

The table below indicates the number of indigenous people hired to work on the Keeyask Project. These include people hired in the Future Development/Implementation offices, and on environmental and construction contracts. The table gives a breakdown of total hires, individual hires, and active hires.

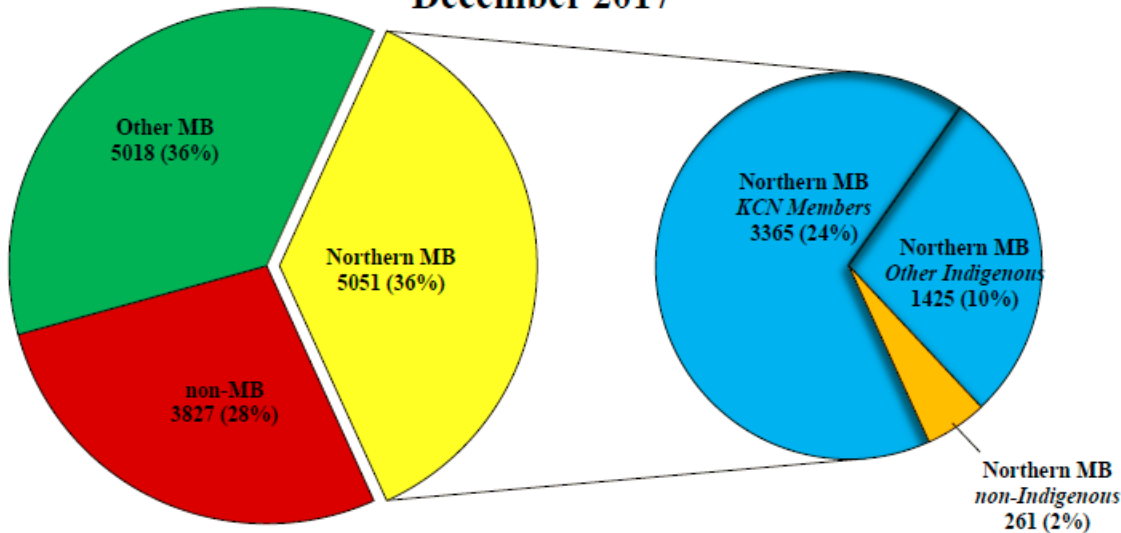
Breakdown of Indigenous Hires by Community/Group			
Community/Group	Total Hires*	Individuals Hired**	Active Hires***
Fox Lake Cree Nation	505	213	52
Tataskweyak Cree Nation	2040	781	219
War Lake First Nation	238	78	25
York Factory First Nation	598	270	109
Barren Lands First Nation	29	10	<5
Berens River First Nation	13	7	<5
Birdtail Sioux First Nation	<5	<5	<5
Bloodvein First Nation	6	<5	<5
Brokenhead Ojibway Nation	12	6	<5
Buffalo Point First Nation	<5	<5	<5
Bunibonabee Cree Nation (Oxford House)	29	13	<5
Chemawawin First Nation	10	5	<5
Dakota Plains First Nation	<5	<5	<5
Dakota Tipi First Nation	<5	<5	0
Dauphin River First Nation	7	<5	<5
Ebb and Flow First Nation	9	5	<5
First Nation Located Outside of Manitoba	226	151	51
Fisher River Cree First Nation	63	30	8
Garden Hill First Nation	7	6	<5
God's Lake First Nation	42	22	8
Hollow Water First Nation	8	7	<5
Inuit	7	<5	0
Keeseekoowewin First Nation	<5	<5	<5
Kinonjeostegon First Nation (Jackhead)	<5	<5	<5
Lake Manitoba First Nation	15	8	<5
Lake St. Martin First Nation	8	5	<5
Little Black River First Nation	<5	<5	<5
Little Grand Rapids First Nation	5	<5	0
Little Saskatchewan First Nation	6	<5	<5
Long Plain First Nation	13	10	<5
Manto Sipi Cree Nation (God's River)	<5	<5	<5
Marcel Colomb First Nation	<5	<5	<5
Mathias Colomb First Nation	37	19	6
Métis	1095	608	239
Misipawistick Cree Nation (Grands Rapids)	35	21	6
Mosakahiken Cree Nation (Moose Lake)	54	27	<5
Nisichawayasihk Cree Nation (Nelson House)	174	106	24
Non-Status	111	74	24
Northlands Dene First Nation	29	15	6
Norway House Cree Nation	177	67	27
Ochi-Chak-Ko-Sipi First Nation	7	<5	<5
Opaskwayak Cree Nation	149	78	22
O-Pipon-Na-Piwin Cree Nation	30	21	6
Peguis First Nation	72	36	13
Pimicikamak Cree Nation (Cross Lake)	268	140	57
Pinaymootang First Nation	71	37	10
Pine Creek First Nation	49	25	11
Poplar River First Nation	<5	<5	<5
Rolling River First Nation	<5	<5	<5
Roseau River Anishinabe First Nation	5	5	<5
Sagkeeng First Nation (Fort Alexander)	39	26	12
Sandy Bay First Nation	9	7	<5
Sapotaweyak Cree Nation	59	22	8
Sayisi Dene First Nation (Tadoules Lake)	26	11	6
Shamattawa First Nation	<5	<5	0
Sioux Valley Dakota Nation	<5	<5	0
Skownan First Nation	50	17	<5
St. Theresa Point First Nation	<5	<5	<5
Swan Lake First Nation	7	5	<5
Tootinaowaziibeeng First Nation (Valley River)	<5	<5	0
Wasagamack First Nation	7	<5	<5
Waywayseecappo First Nation	6	<5	<5
Wuskwi Sipi First Nation	5	<5	0
Total Indigenous	6505	3053	1011
Total Non-Indigenous	7391	5064	2202
Total	13896	8117	3213

*Total Hires - the number of people hired to work on the Project. This includes re-hires.

**Individuals Hired - the number of individual people hired to work on the Project. This number does not include re-hires. (ie. One individual can count as multiple hires in Total Hires)

***Active Hires - the number of people active (not separated) on the project in the report month.

Keeyask Project Breakdown of Total Hires* December 2017



Total Hires between June 1, 2009 to December 31, 2017 = 13,896
Total Indigenous Hires = 6,505 (47% of Total Hires)

**Data as entered by contractors into the Construction Employee Database (CED) to January 10, 2018
**KCN members living outside of Manitoba are not included in Northern MB KCN Members total.*

Between June 1, 2009 and December 31, 2017, there have been a total of 13,896 hires to the Keeyask Project. Of the total hires:

10,069 (72%) are Manitobans (36% are Northern Manitobans);
6,505 (47%) have declared being indigenous persons; and,
3,381 are KCN members (24% of the total hires and 52% of the indigenous hires).

In December 2017, there were 3,213 active hires on the Keeyask Project. Of the active hires:
1,767 (55%) are Manitobans (22% are Northern Manitobans);
1,011 (31%) have declared being indigenous persons; and,
405 are KCN members (13% of the total hires and 40% of the indigenous hires).

The workforce on-site, on the 15th of the reporting period was 1539.

Active Hires on Generating Station Contracts

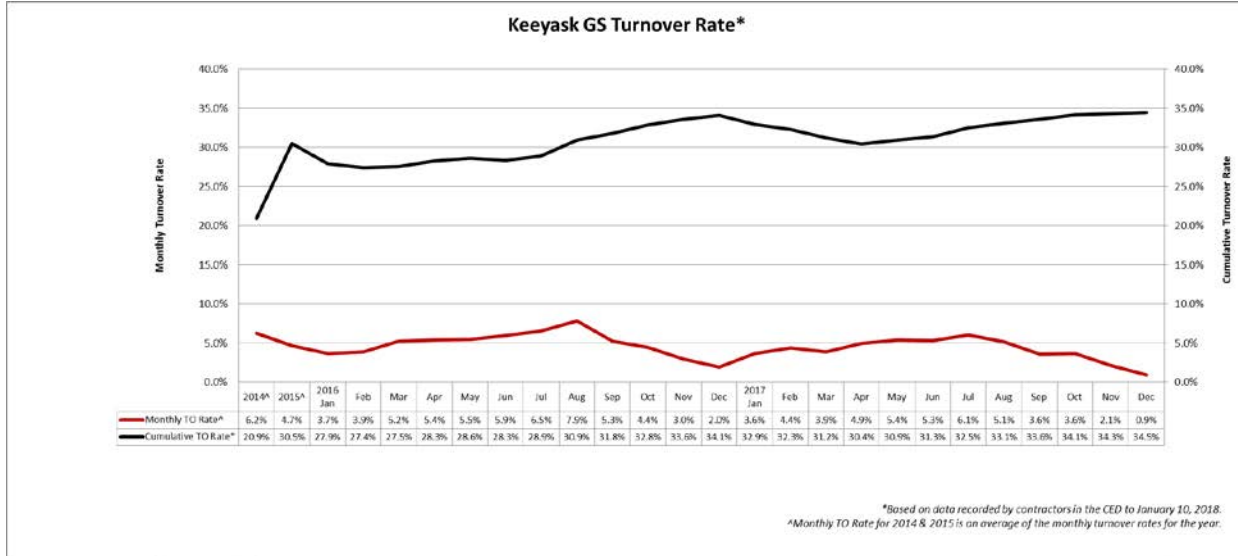
During the report month, 3,031 of the 3,213 active hires were working on Generating Station (GS) contracts. 1,446 (45%) of the active hires were non-Manitobans; additionally, the rolling 6 month average for non-Manitobans remained at 46%. Of the active hires, 72% are working in craft positions and 28% are working in staff and supervisory positions. The rolling 6 month average for craft hires remained at 75% and at 25% for staff and supervisory hires.

A total of 924 (30%) of the active hires declared being indigenous persons; additionally, the number of active indigenous hires (both KCN and others) has increased over the past 6 months (from 1,015 to 924). The rolling 6 month average for active indigenous hires remained at 30%, and remained at 70% for active non-indigenous hires.

Generating Station Turnover Rate

Turnover is calculated as total incidents of discharges and resignations divided by total hires. It does not include layoffs or transfers to other positions or contracts. Resignations represent all situations where an individual chooses to leave a job. The turnover calculation does not include hires or separations to EMS or environmental contracts, as the hiring and works scheduling practices for these contracts can misrepresent the true turnover rate.

Since the start of construction, the cumulative turnover rate on Generating Station (GS) contracts is 34.5%. For the month of December, the turnover rate is 0.9%, which is 2.7% less than the rolling average rate experienced over the last six months of 3.6%. It should be noted that December's turnover rate is expected to change as contractors continue to submit employee separation data for the month.



The figures below illustrate the number of active hires in each month. Figure 1 illustrates the breakdown of active hires by indigenous persons. Figure 2 illustrates the breakdown of active hires by residency.

These numbers include all active hires on the Project, including those working in the Future Development/Implementation offices, on environmental contracts and on construction contracts related to the generating station, the construction power station, and the transmission line.

Figure 1:

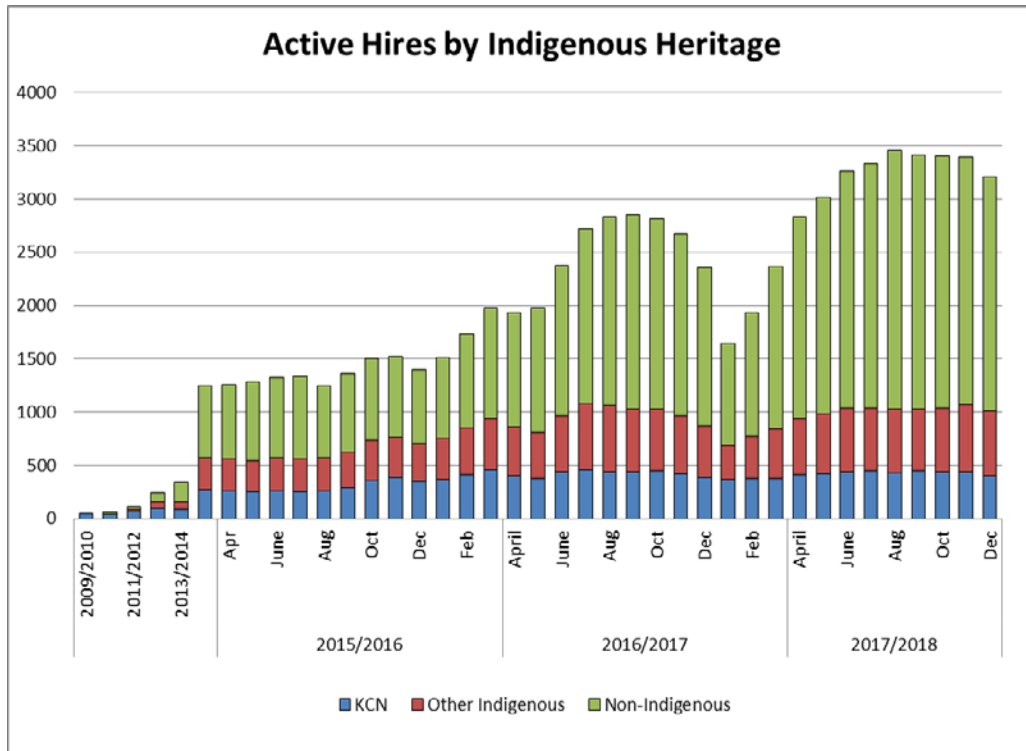
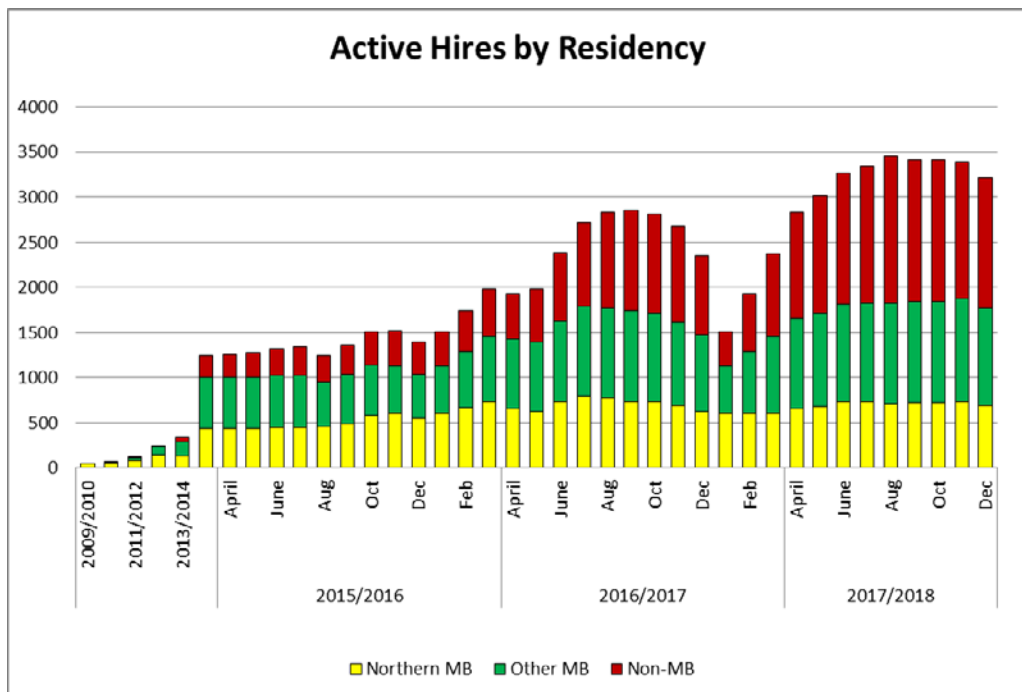


Figure 2:



Active Hires

Active hires are hires that were employed and working (not separated) on the Keeyask Project during the report month.

The table below provides a breakdown of the active hires in December 2017 by indigenous persons and by residency. This breakdown includes active hires in the implementation offices and on environmental and construction contracts.

KEYYASK PROJECT EMPLOYMENT BREAKDOWN OF ACTIVE HIRES - December 2017												
Contract Number	Contract Description	Active Employees	Active Employees in December 2017									
			By Indigenous Persons				By Residency					
			KCN	% of Active Employees	Other Indigenous	% of Active Employees	Non-Indigenous	% of Active Employees	Manitobans	% of Active Employees	Non-Manitobans	% of Active Employees
016050	Future Development - FLCN	<5	<5	100%	<5	<1%	<5	<1%	<5	100%	<5	<1%
016052	Future Development - YFFN	8	8	100%	<5	<1%	<5	<1%	8	100%	<5	<1%
016053	Future Development - CNP	<5	<5	100%	<5	<1%	<5	<1%	<5	100%	<5	<1%
Future Development - Implementation (Construction) Totals		14	14	100%	<5	<1%	<5	<1%	14	100%	<5	<1%
Environmental Licensing, Planning & Pre-Construction Monitoring Totals		17	8	47%	<5	6%	8	47%	14	82%	<5	18%
000000	Construction Management (Manitoba Hydro & Consultants)	155	12	8%	13	8%	130	84%	126	81%	29	19%
016121	Catering and Janitorial DNC (Part 2)	314	252	80%	30	10%	32	10%	290	92%	24	8%
016122	Provision of Maintenance Services DNC (Part 2)	51	23	45%	7	14%	21	41%	48	94%	<5	6%
016123	Provision of Security Services DNC (Part 2)	48	<5	4%	9	19%	37	77%	47	98%	<5	2%
016124	Employee Retention and Support DNC (Part 2)	8	5	63%	<5	38%	<5	<1%	8	100%	<5	<1%
016125	Provision of Emergency Medical and Ambulance Services DNC (Part 2)	15	<5	7%	<5	7%	13	87%	15	100%	<5	<1%
016132	MH and Contractor Work Area Site Development Installation DNC (EWO)	7	<5	29%	5	71%	<5	<1%	7	100%	<5	<1%
016180	Nurse Practitioners	7	<5	<1%	<5	<1%	7	100%	6	86%	<5	14%
016203	General Civil Contract (GCC)	2292	69	3%	455	20%	1768	77%	1030	45%	1262	55%
016206	Forebay Clearing DNC	5	<5	<1%	<5	20%	<5	80%	<5	80%	<5	20%
016304	Spillway Gates Guides and Hoists	114	<5	1%	30	26%	83	73%	59	52%	55	48%
016321	Turbines and Generators	15	<5	7%	<5	13%	12	80%	10	67%	5	33%
Various	Environmental Mitigation and Monitoring (Construction)**	<5	<5	<1%	<5	<1%	<5	<1%	<5	<1%	<5	<1%
Keeyask Generating Station (GS) Totals		3031	368	12%	556	18%	2107	70%	1650	54%	1381	46%
016613	Keeyask Switching Stations (KR2 KR3 KE1 KE2 KE3 KE4)	151	15	10%	49	32%	87	58%	89	59%	62	41%
Keeyask Transmission Totals		151	15	10%	49	32%	87	58%	89	59%	62	41%
TOTAL KEYYASK PROJECT EMPLOYMENT		3213	405	13%	606	19%	2202	69%	1767	55%	1446	45%

*Data as entered by contractors into the Construction Employee Database (CED) to: January 10, 2018

**Includes all environmental mitigation & monitoring contracts

016132 MH and Contractor Work Area Site Development Installation DNC reopened with EWO August 2017.

Indigenous refers to Indian, Inuit or Metis Peoples of Canada including status, treaty or registered persons as well as non-status and non-registered people.

On the Job Training Opportunities

On-the-Job (OJT) Training Programs ¹									
Labour Type	KCN Hires			Other Hires			GS Training Totals		
	Individuals Trained*	Training Hours	Average Training Duration (Hours)	Individuals Trained*	Training Hours	Average Training Duration (Hours)	Individuals Trained*	Training Hours	Average Training Duration (Hours)
Non-Designated Trades	149	6788	46	1012	12635	12	1161	19423	17
Designated Trades	55	72762	1323	335	232450	694	390	305213	783
Support & Service Trades	47	35703	760	14	16080	1149	61	51783	849
Staff & Supervisory	1	576	576	4	756	189	5	1332	266
Total GS Training	242	115829	479	1356	261920	193	1598	377750	236

Other Training ²									
Labour Type	KCN Hires			Other Hires			GS Training Totals		
	Individuals Trained*	Training Hours	Average Training Duration (Hours)	Individuals Trained*	Training Hours	Average Training Duration (Hours)	Individuals Trained*	Training Hours	Average Training Duration (Hours)
Non-Designated Trades	26	364	14	353	8414	24	379	8778	23
Designated Trades	22	10431	474	1034	73537	71	1056	83968	80
Support & Service Trades	295	7425	25	136	5884	43	431	13309	31
Staff & Supervisory	1	246	246	106	5626	53	107	5872	55
Total GS Training	340	18466	54	1617	93460	58	1957	111926	57

¹On-the-Job Training Programs capture training that is part of an On-the-Job Training (OJT) Program as planned for and approved based on the contract.

²Other Training captures training that is not part of an On-the-Job Training Program. This can include apprentices and trainees that are not part of an approved contract plan, training that takes place for specific job requirements, and training that takes place as part of natural progression.

*Total Individuals Trained is not additive; some individuals may have had training in multiple labour types.

Active OJT Programs**Catering – 016121**

Contractor continues to provide natural progression training through its workforce. Red Seal Cook OJT program and Fitness Leaders OJT program have been developed and are ongoing.

Fitness Leader – 016121 - Ongoing training, review and testing is taking place. There are currently four individuals taking part in the approved OJT Program.

Red Seal Chefs – 016121 – Training is ongoing, and 14 individuals are taking part in approved OJT Program.

Camp Maintenance – 016122

Contractor currently has eight individuals in the OJT Program; one in each of the following areas: apprentice water treatment plant operator, apprentice carpenter, apprentice electrician, apprentice heavy duty mechanic, HVAC Technician Trainee, Journeymen Plumbers/Pipefitters, as well as two clerk trainees.

Security – 016123

OJT Program has not commenced, as no candidates with required prerequisites have come forward to date. KCN Communities are frequently requested to canvas their members to provide information about the program.

EMS – 016125

The two Primary Care Paramedic trainees have successfully completed their training at Keeyask. Both candidates wrote their National Licensing Exam on November 22nd and both participants successfully passed the examination. A graduation ceremony took place on December 15th, 2017.

GCC – 016203

The contractor continues to implement their OJT plan. As of December 31, 2017, 13 Level 1 (MBs) and 22 Level 2-5 apprentices are working onsite under the following trades: Crane Operator, Heavy Duty Mechanics, Carpenters, Iron Workers, Electricians, and Plumbers/Pipefitters.

Future OJT Programs:**Spillway Gates Guides & Hoists – 016304 & Intake Gates, Guides and Hoists – 016305**

The bulk of contractor work at site is anticipated to commence shortly. The contractor has committed to provide the following training positions: one labourer trainee, two apprentice iron workers, and two apprentice electricians.

Turbines and Generators – 016321

Contractor work at site has been delayed until spring of 2018. Currently engaging the contractor in developing further details for the OJT plan. Contractor has been requested to provide the following training positions: 20 apprentice millwrights, and 10 apprentice electricians (winders).

Advisory Group on Operational Jobs

The Operational Jobs Advisory Committee held a workshop December 12 in Winnipeg to discuss ideas for implementation if the Operational Jobs funding criteria was expanded. Members of the Working Group on Operational Jobs also attended this workshop. All communities were able to identify areas of potential benefit if the definition of eligible activities was expanded.

Manitoba Hydro is drafting a Letter of Agreement which would expand the definition of acceptable work, and working at the leadership level to finalize this agreement.

For December there was a slight increase in the total from 39 to 40.

First Nation Partner	Target	Eligible Employees		
		Eligible Employed	Eligible Previously Employed	Eligible Employees Total
		where: permanent+service>12mo; or term>=2yrs+service>12mo		
York Factory (304)	36	2	3	5
Fox Lake (305)	36	13	5	18
Split Lake - TCN (306)	100	11	5	16
War Lake (323)	10	1	0	1
Total	182	27	13	40

Labour Relations

The following grievance information is from the start of KIP construction to Dec 31st, 2017:

	Settled	Under Review	Referred to Arbitration	Abandoned/ Withdrawn	Total
Month of November	0	4	0	0	4
Project Total	134	27	17	109	287

New grievances filed this report period:	1
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At month's end, 4 grievances were still open and under review. During the month of December, the HPMa continued to monitor break times.

Workforce Safety

Reported	Manitoba Hydro			Contractors			Project Total		
	Dec 2017	YTD	PTD	Dec 2017	YTD	PTD	Dec 2017	YTD	PTD
Lost Time Injuries (LTI)	0	0	2	0	3	20	0	3	22
Lost Time Days (LTD)	0	0	13	0	159	461	0	159	474
Total working hours	22,696	250,992	754,507	493,207	5,230,434	14,468,005	515,903	5,481,426	15,222,512
Accident Frequency Rate	0.00	0.00	.53	0.00	0.11	0.28	0.00	0.11	0.29
Accident Severity Rate	0.00	0.00	3.45	0.00	6.08	6.37	0.00	5.80	6.23

Note: Working hours recorded for December are for all contractors on site and all MH employees including field staff, site office staff.

*Accident frequency rate is the number of Lost-time injuries per 200,000 hours worked.

*Accident severity rate is the number of lost time days per 200,000 hours worked

Lost Time

There were no Lost Time incidents for the month of December.

Visits/Inspections from government

There were no government visits in the month of December.

Advisory Group on Employment (AGE)

All communities were represented at the December 7th AGE meeting which was held at Riverlodge Place in Thompson – 10am to 4pm. Attendance at the AGE meetings continues to be strong with 33 attendees. There were two action items arising out of the December 7th meeting and one remains outstanding from a previous meeting.

Community Engagement Sessions were scheduled in 2018 as follows:

- Ilford – Thursday, January 11 (11:00am to 3:30pm)
- Winnipeg – Wednesday, January 17 (Best Western Charter House, 11:00am to 7:00pm)
- Thompson – Wednesday, January 24 (Ma-Mow-We-Tak Friendship Centre 2:00pm to 7:00pm)
- Gillam – February 9, 2018 (Gillam School Gym - TBD)
- Split Lake – TBD (Sometime in January or February)

The committee recommended the continuation of the Keeyask Site Orientation Session in 2018 working towards a date sometime in February, prior to ramp-up. The focus will be on individuals who have never worked at Keeyask, have a JRS registration, are 18 years of age, and who are looking to get a better sense of what camp/work life is all about. And to learn more from the contractors about the various employment and training opportunities available at site.

Keeyask Workplace Essential Skills Training (KWEST) services and supports continued in the month of December prior to shut down. To date, 229 clients have benefited from the supports and instruction offered through KWEST. KWEST Essential Skills services and supports were delivered for 13 clients; of these 4 were new to the centre and 9 were returning for ongoing services.

Up skilling supports were provided to apprentices in the following trades': cook (6), carpentry (2), waste water technician (1) and ironworker (1). There were an additional three (3) self-referrals; individuals interested in personal skill development in non-designated trades.

The goal of KWEST is to prepare KCN apprentices and KCN non-designated craft workers to advance towards employment in areas that align with their employment goals.

Site Ceremonies KCN Events not included under Employee Retention and Support Services (ERS) contract 016124

Site staff participated in the Fox Lake Cree Nation/Gillam community Santa Claus parade.

Site Tours

There was only 1 site tour in December.

Date	Group Name	Number of Participants
Dec 15	Careers Awareness - Skills Canada	9

Environment

Environmental Management Plans

Sediment Management

The winter Sediment Management Plan (SMP) in-stream monitoring equipment includes three turbidity loggers, SMP-1 (upstream of construction) and SMP-3R and SMP-3L (downstream of construction). The installation of the turbidity monitors commenced in December and will be completed in January.

Fisheries Offsetting and Mitigation

There were no activities during December.

Heritage Resources Protection

The Project archaeologist continues to analyze and catalogue artifacts. Manitoba Hydro Agreements Implementation Department staff are working with Keeyask Site support staff to ensure identified heritage sensitive areas are protected as construction clearing areas are modified or refined.

Terrestrial Mitigation Implementation

The beaver and muskrat trapping program, which started last winter on the south side of the river, will continue on both the north and south sides of the river this winter. Currently there are 9 active beaver lodges (down from 29 last year) within the future reservoir area that will be trapped out prior to impoundment. The RTL 15 trapline holder is expected to begin trapping in early January.

Waterways Management

The Safe Ice Trail (SIT) Program is an essential part of the Keeyask Waterways Management Program which is to provide safe travel on impacted waterways. The ice trails provide designated safe winter travel routes that are used by traditional, commercial, domestic, and recreational resource users in northern Indigenous communities. As part of the 2017/18 Keeyask SIT Program, one trapline holder and one helper was contracted to install, monitor and maintain trails for areas around Gull and Stephens lakes from mid-December to mid-April. In December, approximately 100 kilometres of trails were installed and minimal distance patrolled was due to extreme cold weather conditions during the month.

Mercury and Human Health Risk Management

The Keeyask Mercury and Human Health Implementation Group (MHHIG), with representatives from Manitoba Hydro, the partner First Nations, technical experts, and provincial and federal health agencies, have finalized a Mercury and Human Health Risk Management Plan. The plan includes monitoring of mercury in fish, wildlife, plants, and voluntary hair sampling of First Nation community members; human health risk assessments; and a communication strategy for partner First Nations, Gillam, and other users of fish in affected waterbodies.

The MHHIG is planning the implementation of the Risk Management Plan and is targeting an initial 'roll out' in partner FN communities in early 2018. The MHHIG met with Golder Associates in December to discuss modifications to its initial proposal to undertake hair monitoring and food surveys in partner FN communities. A revised proposal is anticipated in January, 2018.

All partner First Nation communities have signed Contribution Agreements to hire and fund individuals to undertake mercury coordination responsibilities. TCN, FLCN and YFFN have hired individuals to fulfill this role. Discussions are ongoing with WLFN on next steps. A three-day orientation (one of four sessions) was held with the Mercury Coordinators in December to assist in familiarizing them with the Keeyask Project and the mercury issue.

Environmental Monitoring Plans

Physical Environment

There were no monitoring activities during December.

Aquatic Effects

There were no activities during December.

Terrestrial Effects

A caribou aerial survey was conducted on December 4-8. This survey was focused on the group of caribou that are known to calve in the Keeyask area in the summer and may stay in the Project area year-round. The purpose of the survey is to document the winter distribution and abundance of these caribou. No caribou or tracks were observed during the early December survey.

Socio-economic

The Keeyask Socio-economic Monitoring Plan identifies the social and economic monitoring activities to be undertaken during construction and operation of the Project. Included in these activities are three in-community interview and survey programs:

1. A key person interview program to identify any project induced effects on housing, infrastructure and services in each of the communities,
2. A worker/family survey to determine what effects (positive and negative) project employment has on KCN Keeyask workers, their families and the communities as a whole, and
3. A survey of the indirect employment and business opportunities generated by the project in each of the communities.

On December 13th a meeting was held with YFFN representatives to discuss revisions to the draft report on their community's Infrastructure and Services Key Person Interview Program. At this meeting discussion also occurred regarding logistics for the Worker/Family survey to be undertaken in 2018.

Aboriginal Traditional Knowledge (ATK)

The KHLP and MH recognize the importance of both ATK and western science in the Environmental Protection Program and have been working together as partners to gather, share, and apply this knowledge. Each of the partner First Nations have, or are in the process of developing and implementing community specific monitoring programs for the Project.

MH Agreements Implementation Department staff continue to work closely with all partner First Nations to build linkages between ATK and western science monitoring.

Fox Lake Cree Nation (FLCN)

FLCN is working on their upcoming workplan and budget and continuing with monitoring activities as per their current work plan.

York Factory First Nation (YFFN)

YFFN continues to carry out ATK monitoring activities from their workplan.

War Lake First Nation (WLFN)

WLFN and MH have agreed upon a work plan and budget for the next year and we are in the process of finalizing the contribution agreement. WLFN is continuing to carry out activities from their interim workplan.

Tataskweyak Cree Nation (TCN)

TCN signed a three month interim ATK Monitoring Contribution Agreement and hired two ATK monitors to lead activities from their workplan.

Monitoring Advisory Committee

The MAC's next meeting is scheduled for January 25 and the Keeyask Caribou Coordination Committee will meet January 26, 2018.

Transmission Complex

Keyask - Transmission Complex Description

Design, procurement and construction of the Keyask Switching Station which will consist of a 138 kV ring bus complete with seven 138 kV breakers and associated equipment required for the termination of four new lines from the Keyask Generating Station and three new lines from Radisson Station. In addition there are 31 breaker upgrades and 4 new breakers at the Radisson station.

Complex Status Update

Construction Progress

Radisson Station Upgrades:

- R33 was returned to service on December 2, 2017.
- The concrete work has been completed. The contractor will be returning in January to complete the installation of the pull lines and to backfill the entire duct line.
- To avoid posing an unacceptable amount of risk to reliability and/or to the Bipole III project, breaker replacements will be suspended until summer 2018 (end of Bipole III commissioning). The breaker schedule will be re-visited in late Spring 2018.

Keyask Switching Station

- A recommendation has been approved to award the construction contract to Voltage Power Ltd. The contract is expected to be finalized in January, with mobilization in late February.

Transmission Lines:

- Tower assembly, and foundation and anchor installations are underway.
- Issues of cracked steel were found during tower assembly, due to parts that have been fabricated out of tolerance. Replacement parts have been ordered and will arrive in February and the defective parts will be replaced. To prevent this issue from recurring, a go/no-go gauge will be fabricated and parts will be checked for tolerances.

Upcoming Activities:

- Installation of pull lines and the backfill of the ductline will be completed at Radisson Station.
- Transmission line construction will continue throughout the winter.
- Once the contract has been finalized, pre-construction meetings will begin for the Switching Station construction.

Pictures



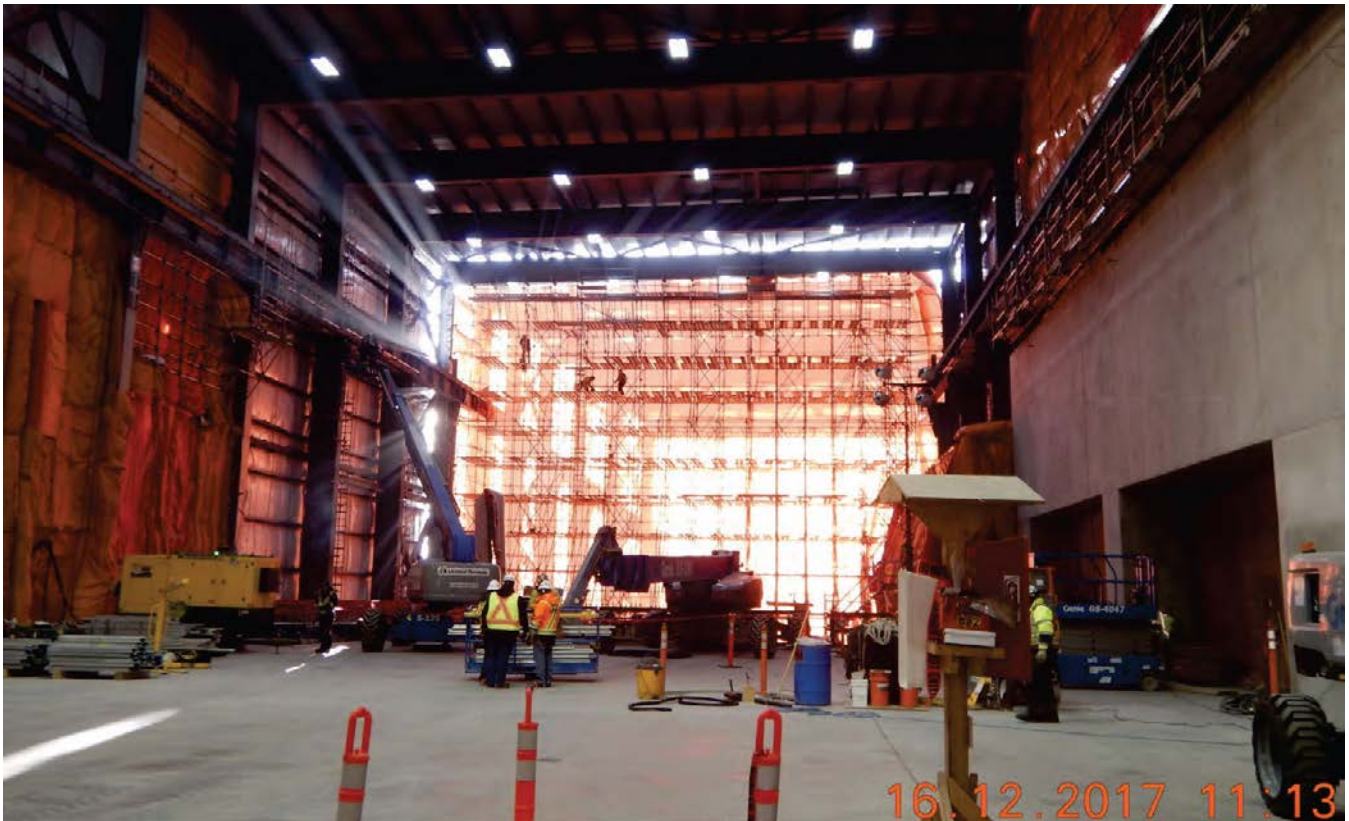
View of service bay and PH unit 1 looking upstream



Intake 1 water passage 1 removal of headblock shoring



View of the service bay and powerhouse enclosure



Construction of the temporary end wall in Powerhouse 1 in progress