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September 30, 2016

The Board of Commissioners of Public Utilities **Prince Charles Building** 120 Torbay Road, P.O. Box 21040 St. John's, NL A1A 5B2

Attention:

Ms. Cheryl Blundon

**Director Corporate Services & Board Secretary** 

Dear Ms. Blundon:

Re: The Board's Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnection System - Winter Readiness Planning Report

Further to the Board's correspondence of September 13, 2016, please find enclosed the original plus 12 copies of Hydro's report entitled A Report to the Board of Commissioners of Public Utilities Regarding 2016-17 Winter Readiness Planning.

Should you have any questions, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

Senior Counsel, Regulatory

TLP/cp

Gerard Hayes - Newfoundland Power

Paul Coxworthy - Stewart McKelvey Stirling Scales

Sheryl Nisenbaum - Praxair Canada Inc.

Roberta Frampton Benefiel - Grand Riverkeeper Labrador ecc:

Thomas Johnson, Q.C. - Consumer Advocate Thomas O' Reilly, Q.C. - Cox & Palmer

Danny Dumaresque

# Investigation and Hearing into Supply Issues and Power Outages on the Island Interconnected System

# A Report to the Board of Commissioners of Public Utilities Regarding 2016-17 Winter Readiness Planning

September 30, 2016



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#### 1 1.0 BACKGROUND AND INTRODUCTION

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- 2 This Report is in response to a request by the Board of Commissioners of Public Utilities (the
- Board) in a letter dated September 13, 2016, that Newfoundland and Labrador Hydro (Hydro)
- 4 provide a report related to its winter readiness planning for the 2016-17 winter season. This
- 5 Report addresses the following items as requested by the Board:
- 1. The status of Annual Work Plan (AWP) items, in the format previously provided to the
  Board, for Hydro's generating plants and transmission and terminal stations, including
  the completion date; outstanding items to complete; and any risks to completion or as
  a result of failure to complete;
  - 2. A description and schedule for all outstanding 2016 capital projects for Hydro's generating plant and transmission and terminal stations, including progress on completion status to date and expected completion date;
  - The identification of all equipment and plant testing to be carried out in advance of the winter period (generation plant, emergency diesels, black start generators, fire systems, transmission system equipment), including progress on completion status to date;
  - The planned generation outage schedule for the period September to December 31,
     2016, including an explanation for any planned outages extending beyond December
     1, 2016;
  - 5. An update of critical spares assessment and procurement;
    - 6. The forecast loads and expected generation capacity and reserves (setting out the basis for calculation) for the upcoming winter, as of December 1, 2016, and including capacity assistance agreements in place or planned; and
      - 7. An identification of any risks that could impact the winter readiness of assets as of December 1, 2016 and associated contingency plans.

27 For additional clarity with respect to item 1 above, Section 2 of the 2016-2017 Winter

- Readiness Report includes both the entire Annual Work Plan (AWP) and the specific AWP
- 29 winter readiness (WR) charts. All data in this report is as of September 10, 2016.

#### 1 2.0 ANNUAL WORK PLAN STATUS

- 2 Hydro's Annual Work Plan (AWP) integrates all planned activities for the year related to the
- 3 corrective maintenance, preventive maintenance, and capital project support which are
- 4 critical to safe, reliable production. Hydro regularly measures the progress of AWP execution
- 5 in comparison with plan, and is able to track the AWP status down to the level of individual
- 6 work plan items. For consistency, the individual AWPs are incorporated into an integrated
- 7 AWP.

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- 9 This Report produces a consolidated summary of actual AWP progress, both for the entire
- plan (first chart in each set) and the winter readiness (WR) tasks (second chart in each set),
- versus the plan, as of the week ending September 10, 2016 for each of the following areas of
- 12 operations:
- 1) Holyrood Thermal Generating Station
- a. Units 1, 2 and 3; and
- b. Balance of Plant, including black start diesels.
- 16 2) Gas Turbines
- 17 a. Holyrood Combustion Turbine;
- b. Hardwoods; and
- c. Stephenville.
- 20 3) Hydraulic Generation
- a. Bay d'Espoir;
- b. Cat Arm;
- c. Hind's Lake;
- d. Paradise River;
- e. Upper Salmon; and
- f. Granite Canal.
- 27 4) Transmission and Terminal Stations
- a. Transmission; and
- b. Terminal Stations.

- 3 Each chart includes the completed and remaining AWP and WR tasks, as well as a progress bar
- 4 indicating the planned task completion target to date.

- 8 A text box to the right of each WR chart below indicates Hydro's forecasted completion status
- 9 as of September 10, 2016 in relation to AWP winter readiness activities (Green: On Target,
- 10 Yellow: Caution Recovery Required, Red: Target Will Not be Fully Met). Relevant highlights
- 11 are also provided.

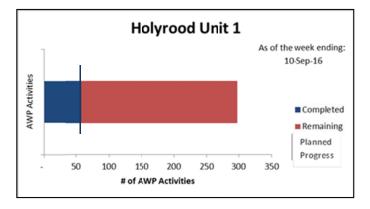
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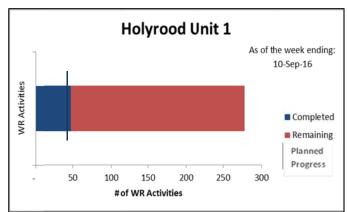
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#### 2.1 AWP and WR Status: Holyrood Thermal Generating Station

- 13 The status of AWP and winter readiness execution at Holyrood is summarized in the charts
- 14 below. As noted, all planned 2016 winter readiness work is expected to be complete by
- 15 December 1, 2016, with all areas currently ahead of schedule.

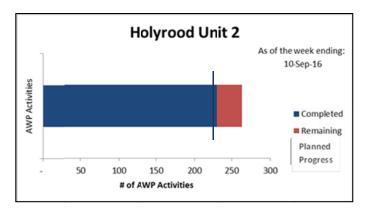
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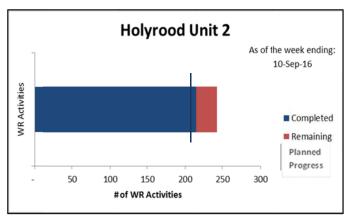




Forecast Completion Status: (R/Y/G): Green
Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

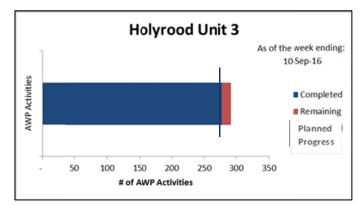
- Overall AWP completion is 19% to date, as planned
- Annual maintenance outage has a completion date of November 1, and covers many of the outstanding activities
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016

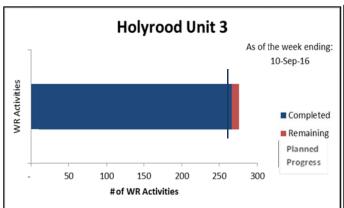




Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- Overall AWP completion is 87% to date, as planned
- Annual maintenance outage is complete.
- Remaining items are related to online Preventative Maintenance program executed in Q4
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016

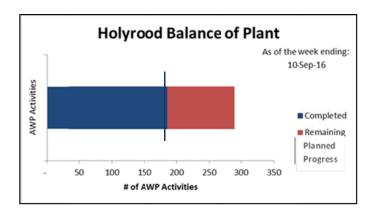


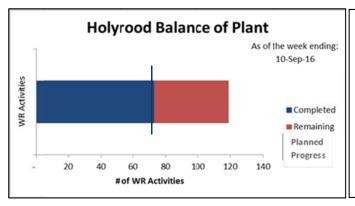


**Forecast Completion Status:** (R/Y/G): **Green** 

Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- Overall AWP completion is 95% to date, as planned.
- Annual maintenance outage is complete
- Remaining items are related to online Preventative Maintenance program executed in Q4.
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016



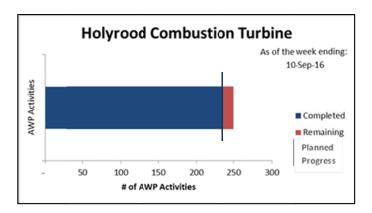


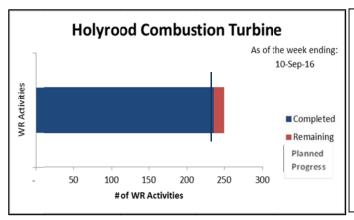
Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- Overall AWP program completion is 64% to date, as planned
- Remaining items are related to online Preventative Maintenance program executed in Q4
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016

#### 2 2.2 AWP and WR Status: Gas Turbines

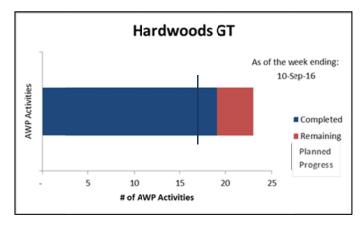
- 6 The current status of AWP and winter readiness execution at the Holyrood Combustion
- 7 Turbine, and the Hardwoods and Stephenville gas turbines is summarized in the charts below.
- 8 As noted, all planned 2016 work is expected to be complete by December 1, 2016. In the case
- 9 of Stephenville and Hardwoods, all AWP work is winter readiness work.

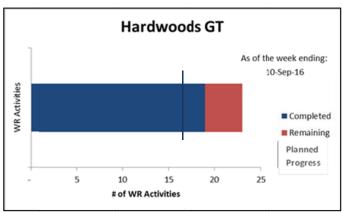




Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- Overall AWP completion is 94% to date, as planned
- Planned capital work (combustor major overhaul) is scheduled to be completed in November
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016

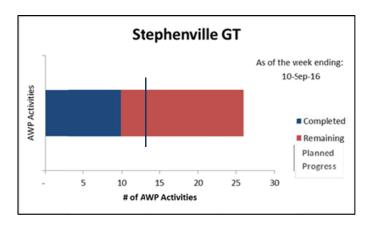


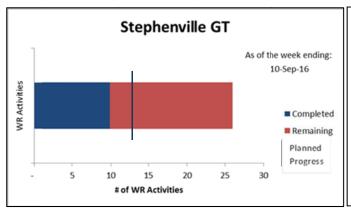


**Forecast Completion Status:** (R/Y/G): **Green** 

Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- Overall AWP completion is 83% to date, as planned
- Planned capital work is completed or on schedule to be completed (including installation of the refurbished engine in November.
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016



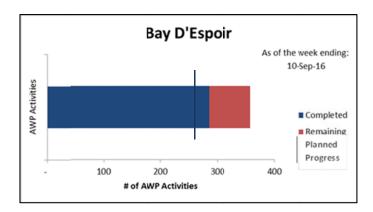


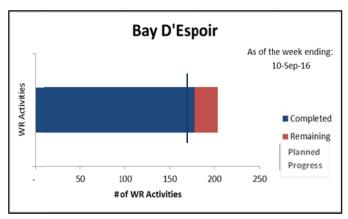
#### Comments and Schedule Notables (e.g. ahead, behind, recovery plan):

- Overall AWP completion is 38% to date, as planned
- AWP activities behind plan are tied to major capital work
- Planned capital work (refurbished engine install) remains on schedule for completion in November
- Planned Winter Readiness work on schedule for successful completion by the end of November

#### **AWP and WR Status: Hydraulic Units** 2 2.3

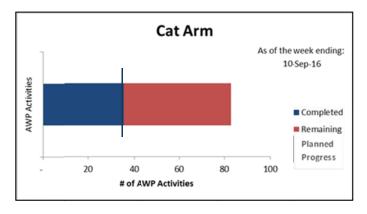
- 5 The current status of AWP and winter readiness execution at Bay d'Espoir and other hydraulic
- 6 generation facilities is summarized in the charts below. As noted, it is expected that all
- 7 planned 2016 winter readiness activities will be completed by December 1, 2016.

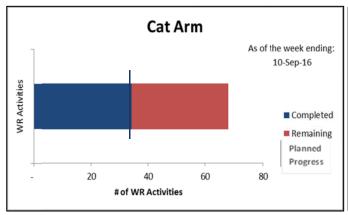




#### **Comments and Schedule Notables:**

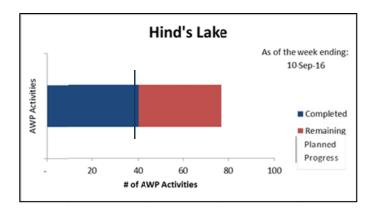
- Overall AWP completion status, including work in progress, is 87%
- All seven planned unit outages are complete
- Remaining Winter Readiness work is on schedule for successful completion by December 1, 2016.

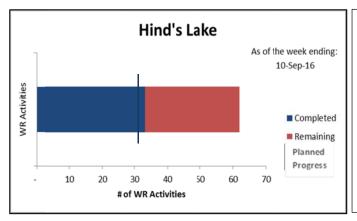




#### Forecast Completion Status (R/Y/G): Green

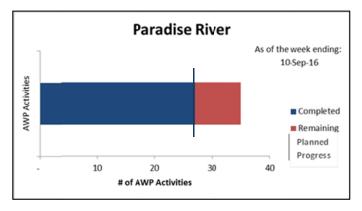
- Overall AWP completion status, including work in progress, is 50%
- Cat Arm Unit 1 outage in progress; Cat Arm Unit 2 outage being delayed until Bay d'Espoir Units 1 and 2 returned to service
- Remaining Winter Readiness work is on schedule for successful completion by December 1, 2016.

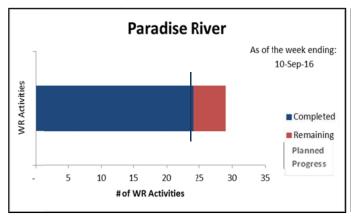




#### **Comments and Schedule Notables:**

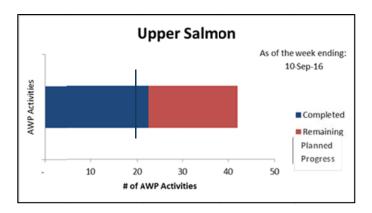
- Overall AWP completion status, including work in progress, is 53%
- Unit outage is scheduled for Nov.6<sup>th</sup> to 26<sup>st</sup>
- Remaining Winter Readiness work is on schedule for successful completion by December 1, 2016.

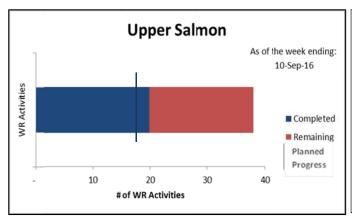




#### Forecast Completion Status (R/Y/G): Green

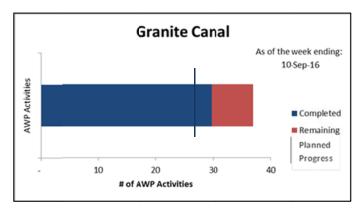
- Overall AWP completion status, including work in progress, is 83%
- Unit outage is complete.
- Remaining Winter Readiness work is on schedule for successful completion by December 1, 2016.

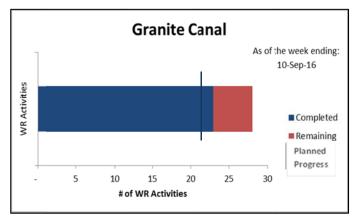




### Comments and Schedule Notables:

- Overall AWP completion status, including work in progress, is 53%
- Unit outage is scheduled for Oct. 10<sup>th</sup> -28<sup>th</sup>.
- Remaining Winter Readiness work is on schedule for successful completion by December 1, 2016.





#### Forecast Completion Status (R/Y/G): Green

- Overall AWP completion status, including work in progress, is 82%
- Unit outage is complete
- Remaining Winter Readiness work is on schedule for successful completion by December 1, 2016.

#### 2.4 AWP and WR Status: Transmission and Terminal Stations

6 The current status of AWP and winter readiness execution for both transmission line and

7 terminal station facilities on the Island Interconnected System (IIS) (Northern, West and East

regions) is summarized in the charts below. As noted, it is expected that all planned 2016

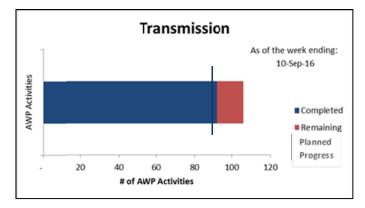
winter readiness activities will be completed by December 1, 2016.

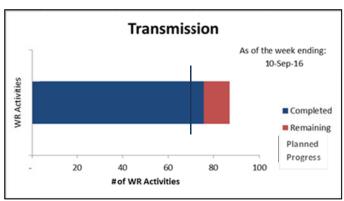
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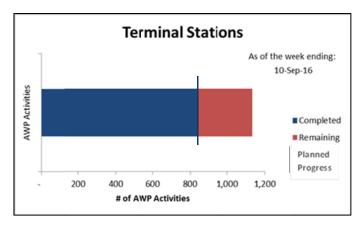
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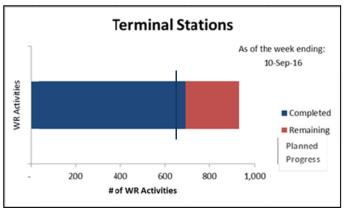




#### Forecast Completion Status (R/Y/G): Green

- Overall AWP completion status is 87%, as planned
- Continue to execute Wood Pole Line Management program in all regions
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016





- Comments and Schedule Notables:
- Overall AWP completion status is 74%, as planned
   Main focus until December 1 will be remaining disconnect switch maintenance, relay maintenance, and operate breakers
- Planned Winter Readiness work on schedule for successful completion by December 1, 2016

#### 2 3.0 STATUS OF WINTER READINESS CAPITAL PROJECTS

- 5 Appendix A of this Report identifies the 2016 capital projects that include scope related to
- 6 2016-17 winter readiness, and indicates status of each. Table 3.1 below summarizes the
- 7 status of the winter readiness scopes of these projects by asset category.

TABLE 3.1 2016 Capital Projects with Winter Readiness Scope							
Asset Category	Complete	Outstanding	Total				
Thermal Generation	7	4	11				
Hydraulic Generation	5	3	8				
Gas Turbine Generation	1	3	4				
Transmission	1	1	2				
Terminal Stations	1	10	11				
Various (Critical Spares)	0	1	1				
TOTAL	15	22	37				

The winter readiness scopes are complete and in service for 15 of the 37 capital projects. The winter readiness scopes for the 22 outstanding projects are tracking well against plan and are expected to be complete by December 1, 2016. There is substantial completion within many of these 22 outstanding projects, including the ten Terminal Station projects. For example, the Upgrade Circuit Breakers 2015-2016 Project in the Terminal Stations Asset Category includes refurbishment or replacement of 12 breakers, and 11 of those are complete. More details on project progress are provided in the Notes accompanying Appendix A.

Winter readiness project work completed to date include a number of milestones, including: the overhaul of Holyrood Unit 3 turbine and generator; the rewind of the rotor for Holyrood Unit 3; the unforeseen replacement of boiler tubes for Holyrood Units 1 and 2; the overhaul of Bay d'Espoir Units 6 and 7; the supplementary project to rehabilitate Bay d'Espoir Unit 4 turbine; the replacement of the transformer for Bay d'Espoir Unit 7; the refurbishment of transformers at six terminal stations; the assessment, refurbishment or replacement of 17 circuit breakers in the 2015-16 and 2016-20 capital projects; the replacement of approximately 9500 terminal station insulators; the replacement of eight sets of surge arrestors; the replacement of ten disconnect switches; and the replacement of 21 instrument transformers.

- 1 Remaining aspects of the winter readiness capital projects scheduled for completion in
- 2 October and November 2016. The successful completion of this work is contingent on several
- 3 factors which have the potential to change completion dates. For example, if any of the
- 4 projects, which are dependent on generator or line outages, encounters a delay, then this
- 5 could have a ripple effect on the completion of other projects that are also generator or line
- 6 outage dependent. Hydro is managing this risk and will identify projects to not start if they
- 7 cannot be completed in time, or will identify means to expedite as necessary. Hydro
- 8 continues to closely coordinate its overall work plan and manage associated risks.

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#### 4.0 PLANT AND EQUIPMENT TESTING

- 11 In its thermal and hydraulic generation facilities Hydro follows a structured checklist for
- 12 planning and documenting its testing and inspection of plant and equipment from a winter
- 13 readiness perspective.

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- 15 In its transmission, terminal station and gas turbine operations, Hydro relies on its AWP
- process to plan and track its winter readiness testing and inspection of these assets. The
- 17 AWPs in these areas include planned preventative maintenance (PM) activities, as well as
- 18 corrective maintenance (CM) items, both of which involve inspection and testing. Planned
- 19 PMs, CMs, and any other activities pertaining to winter readiness are flagged inside the
- 20 respective AWPs, and may therefore be tracked separately from AWP items which are not
- 21 winter readiness related.

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#### 4.1 Thermal Generation

- 24 Winter readiness testing of generating equipment in Thermal generation is focused primarily
- around annual unit maintenance outages. Following annual outages, units are run up,
- 26 synchronized, and all systems are verified before operating status is determined and
- 27 preparedness is confirmed. Unit load tests are performed at this time as well.

- 1 The winter readiness testing protocol includes the testing of appropriate Balance of Plant
- 2 components, as well as the black start diesels and confirming their ability to black start the
- 3 Holyrood Plant.

- 5 The current status of equipment/plant testing for Thermal Generation is indicated in Appendix
- 6 B of this Report. Consistent with the generation outage schedule shown in Appendix D, it is
- 7 expected that all winter readiness testing will be completed by December 1, 2016.

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#### 4.2 Hydraulic Generation

- 10 Winter readiness testing of generating equipment and balance of plant in Hydraulic
- 11 Generation is completed using the same process as for Thermal Generation as described in
- 12 section 4.1 above.

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- 14 The current status of equipment/plant testing for Hydraulic Generation is indicated in
- 15 Appendix C of this Report. Consistent with the generation outage schedule shown in
- Appendix D, it is expected that all winter readiness testing will be completed by December 1,
- 17 2016.

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#### 4.3 Transmission and Terminal Stations

- 20 As noted above, the AWPs for both Transmission and Terminal Stations are predominantly
- 21 comprised of PMs and CMs, which inherently involve inspection and testing. Examples of
- 22 winter readiness activities that are included in the AWP work scopes include the following:
- a) Transformer PMs and CMs;
- b) Annual exercises on all high voltage circuit breakers;
- 25 c) Exercise of 230 kV circuit breakers from protection during PM inspections;
- d) Infrared scans at all terminal stations;
- e) Annual ultrasonic leak testing on all terminal station air systems; and
- 28 f) Annual helicopter patrol of transmission lines prior to the winter season.

- 1 AWP charts which include winter readiness activities are shown in section 2.4 of this report,
- and it is expected that all activities will be completed by December 1, 2016.

- 4.4 Gas Turbines Holyrood, Hardwoods and Stephenville
- 5 Examples of winter readiness activities that are included in the AWP work scopes and
- 6 maintenance plans for the Hardwoods, Stephenville and Holyrood gas turbines include the
- 7 following:
  - a) PMs and CMs for major components and auxiliary systems;
- 9 b) Black start testing;
- 10 c) Monthly operational testing; and
- d) Execution of capital upgrades and refurbishment.

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- 13 As of September 10, 2016 the AWP completion status at Hardwoods on winter readiness
- activities was on plan. The overall AWP completion status at Stephenville is 38%. Completion
- status to date in Stephenville is behind plan, primarily reflecting the status of several activities
- that are tied to the major capital work ongoing at the Stephenville facility. However, as
- 17 indicated in Section 2.2 it is expected that all work related to winter readiness testing will be
- 18 completed by December 1, 2016. Black start testing is scheduled to be completed for the
- 19 Holyrood CT, and Hardwoods and Stephenville GTs by December 1, 2016.

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#### 5.0 GENERATION OUTAGE SCHEDULE

- 22 Hydro's 2016 Master Generation Outage Schedule for the period September 1 to December
- 23 31, 2016 is attached to this Report as Appendix D. This Schedule does not currently
- contemplate any planned generation outages beyond November 27, 2016 and it is expected
- 25 that all generation assets will be fully available as of December 1, 2016, with the exception of
- the rated capacity of Holyrood Unit 3. Holyrood Unit 3, although available, is currently
- 27 derated to 135 MW, and the Master Generation Outage Schedule reflects that rating. Work
- currently being carried out to assess Unit 3 may result in an improvement to the final rating.

#### 1 6.0 CRITICAL SPARES

- 2 In 2014, Hydro completed extensive reviews of its critical spares requirements in all three
- 3 areas of its generation operations: hydraulic generation; thermal generation (Holyrood); and
- 4 the gas turbines in Hardwoods and Stephenville. These reviews included a detailed analysis of
- 5 asset criticality and spare parts in reference to several factors, including their impact on
- 6 generation reliability and replacement part availability.

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- 8 Hydro's evaluation of critical spares is an ongoing process where consideration is given to:
- 9 asset condition; level of criticality; parts availability/order lead time; and cost. In some cases,
- 10 a balanced consideration of these factors may result in a decision to not procure into
- inventory where the risk to reliability is judged to be low and/or other measures are available
- 12 to mitigate against generation unavailability.

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- 14 In its report to the Board dated February 16, 2015, Hydro provided a full update on the status
- of its critical spares for the 2014-15 winter season. This update included a detailed listing of
- critical spares requirements for each area of generation operations and the in-stock or on-
- order status of each item. A further update on the status of critical spares is briefly provided
- in the following sections.

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#### 6.1 2016-2017 Winter Season

- 21 Hydro's critical spares status leading into the 2016-17 winter season is very strong. For the
- 22 Thermal Generation (Appendix E), Gas Turbines (Appendix F), and Hydro Generation
- 23 (Appendix G), a total of 1,194 critical spares have been identified by Hydro's three generation
- operations areas. Of this total, 1,177 items are in stock (98.6%) and the remaining 17 items
- are on order (1.4%) with expected delivery by December 1, 2016.

The following items are not included in this total: 1) Critical spares at HTGS which share a common spare with another area of thermal operations are not stocked separately but are considered as being in-stock given the availability of a spare if required. 2) The critical spares updates for HTGS and Hydraulic Generation identify 39 components which have been assessed in 2015 as not being critical and these will not appear in any future critical spares updates. 3) Predictive maintenance and ongoing condition monitoring and assessment to maximize asset life have been determined as the optimum approach for 10 items at HTGS.

- 1 With respect to the Holyrood Combustion Turbine, the assessment for spares criticality has
- 2 not been completed to the same degree as the other generation assets. Therefore, the spares
- 3 list detailed in Appendix F for the Holyrood CT includes both operational and critical spares.
- 4 Greater than 50% of these spares are in stock, including the high priority items. Of the
- 5 remainder, 14 are on order, and 157 are in the procurement process awaiting quotes from
- 6 vendors. It is anticipated that the majority of these remaining items will be on order by the
- 7 end of October, with the vast majority delivered by December 1.

- 9 Spares for 11 critical components for Island Interconnected generation stations were
- identified as capital spares (i.e., involve a cost in excess of \$50,000 and require Board
- approval) in 2015, and approved in Board Order P.U. 24(2015). Ten of these spares were
- received after last year's December 1, 2015 Winter Readiness Report. As noted in the 2015
- 13 Winter Readiness Report, the high voltage bushings for Unit 3 had a longer lead time and
- would not be available until late 2016. These bushings are scheduled for delivery by
- 15 December 1, 2016.

16

- 17 Hydro's 2015-16 critical spares plan for Holyrood included the procurement of rectifying
- transformers for Unit 1 and Unit 2. Due to reliability concerns with the existing transformers,
- 19 replacement transformers were purchased under a supplemental capital application approved
- in September 2015 (Board Order P.U. 27(2015)) to be available as critical spares for the 2015-
- 21 2016 operating season, and, as detailed in the supplemental application, are being installed in
- the annual outages for 2016.

23

24

#### 7.0 FORECASTED LOADS, CAPACITY AND RESERVES

- 25 In Hydro's reply submission filed in response to the Phase I report by Liberty Consulting on
- 26 February 5, 2015, Hydro committed to provide the Board with a generation adequacy update
- as of August in each year leading up to interconnection, and that this update would include
- the following:

a) An updated P90 load forecast for the period up to one year beyond the then 1 2 anticipated interconnection date; 3 b) A summary of the previous winter's generation performance and an outlook of peak 4 available generating capacity for each year of the load forecast; and 5 c) A forecast of generation reserves in both percentage and total MW terms. 6 7 At the request of the Board, Hydro filed the Energy Supply Risk Assessment (ESRA) report on 8 May 27, 2016. In addition to providing the material requested above, the ESRA report 9 included: 10 a) The updated P90 load forecast through 2020; two years beyond the anticipated 11 interconnection date; 12 b) A critical assessment of Hydro's thermal generating assets and their relative 13 importance to the Island Interconnected System, by evaluating a range of unit 14 availabilities, and the resultant expected unserved energy (EUE); and 15 c) Identified options and alternatives to mitigate supply risk. 16 17 Hydro's capacity and reserve forecasts also assume a total of 91 MW of capacity assistance is 18 available through the 2016-17 winter season, if needed, under the capacity assistance 19 agreements Hydro has in place with Corner Brook Pulp and Paper Limited and Vale 20 Newfoundland & Labrador Limited. The details of these agreements have been outlined in 21 previous reports to the Board, most recently in Hydro's Generation Availability Report to the 22 Board on January 15, 2015. 23 24 Table 7.1 indicates Hydro's forecasts for the 2016-17 winter season. The Capacity at Peak of 25 1,994 MW indicated in Table 7.1 is inclusive of the diesel units now installed at Holyrood (12 26 MW installed; 10 MW firm to the IIS) and also includes Holyrood unit ratings of 170 MW for

units 1 and 2 and a rating of 135 MW for Unit 3, consistent with the information provided by

Amec Foster Wheeler (AMEC FW) as part of its investigation. Investigation continues into the

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28

- 1 rating of Unit 3, with results expected by mid-November. The Capacity at Peak also includes
- 2 10.8 MW of capacity assistance provided by Vale.

	TABLE 7.1 <sup>2</sup> Forecasts of Peak Load, Capacity, and Reserves – 2016-17						
Α	IIS Peak Load – P50	1,733	3 MW				
В	IIS Peak Load – P90	1,801 MW					
С	Subtract: Curtailable Load (-90 MW)	1,711 MW					
D	Capacity at Peak	1,994 MW					
	Reserves (D-C) for P90 283 MW 17%						

4

- 5 Additionally, as detailed in the ESRA report, Hydro has identified that the securing of 15 MW
- 6 of incremental curtailable load on the Avalon Peninsula would be beneficial in advance of the
- 7 in-service of TL267. Hydro continues to pursue commercial discussions with potential partners
- 8 to obtain this commitment. Table 7.2 indicates Hydro's same capacity at peak for the 2016-17
- 9 winter season, and includes an incremental 15 MW of curtailable load.

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	TABLE 7.2 <sup>2</sup> Forecasts of Peak Load, Capacity, and Reserves – 2016-17						
Α	IIS Peak Load – P50	1,733	BMW				
В	IIS Peak Load – P90	1,801 MW					
С	Subtract: Curtailable Load (-105 MW)	1,696 MW					
D	Capacity at Peak	1,994 MW					
Reserves (D-C) 298 MW 189							

#### 8.0 RISKS AND RISK MITIGATION

- 12 Hydro is confident that its readiness planning for the 2016-17 winter season is on track and
- will position the company to be fully ready in terms of generation and transmission availability
- 14 by December 1, 2016.

-

<sup>&</sup>lt;sup>2</sup> System Operations Planning April 4, 2016 forecast.

1 As noted in Section 3, there are potential risks to the schedule for completing 2016 capital 2 program winter readiness scopes. No schedule delays are foreseen at this time, but any 3 project delays caused by the need for outage extensions, the unavailability of resources for final commissioning, weather, or other factors could delay the completion of one or more 4 5 projects beyond their planned completion dates. Potential schedule risks are mitigated 6 through a daily monitoring of critical capital project progress which enables an early 7 identification of risks and the development of appropriate mitigation or recovery plans. 8 Ongoing PM and CM programs are regularly monitored as well to ensure that any delays in 9 the execution of this work will not have an impact on capital project commissioning and 10 completion. 11 12 A combustion can failure at the Hardwoods gas turbine facility on February 8, 2016 resulted in 13 damage to one of the two Hardwoods gas turbine engines, which has necessitated an 14 overhaul of the engine. Refurbishment work on this engine is currently in progress. Although 15 this work is proceeding as per plan, there is a low risk that the required work at Hardwoods 16 may not be completed by December 1. While the overhaul work is expected to be completed 17 in time for installation of the engine prior to December 1, system conditions will necessarily 18 dictate the actual installation schedule for Hardwoods. This will be mitigated by Hydro 19 maintaining its existing 19 MW leased engine at the Hardwoods site until the overhauled 20 engine can be installed and the plant returned to full capacity. 21 22 In May 2016, a leak in Bay d'Espoir Penstock 1, servicing both Units 1 and 2, triggered a forced 23 outage on the units. The cause of the leak was a broken weld, which was repaired on site and 24 the penstock and associated units were returned to service. At the time of the leak, the cause 25 was determined to be localized to a specific section of the penstock and not global. In 26 September, a similar leak happened in the same penstock, near the location of the first leak. 27 This leak was also repaired; however, in order to gain a better understanding of what is 28 causing this issue and ensure reliability of the penstock going into the winter, an extensive 29 inspection and testing program is currently underway. This program includes, among other

- things, magnetic particle testing of a significant number of welds in the penstock, and the
- 2 removal of a section of penstock, which includes a welded area, for further analysis.
- 3 Procedures to grind out and re-weld any identified cracks have begun while analysis to
- 4 determine short and medium term plans is made. It is premature at this time to comment on
- 5 the impacts given the early stage of the analysis; however, there is a strong possibility than an
- 6 extensive refurbishment is required. Further plans on this effort will be known in early
- 7 October. Hydro is working with welding experts to plan and execute required work within the
- 8 shortest timeframe possible and with the ultimate goal of returning the penstock to service
- 9 for winter availability.

- 11 In 2016, Hydro completed a study of the reliability of the Holyrood boilers based on the
- 12 condition of the boiler tubes. A boiler industry consultant, AMEC FW, was hired to review the
- existing boiler tube thickness data and provide recommendations. As a result of this study,
- 14 AMEC FW found no reason to limit the load on Unit 1 or Unit 2, but recommended a 10%
- reduction in operating pressure (and consequently load) in the Unit 3 boiler. Hydro has
- 16 implemented this recommendation to reduce the maximum load from 150 MW to 135 MW
- 17 for the 2016-2017 operating season. Further boiler tube inspections are planned in Unit 3 for
- the fall of 2016 to substantiate the concerns and to provide additional information for
- 19 possible tube replacements. If required, tube replacements will be completed after the 2016-
- 20 2017 winter operating season.

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#### 9.0 CONCLUSION

- 23 The results of Hydro's review of the year-to-date completion status of its annual work plan for
- 24 its island interconnected system assets indicate the winter readiness milestone will be
- achieved by December 1, 2016. Hydro will continue to track all required winter readiness
- activities and will keep the Board informed on any risk to planned completion that may arise.

2016-17 Winter Readiness Plannin
APPENDIX A
Status of 2016 Capital Projects Related to Winter Readiness
Newfoundland and Labrador Hydro

Asset Category	Project Description	Expected In Service Date (for 2016 Winter Readiness Scope) September 30 Update
Thermal Generation	Turbine Generator Overhaul - Unit 3 - Holyrood	Complete
Thermal Generation	Overhaul Unit 2 Cooling Water Pump - East - Holyrood	Complete
Thermal Generation	Overhaul Unit 2 Extraction Pump - North - Holyrood	Complete
Thermal Generation	Overhaul Unit 1 Boiler Feed Pump - West - Holyrood	11/1/2016
Thermal Generation	Rewind Rotor and Install Flux Probe - Unit 3 - Holyrood	Complete
Thermal Generation	Replace Excitation Transformers - Holyrood	11/1/2016 Note 1
Thermal Generation	Purchase of 12 MW Diesel Generators - Holyrood	Complete
Thermal Generation	Replace Boiler Tubes - Unit 1 & 2 - Holyrood	11/1/2016 Note 2
Thermal Generation	Boiler Reheater Tubes - Unit 2 - Holyrood (Unforeseen)	Complete
Thermal Generation	Boiler Reheater Tubes - Unit 1 - Holyrood (Unforeseen)	Complete
Thermal Generation	Replace Air Receivers & Compressors - St. Anthony Diesel Plant	10/21/2016
Hydraulic Generation	Overhaul and Inspection - Unit 6 - Bay d'Espoir	Complete
Hydraulic Generation	Thrust Bearing Refurbishment - Units 1-6 - Bay d'Espoir	Complete
Hydraulic Generation	Overhaul and Inspection Unit 7 - Bay d'Espoir	Complete
Hydraulic Generation	Replace Generator Cooling Water Piping - Hinds Lake	11/26/2016
Hydraulic Generation	Replace Vibration Monitoring System - Unit 7 - Bay d'Espoir	Complete
Hydraulic Generation	Turbine Rehabilitation of Unit 4 - Bay d'Espoir	Complete
Hydraulic Generation	Station Service Breaker Replacement - Cat Arm	10/28/2016
Hydraulic Generation	Upgrade Work - Units 1 & 2 - Cat Arm	10/22/2016
Gas Turbines	Snow Door Overhaul - Hardwoods	Complete
Gas Turbines	Upgrade Gas Turbine Plant Life Extension - Stephenville	11/4/2016 Note 3
Gas Turbines	Gas Generator Engine Refurbishment - Hardwoods & Stephenville	11/28/2016 Note 4
Gas Turbines	Combustion Turbine Inspection and Overhaul - Holyrood	11/19/2016 Note 5
Transmission	Perform Wood Pole Management Program - Various Sites	11/15/2016 Note 6
Transmission	Insulator Replacement - TL203	Complete
Terminal Stations	Replace Interrupter Breaker B3L50 - Bottom Brook	Complete
Terminal Stations	Exciter Refurbishment - Corner Book Frequency Convertor	10/28/2016
Terminal Stations	Replace Batteries & Chargers - Various Sites	11/15/16 Note 7
<b>Terminal Stations</b>	Upgrade Terminal Stations Protection & Control - Various Sites	11/15/2016
Terminal Stations	Replace Disconnects - 2015-2016 - Various Sites	10/18/2016 Note 8
<b>Terminal Stations</b>	Upgrade Power Transformers - Various Areas	11/15/2016 Note 9
Terminal Stations	Replace Surge Arrestors - Various Areas	10/21/2016 Note 10
<b>Terminal Stations</b>	Replace Instrument Transformers - Various Areas	10/18/2016 Note 11
<b>Terminal Stations</b>	Upgrade Aluminum Support Structures - Holyrood	10/27/2016
<b>Terminal Stations</b>	Upgrade Circuit Breakers 2015-2016 - Various Sites	10/16/2016 Note 12
<b>Terminal Stations</b>	Upgrade Circuit Breakers 2016-2020 - Various Sites	11/15/2016 Note 13
Various	Purchase Critical Spares - Generating Stations	12/1/2016 Note 14

#### **NOTES**

- 1 The 2016 winter readiness scope of work is to replace excitation transformers on Units 1 and 2 at Holyrood. The work is complete for Unit 2. The work is in progress for Unit 1.
- 2 This is a supplemental project approved by the Public Utilities Board on June 10, 2016. The 2016 winter readiness scope of work includes boiler tube replacements for Units 1 and 2 at Holyrood. The work is complete for Unit 2. The work is in progress for Unit 1.
- 3 The 2016 winter readiness scope of work includes: main lube oil glycol system replacement; and exhaust stack repairs. The main lube oil glycol system replacement is complete. The exhaust stack repairs are in progress.
- 4 This is a supplemental project approved by the Public Utilities Board on June 15, 2016. The 2016 winter readiness scope of work includes the refurbishment of one engine for Hardwoods and one engine for Stephenville. Both engines are presently at the repair facility. Hardwoods is expected to be in service on November 22, 2016 and Stephenville is expected to be in service on November 28, 2016.
- 5 This is a supplemental project approved by the Public Utilities Board on September 23, 2016. The 2016 winter readiness scope of work includes a combustor inspection and overhaul of the Combustion Turbine at Holyrood. The project is in the planning and procurement phase and is expected to be completed by November 19, 2016.
- 6 The 2016 winter readiness scope of work includes work on six transmission lines. The work for five transmission lines is complete. The remaining work, for TL201, is expected to be complete by November 15, 2016.
- 7 The 2016 winter readiness scope of work includes the replacement of battery banks at two sites and the replacement of chargers at three sites. One battery bank and one charger have been replaced. The remaining battery bank to be replaced is at Buchans and the remaining chargers to be replaced are at Plum Point and Western Avalon. All of these are expected to be in service by November 15, 2016.
- 8 The 2016 winter readiness scope includes the replacement of fourteen disconnect switches, of which ten are complete. The remaining four, located at Come By Chance and Hardwoods, are expected to be completed by October 18, 2016.
- 9 The 2016 winter readiness scope of work includes transformer refurbishments at eight terminal stations and the replacement of two transformers at Bay d'Espoir and Cat Arm. Transformer refurbishments at six terminal stations are complete and the new Bay d'Espoir transformer is in service. The two remaining refurbishments are located at Upper Salmon and Hinds Lake and are expected to be completed by November 15, 2016. The new Cat Arm transformer is on site and installation is in progress with an expected in service date of October 28, 2016.
- 10 The 2016 winter readiness scope of work includes the replacement of nine surge arrester sets at seven locations. Eight of the surge arrester sets have been replaced. The ninth surge arrester set is for Stoney Brook and is expected to be in service by October 21, 2016.
- 11 The 2016 winter readiness scope of work includes the replacement of 35 instrument transformers at 12 locations. To date, 21 instrument transformers have been replaced. The remaining 14 instrument transformers to be replaced are at Holyrood, Stephenville, Massey Drive, Cat Arm, Howley and Hardwoods. All of theses are expected to be in service by October 18, 2016.
- 12 The 2016 winter readiness scope of work includes the replacement or refurbishment of twelve breakers. The work is complete for eleven breakers. The twelfth breaker is at Bay d'Espoir and is expected to be in service by October 16, 2016.
- 13 The 2016 winter readiness scope of work includes the assessment, replacement or refurbishment of ten breakers. The work for six breakers is complete. The remaining locations are Howley, Bear Cove, Plum Point and the Corner Brook Frequency Converter. The last of these is expected to be in service by November 15, 2016.
- 14 This is a supplemental project approved by the Public Utilities Board in July 2015 for the procurement of various critical spare components for several hydraulic, thermal and gas turbine generating facilities. All spare components have been received with the exception of high voltage bushings for Unit 3 at Holyrood. These bushings are expected to be received by December 1, 2016.

#### **APPENDIX B**

Status of Winter Readiness Testing of Plant and Equipment Holyrood Thermal Generating Station As of September 10, 2016





a nalcor energy company	Status of Test			
a construction of the cons	Unit 1	Unit 2	Unit 3	ВоР
Plant:				
Following Annual outages, Unit is run up, Synchronized and all Systems				
verified before Operating Status determined, as per ECC, prior to coming	S/U	✓	✓	N/A
Winter Operating Season to ensure preparedness. A Unit Load Test is	5, 5			,
performed at this time.				
Black Start Test of the black start systems is performed prior to the Winter	N/A	N/A	N/A	✓
Operating Season.			,	
Perform Megger testing of 600 volt motors prior to the Winter Operating	✓	✓	✓	✓
Season.				
Safety:				
Boiler Service Pressure Test performed as required by Regulator.	S/U	✓	✓	N/A
Safety Valves testing as required.	S/U	✓	✓	N/A
Boiler Operational Off-Line High / Low Drum Level Trip Tests.	S/U	✓	✓	N/A
Breaker & Disconnect Operation verified by Ops. Dept. & Whitbourne	A/O	✓	✓	N/A
Crew.	A/U	V	•	IN/A
Service Air and Instrument Air Systems:				
All Stationary Air Compressors available.	N/A	N/A	N/A	✓
Air Compressor operational checks performed (e.g. oil levels, cooling	N/A	N/A	N/A	✓
water, etc.)	NI/A	NI/A	NI/A	<b>√</b>
Air Compressor STBY/Sequencing capability.	N/A	N/A	N/A	•
Raw and Makeup Water System:				
Quarry Brook Dam Integrity.	N/A	N/A	N/A	✓
Raw Water Sump Water Supply Control Valve operational.	N/A	N/A	N/A	✓
Raw Water Pumps operational.	N/A	N/A	N/A	✓
Adequate supply of Chemicals (1172, 1179, Polymer, etc.).	N/A	N/A	N/A	✓
1172, 1179, Polymer Injection Pumping Sets, Pumps, valves, lines,	N1 / A	N1 / A	N1 / A	
agitators, etc. operational.	N/A	N/A	N/A	<b>√</b>
Portable Diesel Pump check of Emergency Plant Water Supply from Quarry	N/A	N/A	N/A	<b>√</b>
Brook Dam.	IN/A	IN/A	IN/A	•
Adequate & Readily available supply of Hoses for the Portable Diesel Pump	N/A	N/A	N/A	✓
from Quarry Brook Dam to Plant.	N/A	14/74	14/74	·
	1/0	/	_	
Instrumentation & Controls operational.	A/O	<b>√</b>	<b>√</b>	N/A
Instrumentation & Controls operational.  Analytical Rack Sample Cooler Filters cleaned/replaced as required.	A/O	✓	✓	N/A
Instrumentation & Controls operational.  Analytical Rack Sample Cooler Filters cleaned/replaced as required.  Analytical Rack Sample Coolers cooling water in service.	A/O A/O	✓ ✓	✓ ✓	N/A N/A
Instrumentation & Controls operational.  Analytical Rack Sample Cooler Filters cleaned/replaced as required.  Analytical Rack Sample Coolers cooling water in service.	A/O	✓	✓	N/A
Instrumentation & Controls operational.  Analytical Rack Sample Cooler Filters cleaned/replaced as required.  Analytical Rack Sample Coolers cooling water in service.  Two (2) Sample cooling water pumps availability.	A/O A/O	✓ ✓	✓ ✓	N/A N/A
Instrumentation & Controls operational.  Analytical Rack Sample Cooler Filters cleaned/replaced as required.  Analytical Rack Sample Coolers cooling water in service.  Two (2) Sample cooling water pumps availability.  Clarifier:	A/O A/O A/O	√ √ √	√ √ √	N/A N/A
Analytical Rack Sample Cooler Filters cleaned/replaced as required.  Analytical Rack Sample Coolers cooling water in service.  Two (2) Sample cooling water pumps availability.	A/O A/O	✓ ✓	✓ ✓	N/A N/A N/A

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

√ - Test completed



a nalcor energy company	Status of Test			
a design sampang	Unit 1	Unit 2	Unit 3	ВоР
Sand Filters:				
Sand Filters (#s 1, 2 & 3) Resin integrity.	N/A	N/A	N/A	✓
Sand Filters (#s 1, 2 & 3) Valve Operation (Normal & Backwashing, etc.).	N/A	N/A	N/A	✓
Two (2) Clearwell Pumps available.	N/A	N/A	N/A	✓
Demineralization System:				
Cation & Anion Trains (A, B & C) Resin integrity.	N/A	N/A	N/A	✓
Adequate supply of Chemicals (Caustic Soda, Sulphuric Acid, 1172, 1179, Polymer, etc.).	N/A	N/A	N/A	✓
Sulphuric Acid & Caustic Soda Transfer Pumps, valves, lines, etc.	N/A	N/A	N/A	✓
Sulphuric Acid & Caustic Soda Regeneration Sets, Pumps, valves, lines, etc.	N/A	N/A	N/A	✓
<u> </u>	•			
Reserve Feedwater System, 'RFW': RFW Transfer Pump Oil Normal Operating Level.	S/U	✓	✓	N/A
RFW Transfer Pumps operational.	S/U	✓	✓	N/A
Circulating Water 'CW' and Screen Wash System: Vacuum Seal Pits operational.	A/O	✓	✓	N/A
All CW Travelling Screens Operational.	A/O	✓	✓	N/A
CW Pump Motorized discharge valves 'Manual' & 'Auto', 'Cracked' Position operation verified.	A/O	✓	✓	N/A
CW Pump Motors Oil Normal Operating Level,	A/O	<b>√</b>	<b>√</b>	N/A
CW Pumps operational.	A/O	<b>√</b>	<b>√</b>	N/A
CW Pump Discharge Vacuum Breakers operational.	A/O	✓	<b>√</b>	N/A
CW Travelling Screens Wash Pumps operational.	A/O	✓	✓	N/A
Condenser Flushed.	S/U	✓	✓	N/A
Condenser Backwashed.	s/U	✓	✓	N/A
General Service 'GS' Coolers Backwashed, cleaned, etc.	A/O	✓	✓	N/A
Turbine / Generator 'TG' Coolers Backwashed, cleaned, etc.	A/O	✓	✓	N/A
Vacuum Pump Coolers Backwashed, cleaned, etc.	A/O	✓	✓	N/A
Boiler:				
Pre-Outage Valve Survey conducted of Boiler Drains.	<b>√</b>	✓	<b>√</b>	N/A
Service pressure test on boiler for tube leaks.	S/U	✓	✓	N/A
,	-, -			-,
Condenser Air Extraction System: Vacuum Pumps available & tested for STBY 'Auto-Start'.	C/11	<b>√</b>	<b> </b>	NI / A
·	S/U	<b>∨</b>	<b>∨</b>	N/A
Vacuum Pump Seal Water Tank water level controller operational.	S/U	<b>✓</b>	<b>∨</b>	N/A
Vacuum Pump Seal Water Pump operational.	S/U	<b>∨</b>	<b>∨</b>	N/A
Condenser Vacuum Breakers operational.	S/U	<b>V</b>	· ·	N/A

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

✓ - Test completed



	Status		
Unit 1	Unit 2	Unit 3	ВоР

#### High Pressure 'HP' Feedwater System:

#### **Boiler Feed Pumps:**

<u> </u>				
Boiler Feed Pumps available.	S/U	✓	✓	N/A
Boiler Feed Pump Oil Tank Normal Operating Level and checked for	C /L I	<b>√</b>	<b>√</b>	NI/A
moisture content.	S/U	'	•	N/A
Boiler Feed Pump Auxiliary Oil Pumps available.	S/U	✓	✓	N/A
Boiler Feed Pump Suction Valves & Limit Switches.	A/O	✓	✓	N/A
Boiler Feed Pump Emergency Gland Seal Injection Pump available.	S/U	✓	✓	N/A
Boiler Feed Pump Emergency Gland Seal Pump Oil Normal Operating Level.	S/U	✓	✓	N/A
Boiler Feed Pump Gland Seal Water available from the Emergency Pump	C /L L	<b>√</b>	<b>√</b>	NI/A
and Condensate Extraction Pumps.	S/U	'	•	N/A
Boiler Feed Pump Gland Seal Water Control Valve operational.	A/O	✓	✓	N/A
Boiler Feed Pump Gland Seal Water Drains Tank Level Float Operated Valve	C /L I	<b>√</b>	NI/A	NI/A
operational (Units 1 & 2).	S/U	V	N/A	N/A
Boiler Feed Pump Gland Seal Water Transfer Pumps operational (Units 1 &	S/U	<b>√</b>	N/A	N/A
2).	3/0	V	N/A	N/A
Boiler Feed Pump Gland Seal Water Drains Tank Level Control Valve	NI/A	NI/A	✓	NI/A
operational (Unit 3).	N/A	N/A	•	N/A
Boiler Feed Pump Gland Seal Water Transfer Pumps operational (Unit 3).	N/A	N/A	✓	N/A
Boiler Feed Pump Recirculation Control Valves operational.	A/O	✓	✓	N/A
Boiler Feed Pump Motorized Discharge Pilot & Main Valves operational.	A/O	✓	✓	N/A
Low Load Feedwater Isolator & Control Valves operational.	A/O	✓	✓	N/A
Main Feedwater Isolator & Control Valves operational.	A/O	✓	✓	N/A
High Pressure Heater Motorized Valves (Inlet, Outlet & Bypass) checked for	۸/٥	<b>√</b>	✓	NI/A
proper operation, sequencing, etc.	A/O	'		N/A

#### Miscellaneous:

Economizer 'Manual' Operated Valve operational.	S/U	✓	✓	N/A
Economizer Motorized Recirculation Valve operational (Unit 3).	N/A	N/A	✓	N/A
Boiler Drum Level Instrumentation operational.	S/U	✓	✓	N/A
HP Heater Bled Steam Check Valves operational.	S/U	<b>√</b>	✓	N/A
Start-up Desuperheater Steam & Water valving operation/position verified	N/A	N/A	<b>√</b>	N/A
(Unit 3).	IN/ A	IN/ A	·	IV/ A
Main Steam & Reheat Steam Desuperheater Spray Water Isolators &	A/O	<b>√</b>	1	N/A
Control Valves operational.	ζ,	•	·	N/A
Auxiliary Steam Desuperheater Spray Water Control Valve operational	N/A	N/A	1	N/A
(Unit 3).	IV/A	IN/A		IN/A

#### Low Pressure 'LP' Feedwater System:

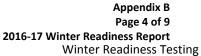
#### **Condenser:**

eonachach.				
Condenser Hotwell Make-Up/Surplus Control Valves operation verified.	A/O	✓	✓	N/A
Condenser Hotwell Make-Up Motorized Isolating Valve operation verified (Unit 3).	N/A	N/A	✓	N/A
Condenser Dye test for leaks, as required.	A/O	<b>√</b>	<b>√</b>	N/A

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

√ - Test completed



# hydro and a specific company

#### **Holyrood Thermal Generating Station**

a nalcor energy company	Status of Test				
a masar careff sembani	Unit 1	Unit 2	Unit 3	ВоР	
Ammonia & Cortrol System:					
Adequate Supply in place.	✓	✓	✓	N/A	
Pumps operational.	✓	✓	✓	N/A	
Control Instrumentation operational.	✓	✓	✓	N/A	
Condensate Extraction Pumps:					
Condensate Extraction Pumps available.	A/O	✓	✓	N/A	
Condensate Extraction Pump Motors Bearing Oil Normal Operating Level.	S/U	✓	✓	N/A	
Condensate Extraction Pump Motor Cooling Water available (Unit 3).	N/A	N/A	✓	N/A	
Condensate Polishers:					
Resin integrity verified.	✓	✓	✓	N/A	
Two (2) Polishers Rinsed and available.	✓	✓	✓	N/A	
Valve Operation (Normal & Regenerating, etc.).	✓	✓	✓	N/A	
Regeneration System Skids available (valving, pumps, blowers, tanks. Etc.).	✓	✓	✓	N/A	
Condensate Polisher Bypass Control Valve operational.	✓	✓	✓	N/A	
Low Pressure Heaters: Low Load Recirculation Control Valve operation.	A/O	✓	<b>√</b>	N/A	
Deaerator:					
Deaerator Normal Operating Level	S/U	✓	✓	N/A	
Deaerator Steam Coil operational.	S/U	✓	✓	N/A	
Deaerator Pegging Steam operational.	S/U	✓	✓	N/A	
Deaerator Low Level Trip Test.	S/U	✓	✓	N/A	
Miscellaneous:					
Condenser Flash Tank Control Valve operation/position.	S/U	✓	✓	N/A	
Turbine Low Pressure Exhaust Hood Spray Motorized Valve operation.	S/U	✓	✓	N/A	
Start-up Desuperheater Steam & Water valving operational (Units 1 & 2).	S/U	✓	N/A	N/A	
LP Heater Bled Steam Check Valves operational.	S/U	✓	✓	N/A	
Bled Steam and Heater Drains System:					
LP and HP Instrumentation and Control operational.	A/O	✓	✓	N/A	
LP and HP Heater Level Control operational.	A/O	✓	✓	N/A	
Low Pressure 'LP' Heater Condensate Drains Pumps operational.	S/U	✓	✓	N/A	
#4 High Pressure 'HP' Heater Condensate Drains Pump operational.	S/U	<b>√</b>	<b>√</b>	N/A	

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

✓ - Test completed



Appendix B
Page 5 of 9

2016-17 Winter Readiness Report
Winter Readiness Testing

a nalcor energy company	Status of Test			
	Unit 1	Unit 2	Unit 3	BoP
Air and Flue Gas System:				
nstrumentation and Control operational.	A/O	✓	✓	N/A
Forced Draft 'FD' Fans and Air Dampers:				
Two (2) FD Fans available.	S/U	✓	✓	N/A
Bearing Oil Normal Operating Level.	S/U	✓	✓	N/A
Cooling Water on to Fans.	S/U	✓	✓	N/A
Stroke Variable Inlet Vanes, 'VIVs'.	S/U	✓	✓	N/A
Stroke Discharge Dampers.	S/U	✓	✓	N/A
FD Fan Motor Variable Speed Drives operational.	S/U	✓	✓	N/A
All Burner Auxiliary Air Dampers/Positioners operation (Units 1 & 2).	S/U	✓	N/A	N/A
All Elevation Air Flow Dampers/Positioners operation (Unit 3).	N/A	N/A	<b>√</b>	N/A
Rotary Air Heaters:				
Rotary Air Heaters operational.	S/U	✓	✓	N/A
Rotary Air Heaters Bearing Oil (Top & Bottom) Normal Operating Level.	S/U	✓	✓	N/A
Rotary Air Heaters Bearing Cooling Water On.	S/U	<b>✓</b>	✓	N/A
Rotary Air Heaters Electric Motor Drives operational.	S/U	✓	✓	N/A
Rotary Air Heaters Air Supply to Air Heater Air Motor Drives Open.	S/U	<b>✓</b>	✓	N/A
Rotary Air Heaters Start-up of Air Motor Drive upon loss of AC Power	S/U	<b>√</b>	<b>√</b>	N/A
Supply to the normal operating Electric Drive Motor.	3/0	•	•	IN/A
Rotary Air Heaters Steam Supply Control Valves operational. (*Note: Two	S/U	✓	<b>√</b>	N/A
Steam Supplies on (Units 1 & 2)).	3/0	•	V	IN/A
Rotary Air Heaters Sootblowers operational.	S/U	✓	✓	N/A
Bailey Coathleysing Cyatamy				
Boiler Sootblowing System: Sootblower Control Panel operational.	۸/0	✓	<b>√</b>	NI/A
Sootblower Control Paner operational.  Sootblowers Steam Supply Control Valve operational.	A/O A/O	<b>√</b>	<b>√</b>	N/A N/A
Sootblowers Overhauled during Annual Outage Verify operation (e.g.	AyO	•	<b>,</b>	IN/ A
Rotation, Travel Advancing/Retracting from Furnace, leaks, etc.) first time	۸/۵	✓	<b>√</b>	NI/A
Unit is placed on Line.	A/O	,		N/A
Office is placed off Life.				
Light Fuel Oil System:				
Hydro Pad operational.	S/U	✓	✓	N/A
Light Oil Pumps available.	S/U	✓	✓	N/A
Pumps, Valves (including Control & Trip), lines, strainers, pressure (locally & UCB).	S/U	✓	✓	N/A
Check Light Oil Supply & Return Lines to/from Plant respectively.	A/O	✓	✓	N/A
Suction Strainers cleaned with covers secured.	A/O	✓	✓	N/A
Ignitors cleaned, securely in place with associated lines securely fastened.	A/O	✓	✓	N/A
Ignitors all checked for operation during Unit Start-up (e.g. Ignitor Control Box, Valve Operation, Lighting, etc.).	S/U	✓	<b>√</b>	N/A

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

√ - Test completed



a nalcor energy company	Status of Test				
	Unit 1	Unit 2	Unit 3	ВоР	
Fuel Oil Delivery System, Auxiliary Steam & Fuel Oil Piping System:					
Adequate Heavy Oil Storage.	N/A	N/A	N/A	✓	
Heavy Oil Piping from Dock to Tankfarm, Tankfarm to Plant Day Tank and	N/A	N/A	N/A	<b>√</b>	
Day Tank to Heavy Oil Sets.	IN/A	IN/A	IN/A	•	
Adequate Light Oil Storage.	N/A	N/A	N/A	✓	
Light Oil Piping from Road Tanker Transfer Pump to Tanks and from Tanks	NI/A	NI/A	NI/A	<b>√</b>	
to Light Oil Sets in Plant.	N/A	N/A	N/A	·	
All Storage Tanks Suction Heaters available when required.	N/A	N/A	N/A	✓	
All Storage Tanks Flatform Heaters available when required.	N/A	N/A	N/A	✓	
Auxiliary Steam for Suction Heaters available.	N/A	N/A	N/A	✓	
Auxiliary Steam for Flatform Heaters available.	N/A	N/A	N/A	✓	
Auxiliary Steam for Heat Tracing available.	N/A	N/A	N/A	✓	
Electrical Heat Tracing for Fuel Oil Lines available.	N/A	N/A	N/A	✓	
Day Tank Supply Line Trip Valve Tested.	N/A	N/A	N/A	✓	
Day Tank available to receive oil.	N/A	N/A	N/A	✓	
Day Tank steam coil available.	N/A	N/A	N/A	✓	
Fuel (Heavy) Oil System: Fuel Oil Heating Sets:	A/O	<b>✓</b>	<b>✓</b>	N/A	
Fuel Oil Heaters available.	A/O	<b>√</b>	<b>√</b>	N/A	
Fuel Oil Heaters cleaned and inspected.	A/O	<b>√</b>	<b>√</b>	N/A	
Steam Supply to Heavy Oil Set Heaters available as required.	A/O	<b>√</b>	<b>√</b>	N/A	
Fuel Oil Heaters Temperature Steam Control Valve operational.	A/O	✓	✓	N/A	
Suction Strainers cleaned (including standby & extras) with covers	A/O	<b>√</b>	<b>✓</b>	N/A	
secured.	A /O	/	<b>√</b>	N1 / A	
Fuel Oil Accumulator operational.	A/O	✓ ✓	<b>∨</b>	N/A	
Fuel Oil Pumps available.	A/O	<b>✓</b>	<b>∨</b>	N/A	
Pumps 'Auto-Start' check Off-Line.	A/O	<b>V</b> ✓	<b>✓</b>	N/A	
Header Pressure Control Valve operational.	A/O	<b>✓</b>	<b>✓</b>	N/A	
Fuel Oil Meter operational.	S/U	<b>V</b>	<b>V</b>	N/A	
Fuel Oil Supply Control, Trip, Long & Short Recirculation Valves:					
Fuel Oil Supply Control Valve operational.	S/U	✓	✓	N/A	
Fuel Oil Trip Valve operational.	S/U	✓	✓	N/A	
uel Oil Long Recirculation Valve operational (Units 1 & 2).	S/U	✓	N/A	N/A	
Fuel Oil Short Recirculation Valve operational (Units 1 & 2).	S/U	✓	N/A	N/A	
Elevation Fuel Oil Trip Valves operational (Unit 3).	N/A	N/A	✓	N/A	
Elevation Fuel Oil Minimum Supply Control Valves operational (Unit 3).	N/A	N/A	✓	N/A	
Elevation Fuel Oil Supply Control Valves operational (Unit 3).	N/A	N/A	✓	N/A	
Main Fuel Oil Recirculation Valve operational (Unit 3).	N/A	N/A	✓	N/A	
	<del> </del>	<del> </del>	<del>                                     </del>	· ·	

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

Elevation Recirculation Valves operational (Unit 3).

√ - Test completed

N/A - Not Applicable

N/A



a nalcor energy company	Status of Test			
a market and M. sembanii	Unit 1	Unit 2	Unit 3	BoP
Burners:				
All Burners cleaned, securely in place with associated lines securely	A/O	<b>√</b>	<b>√</b>	N/A
fastened.	AyO	,	,	IN/ A
All Burners checked for operation during Unit Start-up (e.g.	S/U	✓	<b>√</b>	N/A
Advancing/Retracting, Valve Operation, Lighting, etc.).	3/0	,	,	IN/ A
All Burner Tilts checked for operation (Units 1 & 2).	S/U	✓	N/A	N/A
General Service 'GS' System:		_		
GS Heat Exchangers Backwashed, cleaned, etc.	N/A	N/A	✓	N/A
Stage I GS Plate Cooler Strainers cleaned.	A/O	✓	N/A	N/A
Stage I GS 'Auto-Clean' Strainer operational.	A/O	✓	N/A	N/A
Stage I GS Duplex Strainers cleaned.	A/O	✓	N/A	N/A
GS Pump Suction Strainers cleaned.	A/O	✓	✓	N/A
GS Pump Oil Normal Operating Level.	A/O	✓	✓	N/A
GS Pumps available & tested for STBY 'Auto-Start'.	A/O	✓	✓	N/A
Turbine/Generator 'TG' Auxiliary Cooling System:				
TG Head Tank Normal Operating Level.	S/U	✓	✓	N/A
Turbine Lube Oil Coolers operational.	S/U	✓	✓	N/A
TG Heat Exchangers Backwashed, cleaned, etc.	A/O	✓	✓	N/A
TG Pump Oil Normal Operating Level.	S/U	✓	✓	N/A
TG Pumps available & tested for STBY 'Auto-Start'.	S/U	✓	✓	N/A
Turbine Generator 'TG' System:				
Hydraulic System Units 1 & 2:				
Hydraulic System Accumulators operational.	A/O	✓	N/A	N/A
Hydraulic System Storage Tank Normal Operating Level and checked for	C/11	<b>√</b>	NI/A	NI/A
moisture content.	S/U	*	N/A	N/A
Hydraulic System Storage Tank air purging of moisture in place.	S/U	✓	N/A	N/A
Hydraulic Set Primary, Secondary Filter indications ok.	S/U	✓	N/A	N/A
Two (2) Hydraulic Fluid Pumps availability.	S/U	✓	N/A	N/A
Hydraulic Pump Auto Start Testing.	S/U	✓	N/A	N/A
Two (2) Hydraulic Fluid Pump Coolers availability.	S/U	✓	N/A	N/A
·	•	•	<u> </u>	
Valves:				
Turbine Main Stop Valve Testing (Units 1 & 2).	S/U	✓	N/A	N/A
Turbine Two (2) Main Stop Valves Testing (Unit 3).	N/A	N/A	√	N/A
Turbine 'Left-Hand' & 'Right Hand' Reheat Stop & Intercept Control Valve			,	
Testing verified.	S/U	<b>✓</b>	<b>✓</b>	N/A
Turbine Six (6) Main Control Valve operation (Units 1 & 2).	S/U	✓	N/A	N/A
		<del>l .</del>	<del>'</del> ,	<del></del> _

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

N/A

S/U

N/A

A/O - Annual Outage

Turbine Four (4) Main Control Valve operation (Unit 3).

Turbine Blowdown Valve operation.

√ - Test completed

N/A - Not Applicable

N/A

N/A

**Status of Test** 



### **Holyrood Thermal Generating Station**

a naicor energy company		Status	OI IESE	
	Unit 1	Unit 2	Unit 3	ВоР
Lubricating System:				
Lube Oil Tank Normal Operating Level and checked for moisture content.	S/U	✓	✓	N/A
Lube Oil Tank Oil Centrifuge operational (Unit 3).	N/A	N/A	✓	N/A
Portable Centrifuge operational.	A/O	✓	✓	N/A
Lube Oil Tank Vapor Extractor operation.	S/U	✓	✓	N/A
Bowser Oil Conditioner Vapor Extractor Operation (Units 1 & 2).	S/U	✓	N/A	N/A
Two (2) AC Lube Oil pumps available & tested for STBY 'Auto-Start' (Units 1 & 2).	S/U	✓	N/A	N/A
DC Pump Testing & Starting from UCB (Units 1 & 2).	S/U	✓	N/A	N/A
Verify Discharge Pressure of EACH AC Lube Oil Pumps (Locally & UCB) (Units 1 & 2).	S/U	✓	N/A	N/A
Verify Discharge Pressure of DC Lube Oil Pump (Locally & UCB) (Units 1 & 2).	S/U	✓	N/A	N/A
Jacking Oil Pump Testing & Starting from UCB (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of Jacking Oil Pump (Locally & UCB).	N/A	N/A	✓	N/A
Auxiliary Oil Pump 'AOP' Testing & Starting from UCB & Turbine Lube Oil Tank (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of AOP Pump (Locally & UCB) (Unit 3).	N/A	N/A	✓	N/A
AC Pump Testing & Starting from UCB & Turbine Lube Oil Tank (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of AC Flushing Oil Pump (Locally & UCB) (Unit 3).	N/A	N/A	✓	N/A
DC Pump Testing & Starting from UCB & Turbine Lube Oil Tank (Unit 3).	N/A	N/A	✓	N/A
Verify Discharge Pressure of DC Flushing Oil Pump (Locally & UCB) (Unit 3).	N/A	N/A	✓	N/A
Barring/Turning Gear Low Oil Pressure Trip Test.		✓	✓	N/A
Barring/Turning Gear:				
Turning Gear operation verified.	S/U	✓	✓	N/A
Perform trip test of Turning Gear.	S/U	✓	✓	N/A
Miscellaneous:				
Steam Seal Regulator operational.	S/U	✓	✓	N/A
Operational On-Line/Off-Line Overspeed Trip Tests.	✓	✓	✓	N/A
Hydrogen 'H2' & Carbon Dioxide 'CO2' System:				
H2 and CO2 systems in operation.	N/A	N/A	N/A	✓
Adequate H2 Bulk Packs on hand.	N/A	N/A	N/A	✓
CO2 Adequate Bulk Packs on hand.	N/A	N/A	N/A	✓
·				

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

√ - Test completed

N/A - Not Applicable



## Holyrood Thermal Generating Station

a nalcor energy company		Status	of Test	
s most energy sempony	Unit 1	Unit 2	Unit 3	ВоР
Generator:	•	1	ı	•
Generator Exciter Operation checked Off & On Line.	A/O	✓	✓	N/A
Seal Oil System tested with 'Air' on Generator in preparation for Leak	A/O	✓	✓	N/A
Testing. Seal Oil Regulator operational.	A/O	<b>√</b>	<b>√</b>	N/A
AC Seal Oil pumps available & tested for STBY 'Auto-Start' (Units 1 & 2).	S/U	<b>√</b>	N/A	N/A
AC Seal Oil Pump available (Unit 3).	N/A	N/A	N/A   ✓	N/A
DC Seal Oil Pump available & tested for STBY 'Auto-Start'.	S/U	- N/A - ✓	<b>√</b>	N/A
Seal Oil Vacuum Pumps available.	S/U	· ✓	· ✓	N/A
Vacuum Tank Level Control operational.	S/U	√ ·	· ✓	N/A
Leak Testing Performed prior to 'Gassing Up' Generator.	S/U	√ ·	· ✓	N/A
Purity, Dew Point, etc. Instrumentation operation verified.	S/U	· ✓	· ✓	N/A
Powerhouse and Switchyard Single Line: Plant 129V System: 129V Battery Banks checked Stage I & II.	<b>✓</b>	<b>✓</b>	<b>✓</b>	N/A
129V Battery Chargers checked Stage I & II.	✓	✓	✓	N/A
258V Battery Banks checked Stage I & II. 258V Battery Chargers checked Stage I & II.  Plant Uninterrupted Power Supplies 'UPS':	✓ ✓	✓ ✓	✓ ✓	N/A N/A
Number's 1, 2, 3 & 4 'UPS' Power Supplies including Batteries, Cooling Fans, etc., checked.	<b>✓</b>	<b>✓</b>	✓	N/A
Emergency Diesel Generators:				
Stage I & II Emergency Diesel Generators Tested for Emergency Stop.	✓	✓	✓	N/A
Stage I & II Emergency Diesel Generators Tested for Manual & Auto-Start Operation along with Auto Breaker Closure as well as Emergency Manual Closing of Breakers.	<b>✓</b>	<b>✓</b>	<b>✓</b>	N/A
Diesel Bus Tie Breaker, 'DBT' operation verified.	✓	✓	✓	N/A
Holyrood Main Powerhouse:	1			,
Back-Up ECC and Guardhouse Propane Generator.	N/A	N/A	N/A	✓
Plant Air Conditioning System:				
Control & Relay Rooms.	N/A	N/A	N/A	✓
Uninterrupted Power Supply 'UPS' #1 Room.	N/A	N/A	N/A	✓
Generator Excitation and 'UPS' #s 2, 3 & 4 Room (Unit 3).	N/A	N/A	N/A	✓
	, ,	,	,	
Plant Heating Steam: All Systems operational for when required.	N/A	N/A	N/A	<b>√</b>
An systems operational for when required.	IN/A	IN/A	IN/A	

S/U - Start-up. Final confirmation completed during Start Up. When possible, test also completed during Annual Outage.

A/O - Annual Outage

√ - Test completed

N/A - Not Applicable

## **APPENDIX C**

Status of Winter Readiness Testing of Plant and Equipment
Hydraulic Generation
As of September 10, 2016

newfoundland labrador					Status	of Test			
hudro									
a nalcor energy company									
states states someon	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Bop PH 1	BoP PH 2
Following Annual outages, Unit is run up, Synchronized									
and all Systems verified before Operating Status									
determined, as per ECC, prior to coming Winter Operating	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>✓</b>	21/2	N1 / A
Season to ensure preparedness. A Unit Load Test is	•	•	•	v	•		•	N/A	N/A
performed at this time.									
Black Start Test of the black start systems is performed								,	,
prior to the Winter Operating Season. Station service	N/A	✓	✓						
transfers alternate sources.									
Spherical Valves:									
Turbine Main Stop Valve Testing	✓ ✓	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	N/A	N/A	N/A
Turbine Main Stop Valve Operational	<b>✓</b>	✓	✓	✓	✓	✓	N/A	N/A	N/A
Service Air, Instrument Air Systems Compressors:								<b>√</b>	,
All Stationary Air Compressors available	N/A	<b>√</b>	✓						
Air Compressor operational checks performed (e.g. oil	N/A	✓	✓						
levels, cooling water, etc.)	,					,			
Air Compressor STBY/Sequencing capability/Lead	N/A	✓	✓						
Lag/Standby									
HP compressors available	N/A	✓	<b>√</b>						
LP compressor available	N/A	<b>√</b>	✓ ✓						
Instrumentation Control and Alarms operational	N/A	<b>V</b>	<b>V</b>						
TG Cooling Water Systems:	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>	21/2	<b>√</b>	21/2
Cooling water pumps available	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	N/A	<b>✓</b>	N/A ✓
Emergency Cooling water available Penstock Supply	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	N/A ✓	<b>✓</b>	<b>✓</b>
Cooling water system available	<b>∨</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>∨</b>		<b>✓</b>	
TG Pumps available & tested for Auto/manual Start.	<b>∨</b>	<b>✓</b>	<b>∨</b>	<b>✓</b>	<b>✓</b>	<b>∨</b>	N/A ✓		N/A
Shaft seal system available	· ·	<b>v</b>	<b>v</b>	<b>v</b>	<b>v</b>	· ·	<b>v</b>	N/A	N/A
CW Pump Motorized discharge valves 'Manual' & 'Auto',	N/A								
'Cracked' Position operation verified. GCI/HIk									
Rotary Strainer inspected and available	N/A								

newfoundland labrador					Status	of Test			•
budro					Status	or rest			
rigulo									
a nalcor energy company	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Bop PH 1	BoP PH 2
Turbine Generator Governor System:	Oille	Offic 2	Oint 3	Oilit 4	Onics	Onico	Oille 7	DOPTHI	DOLLIL
Hydraulic System Accumulators operational	<b>√</b>	N/A	N/A						
Governor System Testing	√ ·	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	✓ ·	<b>√</b>	N/A	N/A
Governor System Available	· /	· /	· /	·	<i>'</i>	·	<b>√</b>	N/A	N/A
Hydraulic pump(s) available	· ✓	· /	· /	· ✓	<b>√</b>	<i>√</i>	<b>√</b>	N/A	N/A
Hydraulic Pump Gov Auto Start Testing	√ ·	· ✓	<b>√</b>	✓ ·	✓	<b>√</b>	<b>√</b>	N/A	N/A
Generator:	1							NA	NyA
Generator Exciter Operation checked Off & On Line	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	✓	<b>√</b>	<b>√</b>	N/A	N/A
Generator Exciter Available	<b>√</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	N/A	N/A
Lubricating System:	I.					l		,,,	,
Portable Centrifuge operational	✓	✓	✓	✓	✓	✓	✓	✓	✓
Portable oil Pump (Jacking)	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>	N/A	N/A
Oil level system generator metering available	<b>√</b>	✓	✓	✓	✓	✓	✓	N/A	N/A
Oil level system turbine metering available	<b>√</b>	✓	✓	✓	✓	✓	✓	N/A	N/A
AC High pressure Jacking Oil Pump available automatic		_	_	_	_				
	N/A	N/A	N/A	N/A	N/A	N/A	✓	N/A	N/A
Switchyard/Terminal Station	1	1	1	1		1		1	
Breakers and Disconnects Operational	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Breaker & Disconnect Operation verified by Ops. Dept. &		,	,	,		,	,		•
TRO Bishops Falls	✓	✓	✓	✓	S/U	✓	✓	N/A	N/A
Intake	1					l .			
Water elevation	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Trashrack system	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Gate operation	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Surge Tank				•					
Heating system	N/A	15-Nov	N/A						
Alarm Systems	N/A	15-Nov	N/A						
Spillway									
Water elevation	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Gate Heating/Ice Away unit	N/A	15-Nov	N/A						
Gate operation	N/A	✓	N/A						
Emergency(back-up) Diesel Generator	N/A								
Emergency lift operation and tested	N/A	✓	N/A						
Battery Banks And Battery Chargers									
Plant 129V System:									
129 V Battery Banks checked	N/A	✓	✓						
129 V Battery Chargers	N/A	✓	✓						
129 V battery Banks Available	N/A	✓	✓						
Plant 48V System:									
48V Battery Banks checked	N/A	✓	N/A						
Plant Uninterrupted Power Supplies 'UPS':					1				
'UPS' Power Supplies (Inverter NWS).	N/A	✓	N/A						
Emergency Diesel Generators:					1				
Emergency Diesel Generators Tested for Emergency Stop.	N/A	✓	N/A						
Emergency Diesel Generators Tested for Manual & Auto-									
Start Operation along with Auto Breaker Closure as well	N/A	✓	N/A						
as Emergency Manual Closing of Breakers.									
Alternate AC sources available	N/A	✓	✓						
Station Services Available	N/A	✓	✓						
Transfer alternate source	N/A	✓	✓						
Plant Air Conditioning System:	•								
Control Rooms	N/A								
Communications Rooms	N/A	<i>'</i>	N/A						
Plant Heating Steam:									-
All Systems operational for when required	N/A	✓	✓						
							•		



		Sta	atus of To							
	Cat Arm		HI	LK	U	SL	G	CL	PF	RV
Unit 1	Unit 2	Bop PH	Unit 1	Вор	Unit 1	Вор	Unit 1	Вор	Unit 1	Вор

Following Annual outages, Unit is run up, Synchronized and all Systems verified before Operating Status determined, as											
per ECC, prior to coming Winter	14-Oct	7-Oct	N/A	18-Nov	✓	28-Oct	N/A	✓	N/A	✓	N/A
Operating Season to ensure	2.000	, 000	.,,,	10		20 000	.,,,,		.,,,		11,71
preparedness. A Unit Load Test is											
performed at this time.											
Black Start Test of the black start systems											
is performed prior to the Winter	,	,			,			,	,		
Operating Season. Station service	✓	<b>✓</b>	14-Oct	18-Nov	✓	<b>✓</b>	✓	✓	<b>✓</b>	✓	<b>√</b>
transfers alternate sources.											
Spherical Valves:											
Turbine Main Stop Valve Testing	14-Oct	7-Oct	N/A								
Turbine Main Stop Valve Operational	14-Oct	7-Oct	N/A								
Service Air , Instrument Air Systems											
Compressors:											
All Stationary Air Compressors available	<b>✓</b>	✓	✓	<b>✓</b>	✓	<b>✓</b>	✓	<b>√</b>	<b>√</b>	✓	✓
Air Compressor operational checks											
performed (e.g. oil levels, cooling water,	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
etc.)											
Air Compressor STBY/Sequencing	<b>√</b>										
capability/Lead Lag/Standby	•	•	•	•	•	•	•	•	•	•	•
HP compressors available	✓	<b>✓</b>	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A
LP compressor available	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Instrumentation Control and Alarms	<b>✓</b>	_	<b>✓</b>	<b>✓</b>	1	\ \ \	<b>~</b>	<b>√</b>	<b>√</b>	1	<b>√</b>
operational.	'						•				



		Sta	atus of To	est						
	Cat Arm		Н	LK	U	SL	G	CL	PF	RV
Unit 1	Unit 2	Bop PH	Unit 1	Вор	Unit 1	Вор	Unit 1	Вор	Unit 1	Вор

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TG Cooling Water Systems:											
Cooling water pumps available	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A
Emergency Cooling water available	<b>√</b>	✓	<b>√</b>	<b>✓</b>	✓	N/A	N/A	N/A	N/A	N/A	N/A
Penstock Supply										·	
Cooling water system available	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TG Pumps available & tested for	<b>√</b>	✓	<b>√</b>	<b>✓</b>	✓	N/A	N/A	N/A	N/A	N/A	N/A
Auto/manual Start	•	•	•	•	•	IN/A	IN/A	IN/A	N/A	N/A	IN/A
Shaft seal system available	N/A	N/A	N/A	✓	✓	✓	N/A	✓	✓	✓	✓
CW Pump Motorized discharge valves											
'Manual' & 'Auto', 'Cracked' Position	✓	✓	✓	✓	✓	✓	✓	$\checkmark$	✓	✓	✓
operation verified											
Rotary (Water) Strainer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Turbine Generator Governor System:											
Hydraulic System Accumulators											
operational	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Governor System Testing	14-Oct	7-Oct	N/A	18-Nov	N/A	28-Oct	N/A	<b>√</b>	N/A	✓	N/A
Governor System Available	14-Oct	7-Oct	N/A	18-Nov	N/A	28-Oct	N/A	<u> </u>	N/A	· ✓	N/A
Hydraulic pump(s) available	14-Oct	7-Oct	N/A	18-Nov	N/A	28-Oct	N/A	<b>√</b>	N/A	· ✓	N/A
Hydraulic Pump Gov Auto Start Testing	14-000	7-000	N/A	10-1107	IN/A	20-000	IN/A	•	IN/A	•	IN/A
Hydraulic Pullip Gov Auto Start Testing	14-Oct	7-Oct	N/A	18-Nov	N/A	28-Oct	N/A	✓	N/A	✓	N/A
Generator:											
Generator Exciter Operation checked Off	14-Oct	7-Oct	N/A	18-Nov	N/A	28-Oct	N/A	$\checkmark$	N/A	✓	N/A
& On Line											
Lubricating System:			21/2		21/2		21/2		21./2		21/2
Portable Centrifuge operational	<b>√</b>	✓	N/A	<b>✓</b>	N/A	<b>√</b>	N/A	<b>√</b>	N/A	✓	N/A
Portable oil Pump (Jacking)	✓	✓	N/A	<b>√</b>	N/A	<b>√</b>	N/A	<b>√</b>	N/A	✓	N/A
Oil level system generator metering	✓	✓	N/A	<b>√</b>	N/A	✓	N/A	<b>√</b>	N/A	✓	N/A
Oil level system turbine metering	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	✓	N/A
AC High pressure Jacking Oil Pump	14-Oct	7-Oct	N/A	18-Nov	N/A	28-Oct	N/A	✓	N/A	N/A	N/A
available automatic			,				,		,	,	,
Miscellaneous:											
Breaker & Disconnect Operation verified	14-Oct	7-Oct	✓	18-Nov	✓	28-Oct	✓	✓	✓	✓	✓
by Ops. Dept. & TRO Crew											
Control structure											
Water elevation	N/A	N/A	N/A	N/A	✓	N/A	N/A	N/A	N/A	N/A	N/A
Gate Operation	N/A	N/A	N/A	N/A	✓	N/A	N/A	N/A	N/A	N/A	N/A
Intake											
Water elevation	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	<b>✓</b>	N/A
Trashrack system	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Gate operation	✓	✓	N/A	✓	N/A	✓	N/A	✓	N/A	✓	N/A
Spillway/By-Pass											
Water elevation	N/A	N/A	N/A	N/A	✓	N/A	✓	N/A	✓	✓	N/A
Gate Heating/Ice Away unit	N/A	N/A	N/A	N/A	15-Nov	N/A	15-Nov	N/A	15-Nov	N/A	N/A
Gate operation	N/A	N/A	N/A	N/A	✓	N/A	✓	N/A	✓	N/A	N/A
Emergency (back-up) Diesel Generator							,			·	
0. 1, (1.1. 1),	N/A	N/A	N/A	N/A	✓	N/A	✓	N/A	N/A	N/A	N/A
Emergency lift operation and tested	N/A	N/A	N/A	N/A	<b>√</b>	N/A	<b>√</b>	N/A	N/A	N/A	N/A
Battery Banks And Battery Chargers	,,,,	,,,	,,,,	, , ,		,,,		,,,	,/,	, , ,	,,,
Plant 129V System:											
129V Battery Banks checked	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>
129V Battery Chargers	<i>'</i>	<b>✓</b>	·	· ·	✓ ·	<b>✓</b>	·	<u> </u>	·	· ✓	<b>✓</b>
129V battery Banks Available	<b>√</b>	<b>√</b>	<b>✓</b>	<b>→</b>	<b>√</b>	<b>✓</b>	<b>✓</b>	<u>√</u>	<b>✓</b>	<b>✓</b>	<b>→</b>
		•		<del>                                     </del>	•	•	•	•	,	•	,
Plant 48V System: 48V Battery Banks checked	<b>√</b>	<b>√</b>	<b>√</b>	<b>✓</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>
	_ •	_		+ -	_	•	•	•	•	•	•
Emergency Diesel Generators:				-							
Emergency Diesel Generators Tested for	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Emergency Stop											

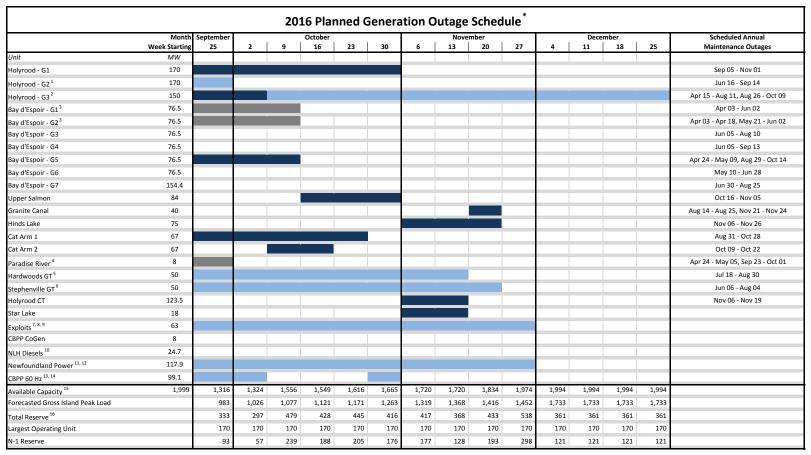


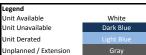
		Sta	atus of T	est						
	Cat Arm		Н	LK	U:	SL	G	CL	PF	RV
Unit 1	Unit 2	Bop PH	Unit 1	Вор	Unit 1	Вор	Unit 1	Вор	Unit 1	Вор

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Emergency Diesel Generators Tested for Manual & Auto-Start Operation along with Auto Breaker Closure as well as Emergency Manual Closing of Breakers.	✓	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>*</b>	✓	<b>*</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>
Alternate AC sources available	✓	1	-/	_	<b>✓</b>	1	_		1	<b>√</b>	
								<u> </u>			· ·
Station Services Available	<b>✓</b>	✓	✓	✓	✓	<b>√</b>	✓	✓	✓	<b>✓</b>	<b>√</b>
Transfer alternate source	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Plant Air Conditioning System:											
Control Rooms	✓	✓	✓	✓	15-Nov	✓	28-Oct	✓	✓	✓	✓
Communications Rooms	N/A	N/A	✓	N/A	✓	✓	28-Oct	N/A	✓	✓	✓
Plant Heating Steam:											
All Systems operational for when	,			,				,			
required	<b>&gt;</b>	<b>~</b>	~	*	<b>V</b>	✓	<b>~</b>	<b>V</b>	<b>~</b>	<b>~</b>	<b>V</b>

# **APPENDIX D**

Master Generation Outage Schedule September 1 to December 31, 2016





#### Notes:

- <sup>1</sup> Holyrood Unit 2 derated to 150 MW pending safety valve test (Reference PUB Advisory 2016-H-212-a-Updated(2))
- <sup>2</sup> Holyrood Unit 3 unavailable since September 19, 2016. The unit was previously derated to 135 MW de to aging super heater and reheater tubes (Reference PUB Advisory 2016-H-133-a-Updated)
- <sup>3</sup> Bay d'Espoir Units 1 and 2 unavailable due to a penstock leak (Reference PUB Advisory 2016-H-320-a).
- <sup>4</sup> Paradise River Unit unavailable due to an O-ring failure in the governor servo motor (Reference PUB Advisory 2016-H-348-a).
- <sup>5</sup> Hardwoods Gas Turbine End A derated to 38 MW due to a temporarily installed leased engine (Reference PUB Advisory 2015-H-057).
- <sup>6</sup> Stephenville Gas Turbine End A unavailable due to a vibration issue (Reference PUB Advisory 2016-H-083-a).
- <sup>7</sup> Nalcor Exploits Grand Falls Unit 4 unavailable for a major refurbishment (Reference PUB Advisory 2016-H-245-a).
- <sup>8</sup> Nalcor Exploits Grand Falls Unit 7 unavailable runner damage (Reference PUB Advisory 2016-H-012-a-(Rev 1) Updated).
- 9 Nalcor Exploits Bishop's Falls Units 7 and 9 unavailable due to turbine bearing repairs and failed turbine coupling respectively (Reference PUB Advisory 2016-H-288-a Updated).
- $^{10}$  24.7 MW include Hawke's Bay (5 MW), St. Anthony (9.7 MW), and Holyrood Diesels (10 MW).
- <sup>11</sup> NP Greenhill Gas Turbine (20 MW) unavailable. Expected return to service date is October 15, 2016.
- <sup>12</sup> NP Wesleyville Gas Turbine (10 MW) unavailable. Expected return to service date is December 01, 2016.
- $^{13}$  Deer Lake Power 60 Hz generation derated to 88 MW from July 31, 2016 to October 10, 2016 due to 60 Hz unit outage.
- <sup>14</sup> Deer Lake Power 60 Hz generation derated to 81 MW from October 24, 2016 to October 28, 2016 due to frequency converter outage.
- 15 As of December 01, planned Vale Diesels capacity of 10.8 MW is included in Available Capacity. A pre-winter capacity test is require to prove capacity up to 10.8 MW.
- <sup>16</sup> December's Total Reserves reflect the planned agreements for CBPP Capacity Assistance (80 MW) and System Voltage Reduction (20 MW).

<sup>\*</sup> Preventative/Corrective Maintenance items that require short duration outages are not reflected in this chart. They are planned in conjunction with system operation for an appropriate time

2016-17 Winter Readiness Planning
APPENDIX E
Critical Spares Status Listing – Thermal Generation
Newfoundland and Labrador Hydro

	Asset				
System	Sub System	Asset	Defined Spares Parts	Status Update - September 30, 2015	Status Update - Sept 2016
Fire Protection System	Electrical Driven Pump	Pump	Pump		Repair Parts in Stock
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping	Valves	Day Tank TripValve	8" Butterfly Valve and Actuator		In Stock
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping		Day Tank Trip Valve	Actuator	On Order	In Progress
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping		Fuel Line Block Valve	16" Gate Valve		In Stock
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping		Day Tank Fill Line Control valve	6" Control Valve	In Stock	In Stock
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping		,	Actuator	On Order	In Stock
Hydrogen Generation and Storage	Valves	Motorized Valves	1/2 " Valve	X	In Stock
Hydrogen Generation and Storage	Tubing		Tubing - See Parts List # COM - 1	In Stock	In Stock
Powerhouse and Switchyard Single Line	129V DC System	Charger	Repair Parts	On Order	In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Cation Valve - KV2205C	In Stock	In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Cation Valve - KV2206C	III Stock	In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Anion Valve - KV3205C		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Anion Valve - KV3205C Anion Valve - KV3206C	1	In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Cation Valve - KV2203C	1	In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Cation Valve - KV2203C		In Stock
		-	Cation Valve - KV2207C	+	In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Cation valve - KVZZOZC		
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Cation Valve - KV2208C		In Progress Same Valve as Anion Valve - KV3208C and Mixed Bed Valve - KV4011A
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Anion Valve - KV3203C		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Anion Valve - KV3207C		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Anion Valve - KV3202C		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Anion Valve - KV3208C		In Progress Same Valve as Cation Valve - KV2208C and Mixed Bed Valve - KV4011A
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4003B		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4004A		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4005B		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4006B		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4007B		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4008B		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4009B		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4010A		In Stock
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - KV4011A		In Progress Same Valve as Anion Valve - KV3208C and Cation Valve - KV2208C
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Mixed Bed Valve - PCV4071		Non-Stock Used also in Non-Critical applications which can be 'borrowed' if required.
Raw and Makeup Water System & Water Treatment Plant	Demineralization System	Instrumentation/Controls	Sodium Monitor		Non-Stock Upgraded to Model 2111LLEN, Maintenance parts stocked, Used also in Non-Critical applications which can be 'borrowed' if required.
Raw and Makeup Water System & Water Treatment Plant	Clarifier	Agitator	Frequency Drive		In Stock
Raw and Makeup Water System & Water Treatment Plant	Clarifier	Agitator	Recirculator - Double Induction Speed Reducer - In Stock		In Stock
Fuel Oil Delivery System Aux. Steam & Fuel Oil Piping		Dock Quick Closing Valves	18 " Butterfly Valve	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Fire Protection System	Electrical Driven Pump	Control Panel	Fire Pump Controller	Expect to replace the control panel in Q1, 2016. A replacement panel is on site and is available in the event of any failure.	Complete. A replacement panel is on site and is available in the event of any failure.
Powerhouse and Switchyard Single Line	129V DC System	Future 2015 129 VDC Panel - Unit 1, 2, 3. Common	Breakers	2015 Capital Project.	Complete - Installed Spares available

	Asset				
			Define Spares Parts		
System	Sub System	Asset	Defined Spares Parts	Status Update - September 30, 2015	Status Update - Sept 2016
Circulating Water and Screen Wash System	CW Discharge Valves	Butterfly Valve	36" Butterfly Valve		In Stock
Circulating Water and Screen Wash System	CW Discharge Valves	Butterfly Valve	Actuator		In Progress Common Part with Stage 2
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Network Interface Modules		In Stock
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Master Fuel Trip Relays		In Stock
Combustion Air & Gas Instruments	Burner Management	Burner Automation	DCS Control Processor		In Stock
Combustion Air & Gas Instruments	Burner Management	Flame Scanners	24Vdc Scanner Power Supply		In Stock
Combustion Air & Gas Instruments	Burner Management	Air Flow Transmitters	Transmitter		In Stock
Combustion Air & Gas Instruments	Burner Management	Oil Flow Transmitter	Transmitter - Unit 1		One spare E.O. Flow TV for
Combustion Air & Gas Instruments	Burner Management	Oil Flow Transmitter	Sensor - Unit 2		One spare F.O. Flow TX for both units
Combustion Air & Gas Instruments	Burner Management	Oil Flow Transmitter	Transmitter - Unit 2		both units
Condenser Air Extraction System	Vacuum Breakers		6' Flanged		In Stock
Generator	Seal Oil System	Seals	See Parts List #U1&2 - 1 from Service Contractor		In Stock
Generator	Exciter	Bridges	See OEM Parts List #U1&2 - 2		Repair parts stocked
Generator	Exciter	Channels	See OEM Parts List		Repair parts stocked
Generator	Stator	PT Cubicle	Primary Contact for Generator P.T.		In Stock
Generator	Seal Oil System	Regulator	1.5" Regulating Valve	Not critical to unit operation.	In Stock
Ignitor Light Oil and Air Supply	Light Oil	Trip Valve	1" Valve		In Stock
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Ignition Transformer		In Stock
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Sunspot		In Stock
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Valve Assembly / Oil Igniter		In Stock
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Level Transmitters		In Stock
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Aquarian Alarm Modules	Aquarian Alarm Modules	
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Relays		In Stock
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Solenoid		In Stock
L.P. Feedwater System	L.P. Heater Controls (Water Induction Protection)		Conductivity Probe	Conductivity Probe	
L.P. Feedwater System	Deaerator System	Level Control	Level Switch		In Stock
L.P. Feedwater System	Deaerator System	Level Control	Level Transmitter		In Stock

Asset			Define Spares Parts		
System	Sub System Asset		Defined Spares Parts	Status Update - September 30, 2015	Status Update - Sept 2016
L.P. Feedwater System	Deaerator System	Level Control	Relay		In Stock
L.P. Feedwater System	Ammonia System		Bulk Chemical		In Stock
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Non-Return Valve		In Stock
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Gaskets		In Stock
L.P. Feedwater System	Deaerator System	NRV Valves (2)	O-Rings		In Stock
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Packing		In Stock
L.P. Feedwater System	Deaerator System	NRV Valves (2)	Seal washers		In Stock
L.P. Feedwater System	L.P. Heaters	NRV Valves	Non-Return Valve		In Stock
L.P. Feedwater System	L.P. Heaters	NRV Valves	Gaskets		In Stock
L.P. Feedwater System	L.P. Heaters	NRV Valves	O-Rings		In Stock
L.P. Feedwater System	L.P. Heaters	NRV Valves	Packing		In Stock
L.P. Feedwater System	L.P. Heaters	NRV Valves	Seal washers		In Stock
L.P. Feedwater System	Polisher Bypass Valve		Valve		In Stock
L.P. Feedwater System	Condensate Polishers (Units 1, 2)	Valves	3" Valves		In Stock
L.P. Feedwater System	Condensate Polishers (Units 1, 2)	Valves	2" Valves		In Stock
Main Steam & Reheat Steam; Turbine Drains	Vacuum Trip Device		Pressure Transmitter - Unit 1		In Stock
Powerhouse and Switchyard Single Line	258V DC System	Unit 1 & 2 Field Breakers	Field Breaker		In Stock
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - cable assemblies		In Stock
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 50 gal. Intercept Control Valve Servos		In Stock
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 50 gal. Main Control Valve Servos		In Stock
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 6 gal. Intercept Control Valve Servos (scram)		In Stock
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - 6 gal. Main Stop Valve Servos		In Stock
Turbine Generator System Stage 1	Governor	Governor	Linear Variable Differential Transducer for Intercept Control Valve & Main Control Valve		In Stock
Turbine Generator System Stage 1	Governor	Governor	Linear Variable Differential Transducers for 1 per Main Stop Valve		In Stock

	Asset		Define Spares Parts		
System	Sub System	Asset	Defined Spares Parts	Status Update - September 30, 2015	Status Update - Sept 2016
Turbine Generator System Stage 1	Governor	Governor	Trip Manifold Assembly (TMA) - Unit 2 OEM \Parts list #U1&2 -4 List of OEM recommended		In Stock
Turbine Generator System Stage 1	Governor	Governor	Go Switch - Limit Switches		In Stock
Turbine Generator System Stage 1	Governor	Governor	Fluid Power Products		In Stock
Turbine Generator System Stage 1	Turbine Lube Oil System	DC Oil Pump	Pump		In Stock
Turbine Generator System Stage 1	Turbine Lube Oil System	DC Motor	Motor		In Stock
Turbine Generator System Stage 1	Turbine Lube Oil System	Pressure Switches	Switch		In Stock
Turbine Generator System Stage 1	Hydraulic Fluid System	Fluid Pumps	Pump		In Stock
Turbine Generator System Stage 1	Turbine Lube Oil System	AC Oil Pumps	Pump		Repair parts stocked
Turbine Generator System Stage 1	Turbine Lube Oil System	AC Motor	Motor		In Stock
Turbine Generator System Stage 1	Turbine Lube Oil System	Pressure Switch 2	Switch		In Stock
Turbine Generator System Stage 1	Steam Seal Regulator		Main Steam Valve - Actuator Repair Kit - Unit 1 & 2		Repair Parts Stocked
Turbine Generator System Stage 1	Steam Seal Regulator		Main Steam Control Valve - Repair Kit - Unit 1 & 2		Repair Parts Stocked
Turbine Generator System Stage 1	Steam Seal Regulator		Dump Control Valve - Actuator - Repair Kit - Unit 1 & 2		Repair Parts Stocked
Turbine Generator System Stage 1	Steam Seal Regulator		Dump Control Valve - Body - Repair Kit - Unit 1 & 2		Repair Parts Stocked
Turbine Generator System Stage 1	Steam Seal Regulator		Dump Control Valve - Body - Valve Cage - Unit 1 & 2		Repair Parts Stocked
Units 1 & 2 Air & Flue Gas	Furnace Pressure TX (Trip)		Pressure Transmitter		In Stock
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Baskets	See OEM Parts List #U1&2- 6		Repair Parts Stocked
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Rotating Element & Bearings	See OEM Parts List #U1&2- 6		Repair Parts Stocked
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Drive System	See OEM Parts List #U1&2- 6		Repair Parts Stocked
Units 1 & 2 Air & Flue Gas	Rotary Air Heaters	Soot Blowers	See OEM Parts List #U1&2- 6		Repair Parts Stocked
Units 1 & 2 Fuel Oil System	Combustion Control Valve	Combustion Control Valve	2" Flanged Valve		In Stock
Units 1 & 2 Fuel Oil System	Atomizing Steam Valve	Atomizing Steam Valve	2" Flanged Valve		In Stock
Units 1 & 2 Fuel Oil System	Main Fuel Oil Trip Valve	Main Fuel Oil Trip Valve	Flanged Valve		In Stock
Units 1 & 2 Fuel Oil System	Header Pressure Control Valve	Header Pressure Control Valve	1 1/2 " Valve		Repair Parts Stocked
Units 1 & 2 Fuel Oil System	Fuel Oil Pumps	Fuel Oil Pumps	PUMP,IMO C324		In Stock
Units 1 & 2 Fuel Oil System	Mechanical Seal	Mechanical Seal	Seal		In Stock
Units 1 & 2 Fuel Oil System	Short Recirculation Valve	Short Recirculation Valve	Welded Flange		Repair Parts Stocked
Units 1 & 2 Fuel Oil System	Long Recirculation Valve	Long Recirculation Valve	Welded Valve		Repair Parts Stocked

	Asset		Define Spares Parts		
System	Sub System Asset		Defined Spares Parts	Status Update - September 30, 2015	Status Update - Sept 2016
Units 1 & 2 Fuel Oil System	Fuel Oil Heaters	Fuel Oil Heaters	Gaskets		In Stock
Units 1 & 2 Fuel Oil System	Fuel Oil Heaters	Fuel Oil Heaters	Tube Bundles		Annual Inspection plus online Check
Units 1 & 2 Fuel Oil System	Burners	Oil Valve	Oil, Steam & Scavenge Valves - All Same		In Stock
Units 1 & 2 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve - Unit 1	See Pats List #U1&2-8		Repair Parts Stocked
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps - Unit 1 E & W	Pump or Parts		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Unit 2 E & W	Pump		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Rotating Assembly		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Volute casing for rotating assembly		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Throttle bushing (2 req'd)		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Sleeve bearing		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Balance bushing		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Thrust bearing		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Pump Parts	Gaskets		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Main Feedwater Low Load Control Valve	See Parts List #U1&2-9		Repair Parts Stocked
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit #1 - All HP Heaters	Level Transmitters		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 2 - HP Heater # 4 & 6	Leve Transmitter		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 2 -HP Heater # 5	Level Transmitter		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit 1 - All HP Heaters	Aquarian Alarm Modules		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit #2 - Heater # 4 & 6	Aquarian Alarm Modules		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 2 -HP Heater # 5	Aquarian Alarm Modules		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit 1 & 2 - All HP Heaters	Conductivity Probe		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit # 1 & 2 - All HP Heaters	Relay		In Stock
Units 1 & 2 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	Unit 1 & 2	Solenoid		In Stock

Asset			Define Spares Parts		
System	Sub System	Asset	Defined Spares Parts	Status Update - September 30, 2015	Status Update - Sept 2016
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Suction Valve Limit Switch	Oil Tight Limit Switch		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Suction Valve	10" Valve		Repair Parts Stocked
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	Motorized Bypass Valves	8" Valve		Repair Parts Stocked
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	NRV Valves - Heater # 4	8"- 150#		Repair Parts Stocked
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	NRV Valves - Heater # 5	8"- 300#		Repair Parts Stocked
Units 1 & 2 H.P. Feedwater System	H.P. Heaters	NRV Valves - Heater # 6	8"- 600#		Repair Parts Stocked
Units 1 & 2 H.P. Feedwater System	Steam Drum	Level Control Transmitters	Level Transmitter		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Suction Line Safety Valve	1/2" x 1" Valve		In Stock
Units 1 & 2 H.P. Feedwater System	Boiler Feed	Boiler Feed Recirculation Valve to DA	4" Valve		In Stock
Combustion Air & Gas Instruments	Burner Management	Positioner	2.5" x 5 "Pneumatic Power Positioner (Hagan) In Stock		In Stock
L.P. Feedwater System	Condensate Extraction Pumps		See OEM Parts List -# U1&2 - 3		Repair Parts Stocked
Powerhouse and Switchyard Single Line	258V DC System	Cable			Available Locally
Turbine Generator System Stage 1	Governor	Governor	Mark 5 System - speed probes		In Stock
Turbine Generator System Stage 1	Turbine Lube Oil System	Pressure Switch 1	Switch		In Stock
Turbine Generator System Stage 1	Steam Seal Regulator		Main Steam Control Valve - Positioner - Unit 2		Repair Parts Stocked
Condenser Air Extraction System	Mechanical Vacuum Pumps	Motor	Motor		In Stock
Generator	Stator	PT Cubicle	Potential Transformer (PT)		In Stock
	Stator	Stand Off Insulators	Stand Off Insulator	Tier 2 Critical Spare - Additional Engineering Required	In Progress
Turbine Generator System Stage 1	Governor	Governor	Truck V-Fast Cables		In Stock
Generator	Rotor	Rotor	Rotor	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Status Quo
Generator	Rotor	Rotor Poles	Rotor Poles	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Status Quo

	Asset				
System	Sub System	Asset Defined Spares Parts		Status Update - September 30, 2015	Status Update - Sept 2016
Generator	Stator		Stator and Brush Rigging Assembly	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Status Quo
Generator	Stator	Stator Poles	Stator Poles	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Status Quo
Units 1 & 2 Air & Flue Gas	F.D. Fans	Unit 1& 2 - Fans	See Parts List #U1&2 - 5 - from OEM	Predictive and preventative maintenance plus condition monitoring are utilized to maintain the FD Fans, mitigating the requirement for whole spare replacements.	Status Quo
Powerhouse and Switchyard Single Line	258V DC System	Panel	Breakers	Capital Project in 2015.	Complete - Spares onsite
Powerhouse and Switchyard Single Line	258V DC System	Unit 1 & 2 - Rectifying Transformers	Rectifying Transformer	Capital Project in 2016.	Replacement Transformers are onsite to be installed. Capital spare planned for 2017
Powerhouse and Switchyard Single Line	258V DC System	Charger	Breakers	Capital Project in 2015.	Complete - Spares onsite
Powerhouse and Switchyard Single Line	258V DC System	Charger	Charger	Capital Project in 2015.	Repair Parts Stocked

	Asset		Dofino Spares Barts	T	
	Asset		Define Spares Parts		
System	Sub System	Asset	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Circulating Water and Screen Wash System	CW Discharge Valves	Valve	36 ' Butterfly Valve	Common with Units 1 & 2	Stocked
Circulating Water and Screen Wash System	CW Discharge Valves	Actuator	CW Butterfly Valve Actuator	Common with Units 1 & 2	In Progress Same as Stage 1
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Network Interface Modules		Stocked
Combustion Air & Gas Instruments	Burner Management	Burner Automation	Master Fuel Trip Relays	Tier 1 Critical Spare - Addition to Inventory process in progress	Stocked
Combustion Air & Gas Instruments	Burner Management	Burner Automation	DCS Control Processor	p. 18-300	Stocked
Combustion Air & Gas Instruments	Burner Management	Elevation Oil Flow Transmitter	Meter & Transmitter	Tier 1 Critical Spare - Addition to Inventory process in progress	Stocked
Combustion Air & Gas Instruments	Burner Management	Elevation Air Dampers	Positioner		Stocked
Condenser Air Extraction System	Vacuum Breakers		6" Flange Vacuum Breaker		Stocked
Generator	Rotor		Rotor	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Rotor	Rotor Poles		Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Stator		Stator and Brush Rigging Assembly	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Stator		Stator and Brush Rigging Assembly	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Stator	Stator Poles		Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.	Predictive and preventative maintenance plus condition monitoring and condition assessments are used to maintain and extend the life of the generator.
Generator	Synchronous Condensor	Thrust Bearing	See Parts List & Estimate by Supplier - #U3-1	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Generator	Seal Oil System	Seals	Regulator	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Generator	Exciter	Bridges	See OEM Parts List -# U3- 2	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Generator	Exciter	Channels	See Above		In Stock
Generator	Stator	Stand Off Insulators		Tier 2 Critical Spare - Additional Engineering Required	In Progress
Generator	Stator	PT Cubicle	Potential Transformer (PT)	Tier 2 Critical Spare - Additional Engineering Required	In Stock
Generator	Stator	PT Cubicle	Fuse		In Stock
Generator	Exciter	Rectifying Transformer	Rectifying Transformer	Capital Project in 2016	Predictive and preventative maintenance plus condition monitoring and condition assessments are used.
Generator	Exciter	Field Breaker	Field Breaker	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Ignitor Light Oil and Air Supply	Light Oil	Trip Valve	1" Ball Valve	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Ignitor Light Oil and Air Supply	Light Oil	Igniter Control Box	Light Oil / Air Supply Solenoid Valve		In Stock
Ignitor Light Oil and Air Supply		Igniter Control Box	Purge Solenoid Valve		In Stock
Ignitor Light Oil and Air Supply		Igniter Control Box	Pneumatic Actuator		In Stock

Subs System  Sub System  Asset  Asset  Defined Sparrs Part  Spring Uniform  Sp		Asset		Define Spares Parts		
	System	Sub System	Asset		•	•
gener tagke Dam Ann Supply  prior Light Clark of Ann Supply  prior Control Rax  pr	Ignitor Light Oil and Air Supply		Igniter Control Box	Ignition Transformer		In Stock
genter Light Oil and Air Supply  Level Transmitter IP Hoster AI  An Avairan Mann Modulus  progress  progre	Ignitor Light Oil and Air Supply		Igniter Control Box	Relay		In Stock
gener Legislater System (Processor System Institute Courtral Base)  Procedurater System System (Processor System Institute Courtral Base)  Procedurater System System (Processor System System Institute Courtral Base)  Procedurater System System (Processor System System System Institute Courtral Base)  Procedurater System System (Processor System System System System System System	Ignitor Light Oil and Air Supply		Igniter Control Box	Sunspot - Scanner		In Stock
personant process process of the pro	Ignitor Light Oil and Air Supply		Igniter Control Box	Snap Action Switch		In Stock
Perdebuter System   Market Control (Water Industrial Projecte Its   Market C	Ignitor Light Oil and Air Supply		Igniter Control Box	1/4" Light Oil Air Ball Valves		In Stock
Predevater System Protection Prot	L.P. Feedwater System	-		Level Transmitter LP Heater #1		In Stock
Predevater System Protection	L.P. Feedwater System			Aquarian Alarm Modules		In Stock
P. Feedwater System D. P. Feedwater System Protection Protection D. P. Feedwater System Desartor System Stage 2 Desart	L.P. Feedwater System	-		Solenoid	Duplicate	In Stock
Precedures System Desertor System Used Control Level Switch Desertor System Used Control Desertor System Used Desertor Used Desertor Used Desertor System Used Desertor	L.P. Feedwater System	Protection)		Relay		In Stock
Level Switch Predevater System Osearator System Stage 2 Osearator Osearator System	L.P. Feedwater System			Conductivity Probe		In Stock
### Percentarer System   Dearstor System   Level Control   Level Transmitter   Solemoid   Duplicate   In stock	L.P. Feedwater System	Deaerator System	Deaerator	Gauge Glasses		In Stock
LP. Feedwater System Amonia System (and System) Level Control Valves (believe Control Valves (believe Control Valves) (be	L.P. Feedwater System	Deaerator System				In stock
P. Feedwater System   Ammonia System   Condensate Pollshers (Units 1, 2, 3)   Control Valves   R. Valves   R. Valves   P. Valves   R. Va	L.P. Feedwater System		Level Control	Solenoid	Duplicate	In stock
P. Feedwater System Condensate Polishers (Units 1, 2, 3) Control Valves 8° Valve 1. In Stock  P. Feedwater System 1. P. Heaters NRV Valves - #1 U Pleater 20° Ib 1. In Progress 1. P. Feedwater System 1. P. Heaters NRV Valves - #1 U Pleater 24° Ib 1. In Progress 1. P. Feedwater System 1. Deaerator System NRV Valves - #1 U Pleater 24° Ib 1. In Progress 1. P. Feedwater System 1. Deaerator System NRV Valves (2) 14° Ib ion DA 1. In Progress 1. P. Feedwater System 1. Deaerator System NRV Valves (2) 14° Ib ion DA 1. In Progress 1. P. Feedwater System 1. Deaerator System 1. Safety Valves 1. In Stock 1. In St	L.P. Feedwater System	Deaerator System	Level Control	Level Transmitter		in Stock
P. Feedwater System D. F. Heaters NRV Valves - H2 - LP Heater P. Feedwater System D. F. Feedwater System D. Feedwater System Stage 2 D. Covernor D. Feedwater System Stage 2 D. C	L.P. Feedwater System	Ammonia System		Bulk Chemical Tote Tank		In Stock
P. Feedwater System   Deaerator System   Safety Valves   F' Valves   In Stock	L.P. Feedwater System	Condensate Polishers (Units 1, 2, 3)	Control Valves	8" Valve		In Stock
P. Feedwater System Deaerator System Safety Valves Parts to Repair Predwater System Condensate Polishers (Units 1, 2, 3) Valves 3" Valves 3" Valves 3" Valves Not critical to unit operation. NA Overblouse and Switchyard Single Line 258V DC System Coverblouse and Switchyard Single Line 258V DC System Coverblous	L.P. Feedwater System	L.P. Heaters	NRV Valves - #2 - LP Heater	20"Dia		In Progress
P. Feedwater System Deaerator System Polisher Bypass Valve Parts to Repair Parts to Repair Polisher Bypass Valve Parts on Repair Parts stocked Parts on Repair Parts on Repair Parts stocked Parts stocked Parts on Repair Parts stocked Parts stocked Parts on Repair Parts stocked Par	L.P. Feedwater System	L.P. Heaters	NRV Valves - #1 LP Heater	24" Dia		In Progress
P. Feedwater System Deserator System Slage 2 Governor Governor Speed Governor Governor Speed Governor System Slage 2 Governor Governor Speed Governor Governor Speed Governor System Slage 2 Governor Governor Speed Gov	L.P. Feedwater System	Deaerator System	NRV Valves (2)	14" Dia on DA		In Progress
P. Feedwater System Condensate Polishers (Units 1, 2, 3) Valves 3"Valves 1" In Stock  P. Feedwater System Condensate Polishers (Units 1, 2, 3) Valves 2"Valves 1" Not critical to unit operation. Not not not critical to unit operation. Not n	•			6" Valves		
P. Feedwater System Condensate Polishers (Units 1, 2, 3) Valves 2" Valves 1" See OEM Pats List # U3-4 Powerhouse and Switchyard Single Line 258V DC System Charger Coverhouse and Switchyard Single Line 258V DC System Covernor System Stage 2 Governor Covernor System Stage 2 Governor Covernor System Stage 2 Governor Covernor See Hitachi Parts List # U3-5 for Speed Governor Assembly Cludine Generator System Stage 2 Governor Covernor See Hitachi Parts List # U3-6 for Speed Governor Assembly Cludine Generator System Stage 2 Covernor Covernor See Hitachi Parts List # U3-6 for Speed Governor Assembly Cludine Generator System Stage 2 Covernor Covernor See Hitachi Parts List # U3-5 for Speed Governor Assembly Cludine Generator System Stage 2 Covernor Covernor Covernor Covernor Covernor Covernor Covernor See Hitachi Parts List # U3-6 for Speed Governor Assembly Cludine Generator System Stage 2 Covernor Coverno	·		,	Parts to Repair		
Admin Steam & Reheat Steam; Turbine Drains  Vacuum Unloading Device  See OEM Pats List # U3-4  Not critical to unit operation.  N/A  Powerhouse and Switchyard Single Line  258V DC System  Charger  Capital Project in 2016  Repair Parts Stocked	L.P. Feedwater System		Valves	3" Valves		In Stock
Coverhouse and Switchyard Single Line 258V DC System Charger Breaker Capital Project in 2016 Panel Replaced - Spares onsite Proventious and Switchyard Single Line 258V DC System Charger Capital Project in 2016 Repair Parts Stocked Turbine Generator System Stage 2 Governor Governor Drive Assembly See Hitachi Parts List # U3-5 for Governor Drive Assembly See Hitachi Parts List # U3-15 for Speed Governor Assembly See Hitachi Parts List # U3-15 for Speed Governor Assembly See Hitachi Parts List # U3-15 for Dad Limit Handwheel Assembly See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-7 for Speed Load Charger Assembly See Hitachi Parts List # U3-7 for Speed Load Charger Assembly See Hitachi Parts List # U3-8 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-8 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-8 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-8 for Load Charger Assembly See Hitachi Parts List # U3-8 for Speed Load Charger Assembly See Hitachi Parts List # U3-8 for Speed Load Charger Assembly See Hitachi Data Speed Load Charger Assembly Speed Load Charger Assembly See Hitachi Data Speed Load Charger Assembly Speed Load Charge	L.P. Feedwater System	Condensate Polishers (Units 1, 2, 3)	Valves	2" Valves		In Stock
Powerhouse and Switchyard Single Line 258V DC System Governor Governor See Hitachi Parts List # U3-5 for Governor System Stage 2 Governor Governor See Hitachi Parts List # U3-18 for Speed Governor Assembly Governor Assembly Furbine Generator System Stage 2 Governor Governor Delman Furbine Generator System Stage 2 Governor Governor Delman Furbine Generator System Stage 2 Governor Governor Governor Assembly Governor Assembly Speed Load Charger Assembly Furbine Generator System Stage 2 Governor G	Main Steam & Reheat Steam; Turbine Drains	Vacuum Unloading Device		See OEM Pats List # U3-4	Not critical to unit operation.	N/A
Powerhouse and Switchyard Single Line 258V DC System Governor Governor See Hitachi Parts List # U3-5 for Governor System Stage 2 Governor Governor See Hitachi Parts List # U3-18 for Speed Governor Assembly Governor Assembly Furbine Generator System Stage 2 Governor Governor Delman Furbine Generator System Stage 2 Governor Governor Delman Furbine Generator System Stage 2 Governor Governor Governor Assembly Governor Assembly Speed Load Charger Assembly Furbine Generator System Stage 2 Governor G	Powerhouse and Switchyard Single Line	258V DC System	Charger	Breaker	Capital Project in 2016	Panel Replaced - Spares onsite
Furbine Generator System Stage 2 Governor Governor Governor Drive Assembly See Hitachi Parts List # U3-5 for Governor Drive Assembly See Hitachi Parts List # U3-5 for Speed Governor Drive Assembly See Hitachi Parts List # U3-8 for Speed Governor Assembly Turbine Generator System Stage 2 Governor Governor  See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly Turbine Generator System Stage 2 Governor  See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly Turbine Generator System Stage 2 Governor  See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly Turbine Generator System Stage 2 Governor  See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly See Hitachi Parts List # U3-6 for Speed Governor Assembly See Hitachi Parts List # U3-6 for Load Limit Handwheel Assembly Turbine Generator System Stage 2 Governor  See Hitachi Parts List # U3-7 for Speed Load Charger Assembly Parts List # U3-8 Parts List # U3-8 Parts List # U3-8 Parts List # U3-8 Parts List # U3-17  See Elitachi Parts List # U3-11 for progress Not practical to have in stock as device requires calibration prior to replacement.  Repair Parts stocked	Powerhouse and Switchyard Single Line					
Furbine Generator System Stage 2 Governor Governor Governor Governor Governor Governor Speed Governor Assembly Furbine Generator System Stage 2 Governor Gov	Turbine Generator System Stage 2		Governor	See Hitachi Parts List # U3-5 for	Tier 2 Critical Spare - Addition to Inventory process in	·
Furbine Generator System Stage 2 Governor Governor See Hitachi Parts List #U3-6 for Load Limit Handwheel Assembly Progress Turbine Generator System Stage 2 Governor See Hitachi Parts List #U3-7 for Speed Load Charger Assembly Progress Turbine Generator System Stage 2 Governor Electrical Trip Test Device Solenoid Trip - See Hitachi OEM Parts list #U3-8 Parts list #U3-8 Turbine Generator System Stage 2 Governor Mechanical Overspeed Trip Device Turbine Generator System Stage 2 Turbine Lube Oil System Displayment of AC Pump Device Pump - 2 Recommended Parts Device See Hitachi Parts List #U3-1 for pump - 2 Recommended Parts Device Pump - 2 Recommend	Turbine Generator System Stage 2	Governor	Governor	See Hitachi Parts List # U3-18 for	Tier 2 Critical Spare - Addition to Inventory process in	In Stock
Furbine Generator System Stage 2 Governor Electrical Trip Test Device Speed Load Charger Assembly progress In Stock  Furbine Generator System Stage 2 Governor Electrical Trip Test Device Parts list #U3-8  Furbine Generator System Stage 2 Governor Mechanical Overspeed Trip Device Parts List #U3-17  Furbine Generator System Stage 2 Turbine Lube Oil System DC Lube (Flushing) Oil Pump Same for AC Pump Same for AC Pump AC Pump - 2 Recommended Parts Stock Seed Load Charger Assembly progress In Stock  Speed Load Charger Assembly progress  Tier 2 Critical Spare - Addition to Inventory process in progress  Not practical to have in stock as device requires calibration prior to replacement.  Not practical to have in stock as device requires calibration prior to replacement.  Repair Parts stocked	Turbine Generator System Stage 2	Governor			Tier 2 Critical Spare - Addition to Inventory process in	In Stock
Furbine Generator System Stage 2 Governor  Mechanical Overspeed Trip Device Farts list #U3-8 Parts list #U3-8 Parts list #U3-8 Parts List #U3-17 Parts List #U3-17 Furbine Generator System Stage 2  Turbine Lube Oil System  DC Lube (Flushing) Oil Pump Same for AC Pump  DC Lube (Flushing) Oil Pump Same for pump - 2 Recommended Parts  DC Lube (Flushing) Oil Pump Same for pump - 2 Recommended Parts	Turbine Generator System Stage 2	Governor				In Stock
Furbine Generator System Stage 2 Governor Mechanical Overspeed Trip Device Parts List #U3-17 calibration prior to replacement. prior to replacement.  Furbine Generator System Stage 2 Turbine Lube Oil System DC Lube (Flushing) Oil Pump Same for AC Pump Same for pump - 2 Recommended Parts Stocked Pump - 2 Recommended Parts Stocked Parts Parts Parts Stocked Parts Parts Parts Parts Parts Stocked Parts P	Turbine Generator System Stage 2	Governor	Electrical Trip Test Device			In Stock
AC Pump pump - 2 Recommended Parts	Turbine Generator System Stage 2	Governor	Mechanical Overspeed Trip Device			1
'urbine Generator System Stage 2 Turbine Lube Oil System DC Lube (Flushing) Oil Pump Auto Start Pressure Switch In Stock	Turbine Generator System Stage 2	Turbine Lube Oil System				Repair Parts stocked
	Turbine Generator System Stage 2	Turbine Lube Oil System	DC Lube (Flushing) Oil Pump	Auto Start Pressure Switch		In Stock

	Asset		Define Spares Parts		
System	Sub System	Asset	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Turbine Generator System Stage 2	Turbine Lube Oil System	DC Lube (Flushing) Oil Pump	Motor	Tier 2 Critical Spare - Addition to Inventory process in progress	Weekly Checks to Monitor Condition
Turbine Generator System Stage 2	Turbine Lube Oil System	Shaft Driven Oil Pump	See Hitachi Parts List #U3-9 for Pump - 6 recommended Parts	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Turbine Generator System Stage 2	Turbine Lube Oil System	Auxiliary Oil Pump	See Hitachi Parts List #U3-10 for Pump - 3 recommended Parts		In Stock
Turbine Generator System Stage 2	Main Steam Chest Assembly	Control Valve - Upper	See OEM list & Quote see list #U3- 12	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Turbine Generator System Stage 2	Main Steam Chest Assembly	Control Valve - Lower	See OEM list & Quote see list #U3- 13	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Turbine Generator System Stage 2	Main Steam Chest Assembly	Stop Valves	See 2 OEM lists & Quotes List #U3 - 14	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Turbine Generator System Stage 2	Reheat Steam Chest Assembly	Reheat/ICV Valves	See 4 OEM lists & Quotes - List #U3- 15	- Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Pressure Transmitter - Unit 3		In Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Main Steam Control Valve - Actuator - Unit 3		Repair Parts in Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Main Steam Control Valve - Body - Unit 3		Repair Parts in Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Main Steam Control Valve - Positioner - Unit 3		Repair Parts in Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Aux Steam Control Valve - Actuator - Unit 3		Repair Parts in Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Aux Steam Control Valve - Body - Unit 3		Repair Parts in Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Dump Control Valve - Actuator - Repair Kit - Unit 3		Repair Parts in Stock
Turbine Generator System Stage 2	Steam Seal Regulator		Dump Control Valve - Body - Repair Kit - Unit 3		Repair Parts in Stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Series 8500 size 95 w/ 95" @ 100% width wheel	Repair materials in stock	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Series 8500size 95 w/ 95" @ 100%width Shaft	Repair materials in stock	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Drive side bearing	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Opposite side bearing	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		2 - Temperature probes installed in bearings	Not critical to unit operation.	N/A
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Falk Steelflex coupling		In Stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		2 - Independent bearing pedestals	Not critical to unit operation.	N/A
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		2 - bearing sole plates	Not critical to unit operation.	N/A
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		outlet damper	Repair materials in stock	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		variable inlet vanes	Repair materials in stock	Repair materials in stock
Unit 3 Air & Flue Gas	F.D. Fans (EFD)		Inlet Silencer	Repair materials in stock	Repair materials in stock
Unit 3 Air & Flue Gas	Rotary Air Heaters	Gearbox	Gearbox	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Unit 3 Air & Flue Gas	Rotary Air Heaters	Pneumatic Drive System	Air Drive Motor		In Stock
Unit 3 Air & Flue Gas	O2 Analyzers		Analyzer - In stock		In Stock
Unit 3 Air & Flue Gas	O2 Analyzers		Probe - In Stock		In Stock
Unit 3 Fuel Oil System		Main Fuel Oil Trip Valve	4" Type ET Class 300	Tier 1 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked

	Asset		Define Spares Parts		
				Status Update -	Status Update -
System	Sub System	Asset	Defined Spares Parts	September 30, 2015	September 23, 2016
Unit 3 Fuel Oil System		Combustion Control Valves	1 1/2 " flanged valve w/ actuator	Tier 1 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked
Unit 3 Fuel Oil System		Atomizing Steam Valve	2" Type ED Class 300	Tier 1 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked
Unit 3 Fuel Oil System		Level Fuel Oil Trip Valves (3)	2-1/2" Flanged (?) Ball Valve cw/ Actuator	Tier 1 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked
Unit 3 Fuel Oil System		Header Pressure Control Valve	1-1/2" - Welded Flanged	Tier 1 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked
Unit 3 Fuel Oil System		Fuel Oil Pumps	Pump		Repair Parts Stocked
Unit 3 Fuel Oil System		Main Fuel Oil Recirculation Valve	1" Welded Flange Valve w/ Actuator	Tier 2 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked
Unit 3 Fuel Oil System		Level Fuel Oil Recirculation Valves	3/4" Welded Valve w/ Actuator	Tier 2 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked
Unit 3 Fuel Oil System	Burners	Oil Valve	1/2"Ball Valve	Tier 1 Critical Spare - Addition to Inventory process in progress	Repair Parts Stocked
Unit 3 Fuel Oil System	Burners	Steam Valve	1" Valve		Repair Parts Stocked
Unit 3 Fuel Oil System	Burners	Scavenge Valve	1" Valve		Repair Parts Stocked
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Rotating Assembly		In Stock
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Volute casing for rotating assembly		In Stock
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Throttle bushing   (2 req'd)		In Stock
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Sleeve bearing (2 req'd)		In Stock
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Balance bushing		In Stock
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Thrust bearing		In Stock
Unit 3 H.P. Feedwater System	Boiler Feed	Boiler Feed Pumps	Gaskets		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	6" - EHT valve 1500lb - Welded		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 10A5411X022 -Seal Ring		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 13A5599X052 - O-Ring		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 26A52990X52 - Seat Ring Retainer		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 27A2798X042 - Seat Ring, O- Ring		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 42B3570X012 - Cage, Eq%		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 36A5366X062 - Plug/Stem Bal		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	2 - 26A5314X012 - Gasket		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1J872906332 - Upper Wiper		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1J873435072 - Packing Box Ring		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1R290601012 - Packing Set		In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 1H7441X0022 - Bushing Seal	Tier 1 Critical Spare - Addition to Inventory process in progress	In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - 2R6376X0082 - Diaphragm	Tier 1 Critical Spare - Addition to Inventory process in progress	In Stock
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	Main Feed Water Control Valve	1 - R667X000802 - Repair Kit	Tier 1 Critical Spare - Addition to Inventory process in progress	In Stock
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)	All HP Heaters	Conductivity Probe		In Stock
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Aquarian Alarm Module		In Stock
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Level Transmitter		In Stock
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Relay	Common with Units 1 & 2	In Stock

# Appendix E Page 12 of 25 2016-17 Winter Readiness Report

	Asset		Define Spares Parts		
System	Sub System	Asset	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Unit 3 H.P. Feedwater System	H.P. Heater Controls (Water Induction Protection)		Solenoid	Common with Units 1 & 2	In Stock
Unit 3 H.P. Feedwater System	H.P. Heaters	Motorized Bypass Valves	10" Dia		In Stock
Unit 3 H.P. Feedwater System	H.P. Heaters	NRV Valves - #6 HP Heater	6" Dia		In Progress
Unit 3 H.P. Feedwater System	H.P. Heaters	NRV Valves - #5 HP Heater	8" Dia		In Progress
Unit 3 H.P. Feedwater System	H.P. Heaters	NRV Valves - #4 HP Heater	10" Dia		In Progress
Unit 3 H.P. Feedwater System	Boiler Feed	Motorized Discharge Valves	8" Dia Valve		In Stock
Unit 3 H.P. Feedwater System	Steam Drum	Level Control Transmitters	Transmitter		In Progress
Unit 3 H.P. Feedwater System	Feed Water Flow Controls	LL Control Valve	Valve	_	Repair Parts Available
Unit 3 H.P. Feedwater System	Boiler Feed	Suction Line Safety Valve	1/2" Dia		In Stock
Unit 3 H.P. Feedwater System	Boiler Feed	DA Recirculation Block Valve	4" Gate Valve	Not critical to unit operation.	N/A
Unit 3 H.P. Feedwater System	Boiler Feed	DA Recirculation Block Valve	Actuator	Not critical to unit operation.	N/A

		Asset				T
System		Ass	et	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)		Feeder to MCC E1 - breaker C4	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)		Feeder to MCC C12 - breaker C7	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Feeder to Power Centre - breaker C14	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Feeder to Power Centre - breaker C15	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C3	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C5	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C6	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C8	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C9	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock

		Asset				
System		Ass	et	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C10	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C11	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C12	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		breaker C13	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12 (Alternate Feeds Diesel Generator D1, Diesel Bus Tie, Tie Breaker to Transfer Bus C15)	Circuit Breaker to Bus - breaker C16	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12 (Alternate Feeds Diesel Generator D1, Diesel Bus Tie, Tie Breaker to Transfer Bus C15)	Circuit Breaker to Bus - breaker C17	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12	Feeder to MCC - breaker C18	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12 (Alternate Feeds Diesel Generator D1, Diesel Bus Tie, Tie Breaker to Transfer Bus C15)	Circuit Breaker to Bus - breaker C19	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Station Board SB12 (SSB1)				SSB-3 Relay	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock

		Asset				<del>,</del>	
System		Asset			Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)			Relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Station Board SB12 (SSB1)					Feeder to transformer ATC - breaker SSB-3	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A	In Stock
Station Board SB12 (SSB1)					SSB-4 Relay	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Station Board SB12 (SSB1)					SSB-4 Relay	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Station Board SB12 (SSB1)					Feeder to Station Board - breaker SSB-2	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A	In Stock
Station Board SB12 (SSB1)					Feeder to Station Board - breaker SSB-4	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			Feeder to Boiler Area MCC BAB3 - breaker SDB-34	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			GPB34	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			AC34	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			CWP34	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			LDP34	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			WTP34	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			Feeder to Diesel Bus DB34 - Breaker DB34	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)	Diesel Bus DB34 (Alternate Feeds Diesel Generator D2, Diesel Bus Tie)		Feeder to Diesel Bus - D2	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock

	T	Asset				
System		Ass	set	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)	Diesel Bus DB34 (Alternate Feeds Diesel Generator D2, Diesel Bus Tie)	Feeder to Diesel Bus - DBT	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Station Board SB34 (ST34)				breaker ST34 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Station Board SB34 (ST34)				breaker ST34 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Station Board SB34 (ST34)				breaker TB12 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Station Board SB34 (ST34)				breaker TB12 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Station Board SB34 (ST34)				breaker SAT34 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Station Board SB34 (ST34)				breaker SAT34 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			TB3 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			TB3 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Station Board SB34 (ST34)				Feeder to Station Board - breaker ST34 & relays	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A	In Stock
Station Board SB34 (ST34)				Feeder to Station Board - breaker TB12 & relays	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A	In Stock
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)			Circuit Breaker TB3	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A	In Stock
Station Board SB34 (ST34)				breaker PSM3 & relay	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock

	Asset					<del>,</del>	
System	Asset		Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016		
Station Board SB34 (ST34)					breaker TB12 relays	Shares spare with MAVS devices - replaced by ABB SYN5201-0271	In Stock
Station Board SB34 (ST34)					breaker TB12 relays	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)				TB3 relays	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
Station Board SB34 (ST34)	TB3 (Tie Breaker Between Station Board SB34 & Unit Board UB3)				TB3 relays	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)					Circuit Breaker UB1-1	Shares spare with Feeder to Station Board - breaker SSB-1.	In Stock
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)					UB1-1 Relay	Shares spare with MAVS devices - replaced by ABB SYN5201-0271	In Stock
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)					UB1-1 Relay	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
UB1-1 (Tie Breaker Between Station Board SB12 & Unit Board UB1)					UB1-1 Relay	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)					Circuit Breaker UB2-12	Shares spare with Feeder to Station Board - breaker SSB-1.	In Stock
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)					UB2-12 Relay	Shares spare with MAVS devices - replaced by ABB SYN5201-0271	In Stock
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)					UB2-12 Relay	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)					UB2-12 Relay	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
UB2-12 (Tie Breaker Between Unit Board UB2 & Station Board SB12)					UB2-12 Relay	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)			Feeder to Power Centre A - A1	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock

		Asset			T	T
System		Asset	ı	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)		Feeder to Power Centre A - A9	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		Feeder to transformer LT-A - breaker A3	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		Feeder to MCC A1 - breaker A4	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		A5	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		A6	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)		A7	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB1 (UB1-2)				UB1-4 relay	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB1 (UB1-2)				UB1-9 relay	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB1 (UB1-2)				UB1-11 relay	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB1 (UB1-2)				UB1-2 relays	Shares spare with CGE HFA devices	In Stock
Unit Board UB1 (UB1-2)				UB1-2 relays	Shares spare with CGE HFA devices	In Stock
Unit Board UB1 (UB1-2)				UB1-3 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Unit Board UB1 (UB1-2)				UB1-3 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)		Relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB1 (UB1-2)				Feeder to Unit Board UB1 - breaker UB1-2	Shares spare with Feeder to Station Board - breaker SSB-1, 5HK-VR-250-2000A	In Stock
Unit Board UB1 (UB1-2)				Feeder to transformer ATA - breaker UB1-3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock

		Asset				
System	stem Asset		Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016	
Unit Board UB1 (UB1-2)				breaker UB1-4	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				breaker UB1-5	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				breaker UB1-6	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				breaker UB1-7	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				breaker UB1-8	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				breaker UB1-9	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				breaker UB1-10	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				breaker UB1-11	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB1 (UB1-2)				UB1-2 relays	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Feeder to Power Centre B - breaker B1	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Feeder to transformer LT-B - breaker B4	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Feeder to MCC B1 - breaker B5	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		B2	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		В6	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock

		Asset				
System		Asset			Status Update - September 30, 2015	Status Update - September 23, 2016
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		B7	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		В8	Shares spare re-build kit/critical spares kit with other CGE AK breakers.	In Stock
Unit Board UB2 (UB2-1)				UB2-3 relay	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB2 (UB2-1)				UB2-4 relay	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB2 (UB2-1)				UB2-9 relay	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB2 (UB2-1)				UB2-10 relay	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB2 (UB2-1)				UB2-1 relays	Shares spare with CGE HFA devices	In Stock
Unit Board UB2 (UB2-1)				UB2-1 relays	Shares spare with CGE HFA devices	In Stock
Unit Board UB2 (UB2-1)				UB2-2 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB2 (UB2-1)				UB2-2 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB2 (UB2-1)				Feeder to Unit Board - breaker UB2- 1 & relays	Shares spare with Feeder to Station Board - breaker SSB-1.	In Stock
Unit Board UB2 (UB2-1)				Feeder to Transformer ATB, breaker UB2-2	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-4	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-5	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-6	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-7	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock

		Asset				
System	Asset		Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016	
Unit Board UB2 (UB2-1)				UB2-8	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-9	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-10	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB2 (UB2-1)				UB2-1 relays	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Relays	Spares spare with CGE IAC51 and ICA53 devices	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)		Relays	Spares spare with CGE IAC51 and ICA53 devices	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Feeder to Aux Board - breaker UAB-	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Feeder to transformer LDP-3 - breaker LDP-3	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Feeder to MCC BAB3 - breaker BAB-	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		AOP3	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		TAB3	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		AC12	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Tie Breaker to Station Board - breaker ATB3	Shares spare re-build kit/critical spares kit with other FP breakers.	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB3 (UT3)				UT3 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock

		Asset				
System	System Asset		Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016	
Unit Board UB3 (UT3)				UT3 relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB3 (UT3)				UAT3 Relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB3 (UT3)				UAT3 Relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL- 551C	In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB3 (UT3)				Feeder to Unit Board - breaker UT3	Shares spare with Feeder to Station Board - breaker SSB-1.	In Stock
Unit Board UB3 (UT3)				Feeder to transformer UAT3 - breaker UAT3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				BFE3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				BFW3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				FDE3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				FDW3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				CEN3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				CES3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				CWE3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				CWW3	Shares spare with Feeder to transformer SAT34 - breaker SAT34, 5HK-VR-250-1200A	In Stock
Unit Board UB3 (UT3)				UT3 relays	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock

		Asset				
System	System Asset		t	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays	Shares spare with other Westinghouse relays - replaced by ABB SPAU121C	In Stock
Station Board SB12 (SSB1)				SSB-3 Relay	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)		Relays		In Stock
Station Board SB12 (SSB1)				Feeder to Station Board - breaker SSB-1 & Relays	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB12 (SSB1)				SSB-1 Relay	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB12 (SSB1)				SSB-1 Relay	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB12 (SSB1)				SSB-1 Relay	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB34 (ST34)				breaker PSM3 relay		In Stock
Unit Board UB1 (UB1-2)				UB1-5 relay		In Stock
Unit Board UB1 (UB1-2)				UB1-6 relay		In Stock
Unit Board UB1 (UB1-2)				UB1-7 relay		In Stock
Unit Board UB1 (UB1-2)				UB1-8 relay		In Stock
Unit Board UB1 (UB1-2)				UB1-10 relay		In Stock
Unit Board UB2 (UB2-1)				UB2-5 relay		In Stock
Unit Board UB2 (UB2-1)				UB2-6 relay		In Stock
Unit Board UB2 (UB2-1)				UB2-7 relay		In Stock
Unit Board UB2 (UB2-1)				UB2-8 relay		In Stock
Unit Board UB3 (UT3)				BFE3 relay		In Stock
Unit Board UB3 (UT3)				BFW3 relay		In Stock
Unit Board UB3 (UT3)				FDE3 relay		In Stock
Unit Board UB3 (UT3)				FDW3 relay		In Stock
Unit Board UB3 (UT3)				CEN3 relay		In Stock
Unit Board UB3 (UT3)				CES3 relay		In Stock
Unit Board UB3 (UT3)				CWE3 relay		In Stock
Unit Board UB3 (UT3)				CWW3 relay		In Stock
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)		Relays		In Stock

		Asset					
System		Ass	set	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016	
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)			Feeder to Power Centre - breaker C1	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)			Feeder to MCC C1 - breaker C2	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB34 (ST34)					Feeder to transformer SAT34 - breaker SAT34 & relays	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			Feeder to Station Board - breaker SAB34	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			Feeder to Station Board - breaker ATB12	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)			WAM34	Tier 2 Critical Spare - Addition to Inventory process in progress	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)			Relays	Shares spare with all other P&B Golds devices.	In Stock
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1) (Alternate Feed Transfer Bus A9)			Relays	Shares spare with CGE IAC51 and ICA53 devices - replaced by SEL-551C	In Stock
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)			Relays	Shares spare with all other P&B Golds devices.	In Stock
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3				Transformer	Not critical	N/A
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1) (Alternate Feed Tie Breaker to Transfer Bus C15)			Relays	Not critical	N/A
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Diesel Bus DB12	Essential Services MCC E1 (C18)	Motor Control Centre Unit	Not critical	N/A
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Water Treatment and Aux Boiler MCC C5 (C4)		мсс	Not critical	N/A
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Common Services MCC C1 (C2)		мсс	Not critical	N/A
Station Board SB12 (SSB1)	Aux Transformer ATC - SSB3	Power Center C SAB12 (C1)	Waste Water Treatment Plant MCC C12 (C7)		мсс	Not critical	N/A
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)				Transformer	Not critical	N/A

	_	Asset					
System		Ass	set	Defined Spares Parts	Status Update - September 30, 2015	Status Update - September 23, 2016	
Station Board SB34 (ST34)	Station Aux Transformer (SAT34)	Station Aux Board (SAB34)	Diesel Bus DB34	Essential Services MCC ESB34	MCC	Not critical	N/A
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)	Lighting Transformer LT-A (A3)		Transformer	Not critical	N/A
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)	Turbine & Boiler Area MCC A1 (A4)		MCC	Not critical	N/A
Unit Board UB1 (UB1-2)	UB13 (Aux Transformer ATA)	Power Center A UAB1 (A1)	Turbine & Boiler Area MCC A1 (A4)	HP Heater MCC A1-1 (A1-1)	MCC	Not critical	N/A
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)	Turbine & Boiler Area MCC B1 (B5)		MCC	Not critical	N/A
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)	Turbine & Boiler Area MCC B1 (B5)	HP Heater MCC B1-1	MCC	Not critical	N/A
Unit Board UB3 (UT3)					UAT3 Relays	Not critical	N/A
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)	Lighting Distribution Transformer (LDP-3)		Transformer	Not critical	N/A
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)	Boiler Area MCC (BAB3)		MCC	Not critical	N/A
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)	Aux Board UAB3 (UAB3)	Boiler Area MCC (BAB3)	HP Heater MCC HPH3	MCC	Not critical	N/A
Unit Board UB1 (UB1-2)	UB1-3 (Aux Transformer ATA)				Transformer	Not critical	N/A
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)				Transformer	Not critical	N/A
Unit Board UB2 (UB2-1)	Aux Transformer ATB (UB22)	Power Center B UAB2 (B1)	LT Transformer LT-B (B4)		Transformer	Not critical	N/A
Unit Board UB3 (UT3)	Unit Aux Transformer (UAT3)				Transformer	Not critical	N/A

2016-17 Winter Readiness Plannin
APPENDIX F
Critical Spares Status Listing – Combustion Turbines
Newfoundland and Labrador Hydro

Hardwoods and Stephenville			September 23, 20	016 Update
·		Updated Stock	Expected Delivery	Exposure for winter 2016/2017
Recommended Component	Risk Score	Status	Date	based on current plan
High Energy Ignition Unit, Gas Generator, Prime Mover Systems	High	In Stock	N/A	Med
Fire Fuel Shutoff Valve (LF-8), Liquid Fuel System, Auxiliary Systems	Low	In Stock	N/A	Low
Bearing (494047), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Bearing (494056), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Vibration Transducer, Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Jacking Oil Pump, Main Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Fuel Filter, Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Oil Filter Unit - Complete (B.108506), Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Filter (494064), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Proximity Switch, Clutch, Prime Mover Systems	Medium	In Stock	N/A	Low
Altair Quick Shutoff Valve (AV-LF-1), Liquid Fuel System, Auxiliary Systems	High	In Stock	N/A	Low
Fuel Valve (FC-LF-1), Liquid Fuel System, Auxiliary Systems	High	In Stock	N/A	Low
Fuel Recirculation Solenoid Valve (LF-7), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Fuel Regulator (LF-4), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Jacking Oil Permissive Pressure Switch, Main Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Clutch Control Solenoid Valve (LO-6), Main Lube Oil System, Auxiliary Systems, HWD GT	Medium	In Stock	N/A	Low
Valve (181536), Power Turbine Model CT2, Prime Mover Systems	Low	In Stock	N/A	Low
Primary Ratchet Ring, Clutch, Prime Mover Systems; A side	High	In Stock	N/A	Low
Primary Ratchet Ring, Clutch, Prime Mover Systems; B side	High	In Stock	N/A	Low
Secondary Ratchet Ring, Clutch, Prime Mover Systems; A side	High	In Stock	N/A	Low
Secondary Ratchet Ring, Clutch, Prime Mover Systems; B side	High	In Stock	N/A	Low
Ring that the Primary Pawl and spring are installed	Medium	In Stock	N/A	Low
Primary Pawl Spring, Clutch, Prime Mover Systems	High	In Stock	N/A	Low
Primary Pawl, Clutch, Prime Mover Systems	High	In Stock	N/A	Low
Secondary Pawl, Clutch, Prime Mover Systems	Medium	In Stock	N/A	Low
Limit Switch, Snow Door Assembly, Exhaust, Prime Mover Systems, SVL GT	Medium	In Stock	N/A	Low
NC Solenoid Valve (SV-CA-2), Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
NO Solenoid Valve (SV-CA-1), Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
Starter Control Valve (CA-17), Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
3-Way Thermostatic Valve (GL-2), MLO/Glycol Cooling System, Auxiliary Systems	Medium	In Stock	N/A	Low
Thermocouple (181398N1), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Speed Pickup (181487), Power Turbine Model CT2, Prime Mover Systems	High	In Stock	N/A	Low
Vibration Pickup (181571), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Thermocouple (181397), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Thermocouple (181398N2), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Probe (181414N1), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Probe (181414N2), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Thermocouple (184847), Power Turbine Model CT2, Prime Mover Systems	High	In Stock	N/A	Low
Motor Operated Tank Shutoff Valve (LF-38), Liquid Fuel System, Auxiliary Systems, HWD GT	High	In Stock	N/A	Med
Final Fuel Filter (F-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Heater Filter Coalescer, Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Prefilter, Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Supplemental Fuel Filter (F-LF-5), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
High Efficiency Farr HP-100 Filter (2'x2'x2"), Filter Box - Curtiss Wright, Prime Mover Systems	Medium	In Stock	N/A	Low

Hardwoods and Stephenville			September 23, 20	D16 Update
·		Updated Stock	Expected Delivery	Exposure for winter 2016/2017
Recommended Component	Risk Score	Status	Date	based on current plan
Filter (F-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Unloading Filter, Liquid Fuel System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Duplex 25u Filter (F-LO-1), Main Lube Oil System, Auxiliary Systems	Medium	In Stock	N/A	Low
Filter/Coalescer Heater (HTR-LF-1), Liquid Fuel System, Auxiliary Systems, HWD GT		In Stock	N/A	Low
P3 Pressure Transducer (PT-P3-1), Liquid Fuel System, Auxiliary Systems	High	In Stock	N/A	Low
Common Drain Clutch A Thermocouple (TC-LO-3), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Fuel Supply Thermocouple (TC-LF-1), Liquid Fuel System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Alternator Bearing Drain Oil Thermocouple (TC-LO-3), Main Lube Oil System, Auxiliary Systems, HWD GT	Medium	In Stock	N/A	Low
Alternator Cooling Air Temperature Thermocouple (TC-A-1), Alternator Cooling System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Common Drain Clutch B Thermocouple (TC-LO-11), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Compressor Start-Stop Pressure Switch (PS-CA-1), Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
Compressor Start-Stop Pressure Switch (PS-CA-2), Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 1 Thermocouple (TC-LO-4), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 2 Thermocouple (TC-LO-5), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 3 Thermocouple (TC-LO-6), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 4 Thermocouple (TC-LO-7), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 5 Thermocouple (TC-LO-8), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Oil Drain Alternator Clutch Bearing 6 Thermocouple (TC-LO-9), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Oil Drain Exciter Bearing 7 Thermocouple (TC-LO-10), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
Oil Drain Thermocouple (TC-LO-2), Main Lube Oil System, Auxiliary Systems, HWD GT	Medium	In Stock	N/A	Low
Oil Supply Thermocouple (TC-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	Medium	In Stock	N/A	Low
Oil Supply Thermocouple (TC-LO-1), Main Lube Oil System, Auxiliary Systems	Medium	In Stock	N/A	Low
Anti-Icing Hot Air Valve - Complete (810-501-0747), Gas Generator, Prime Mover Systems	Low	In Stock	N/A	Low
Gas Generator Permissive Start Pressure Switch, Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
Starter Overpressure Pressure Switch (PS-CA-3), Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
Pressure Regulating Valve (LO-8), Main Lube Oil System, Auxiliary Systems	Medium	In Stock	N/A	Low
Inlet Temperature Thermocouple, Gas Generator Enclosure with Septum Doors, Prime Mover Systems	Medium	In Stock	N/A	Low
Resistance Temperature Detector Probe, Gas Generator Enclosure with Septum Doors, Prime Mover Systems	Medium	In Stock	N/A	Low
NC Solenoid Valve (SV-CA-3), Gas Generator Air Starter System, Auxiliary Systems	High	In Stock	N/A	Low
Fuel Temperature Sensor (TS-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Combustion Chamber, Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Lower Fuel Pump Assembly, Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Outer Fuel Pump Drive Assembly (BDA.7591), Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Upper Fuel Pump Assembly, Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Exciter Bearing, 63MVA 50MW Generator, Power Generation Systems	High	In Stock	N/A	Low
Rotor Bearing, 63MVA 50MW Generator, Power Generation Systems	High	In Stock	N/A	Low
Bearing (181413 or 181332), Power Turbine Model CT2, Prime Mover Systems	Medium	In Stock	N/A	Low
Fuel Pump Servo Valve (SV-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Low Trip Pressure Switch (PS-LO-7), Main Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Start Permissive Pressure Switch (PS-LO-6), Main Lube Oil System, Auxiliary Systems, SVL GT	High	In Stock	N/A	Low
Pressure Switch, Permissive Start - Low Pressure Alarm (PS-LF-2), Liquid Fuel System, Auxiliary Systems	High	In Stock	N/A	Low
Pressure Switch, Trip - Low Fuel Pressure (PS-LF-3), Liquid Fuel System, Auxiliary Systems	High	In Stock	N/A	Low
Low Oil Pressure Switch (PS-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Filter Differential Pressure Switch (PSD-LO-1), Main Lube Oil System, Auxiliary Systems	Medium	In Stock	N/A	Low

## Appendix F Page 3 of 11 2016-17 Winter Readiness Report

Hardwoods and Stephenville			September 23, 20	016 Update
Recommended Component	Risk Score	Updated Stock Status	Expected Delivery Date	Exposure for winter 2016/2017 based on current plan
Filter Upstream Pressure Switch (PS-GGLO-3), Gas Generator Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Pre-filter Differential Pressure Switch (PSD-LF-2), Liquid Fuel System, Auxiliary Systems, HWD GT	Medium	In Stock	N/A	Low
AC Pump Discharge Fuel Pressure Switch (PS-LF-4), Liquid Fuel System, Auxiliary Systems, HWD GT	Medium	In Stock	N/A	Low
DC Pump Start Pressure Switch (PS-LO-1), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
DC Pump Start Pressure Switch (PS-LO-2), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	In Stock	N/A	Low
DC Pump Start Pressure Switch (PS-LO-3), Main Lube Oil System, Auxiliary Systems, HWD GT	Medium	In Stock	N/A	Low
Low Oil Pressure Switch (PS-GGLO-2), Gas Generator Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Pressure Switch (PS-HO-1), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Inertial Filter Element, Filter Box - Curtiss Wright, Prime Mover Systems	Medium	In Stock	N/A	Low
Oil to Clutch A Pressure Transducer (PT-LO-1), Main Lube Oil System, Auxiliary Systems, SVL GT	High	In Stock	N/A	Low
Oil to Clutch B Pressure Transducer (PT-LO-2), Main Lube Oil System, Auxiliary Systems, SVL GT	High	In Stock	N/A	Low
Fuel Pressure Transducer (PT-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Liquid Fuel Burner - Complete (BDC.3026), Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Oil Pump - Complete, Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Outer Oil Pump Drive Assembly (47-1-1-006409), Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Outer Starter Drive Assembly (BDA.1153), Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
Scavenge Pump Assembly (47-1-1-006418), Gas Generator, Prime Mover Systems	Medium	In Stock	N/A	Low
HP Compressor Magnetic Pickup, Gas Generator, Prime Mover Systems	Low	In Stock	N/A	Low
LP Compressor Magnetic Pickup, Gas Generator, Prime Mover Systems	Low	In Stock	N/A	Low
Low Liquid Level Alarm Switch (LL-GL-1), MLO/Glycol Cooling System, Auxiliary Systems	Medium	In Stock	N/A	Low
Level Switch (LS-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	High	In Stock	N/A	Low
Heater Control Temperature Switch (TS-GGLO-1), Gas Generator Lube Oil System, Auxiliary Systems	Medium	In Stock	N/A	Low
Heater Control Temperature Switch (TS-LO-1), Main Lube Oil System, Auxiliary Systems	Medium	In Stock	N/A	Low
Final Fuel Filter Differential Pressure Switch (PSD-LF-1), Liquid Fuel System, Auxiliary Systems	Medium	In Stock	N/A	Low
Inlet Pressure Transducer, Gas Generator Enclosure with Septum Doors, Prime Mover Systems	Medium	In Stock	N/A	Low
Clutch Control Solenoid Valve (LO-6), Main Lube Oil System, Auxiliary Systems, SVL GT	Medium	Procurement in progress	TBD	Low
Proximity Switch, Snow Door Assembly, Exhaust, Prime Mover Systems, HWD GT	Low	Procurement in progress	Nov-16	Low

			Holyrood CT					
Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
			In Stock					
50101152	ACTUATOR,PNEUMATIC	DOUBLE ACTING PNEUMATIC ACTUATOR, KEYSTONE MORIN, TYCO:MRP 004	III Stock	1			N/A	
		AIR DRYER AFTER FILTER, PN 25-178-50C, PARKER FILTER CARTRIDGE # 10C10	In Stock					
58400786	AFTER-FILTER,AIR DRYER	050 INST AIR DEW POINT ANALYZER, MICHELL INSTRUMENTS:EA-XP-TX-EX1-C1-		4		-	N/A	
54900162	ANALYZER,DEW POINT	D1-E2-F1-G1-H1	In Stock	1			N/A	
	BELT,POLYBAND	BELT, 1320-BLT-B-EHX07-1250 3R 5VX1250, POLYBAND DODGE OR EQUAL	In Stock	6			N/A	
42100313	BELT,V	INGERSOLL RAND 95100178	In Stock	6			N/A	
58000077	BELT,1320-BLT-S-EHX19-90	BELT, ECODYNE:1320-BLT-S-EHX19-90	In Stock	6			N/A	
65000436	BRUSH,CARBON MOTOR	1 SET = 2 PIECES, ABB: GPFX052143P0098	In Stock	1			N/A	
60101092	CABLE,SOLAR,IGNITER	CENTAUR:919340C2	In Stock	1			N/A	
58400799	CARTRIDGE, DESICCANT	PNEUMATIC PRODUCTS:3153517	In Stock	1			N/A	
54900175	COIL.MAGNETIC SPEED PICK-UP	TORQUE CONVERTER MAGNETIC SPEED PICK-UP COIL, KOENIG:9501W14	In Stock	1			N/A	
54900174	COIL,OVERSPEED TRIP	ELECTRONIC OVERSPEED TRIP, 9501W38	In Stock	1			N/A	
70000484	CONTACTOR,50A 120VAC	42CF35AF	In Stock	2			N/A	
60101075 60101074	CONTROLLER,LIMIT (0-2502-F) CONTROLLER,STEP LIFO	LIMIT CONTROLLER (0-2502-F), SA100LKA3-MN-4*NN-D1/Y 8 STAGES, SCL4000-8	In Stock	1 1			N/A N/A	
60101074	CONTROLLER, STEP LIFO (4 STAGE)	STAGES, SCL4000-8 STEP CONTROLLER LIFO (4 STAGES), SCL4000-4	In Stock In Stock	1		+	N/A N/A	
25900063	COUPLING, FISHER	COUPLING, FISHER:17A8307X012	In Stock	1		1	N/A N/A	
	COO. EOJI ISHEN	COUPLING, REXNORD-OMEGA: REX ELASTOMER-ES-4(STANDARD		<u> </u>		+	11/15	
58101229	COUPLING,PUMP-MOTOR	ORANGE), PUMP-MOTOR	In Stock	1			N/A	
		COUPLING, REXNORD-OMEGA: ELASTOMER-ES-5 (STANDARD ORANGE)	In Charle					
58101230	COUPLING,PUMP-MOTOR	PUMP-MOTOR	In Stock	1			N/A	
58101224	COUPLING,PUMP/MOTOR	JOHN CRANE:A045-3S78-1270, 1-1/2" - 2-3/8", ROUGH BORE	In Stock	1			N/A	
		SIZE 1040T20, FLEXIBLE GRID TYPE, VERTICAL ORIENTATION,	In Stock					
65900004	COUPLING,PUMP/MOTOR	MANUFACTURER:FALK		1			N/A	
	CUT-OUT,AUTO	AUTO CUT-OUT, CHROMOLOX:168-053169-1 05	In Stock	3			N/A	
	DESICCANT,4-8 GRADE D	INGERSOLL RAND 50# BAG	In Stock	2			N/A	
98200197	DETECTOR,SMOKE	SMOKE DETECTOR, NOTIFIER:FSI-851	In Stock	2			N/A	
98200194	DETECTOR,THERMAL	ELECTRICAL PACKAGE THERMAL DETECTOR, KIDDE-FENWAL:27121-160	In Stock	2			N/A	
00200105	DETECTOR THERMAN	TURBINE EXHAUST TUNNEL - THERMAL DETECTOR, KIDDE-FENWAL:12- H27121-020-08	In Stock	2			N/A	
98200195 98200196	DETECTOR,THERMAL DETECTOR,THERMAL	MECHANICAL PACKAGE THERMAL DETECTOR, KIDDE-FENWAL:27121-225	In Stock	1			N/A N/A	
	DETECTOR, THERMAL	TURBINE ENCLOSURE THERMAL DETECTOR, KIDDE-FENWAL:27121-225	In Stock	4			N/A	
	DIVIDER,FLOW	FLOW DIVIDER, JAHNS HYDRAULIK:MTO-2-5-G	In Stock	1			N/A	
			III Stock	†			.,,	
		INSTRUMENT AIR DRYER DIFFERENTIAL PRESSURE, DIFFERENTIAL PRESSURE	In Stock					
60101077	DRYER,INSTRUMENT AIR	TRANSMITTER, ROSEMOUNT:3051S2CD3A2A11A1AL1L2L4M5Q4		1			N/A	
	ELEMENT, POST FILTER	POST FILTER ELEMENT 105 SCFM, INGERSOLL RAND 85565661	In Stock	6			N/A	
58400766	ELEMENT,PRE-FILTER	PRE-FILTER ELEMENT 105 SCFM, INGERSOLL RAND 85565679	In Stock	6			N/A	
		ELEMENT 0180MA0003BN (3μm), P/N 2059438, SPIN ON ELEMENT,	In Stock					
58400762	ELEMENT,0180MA0003BN	MANUFACTURER: HYDAC		1			N/A	
	FILL KIT,SF6	ABB BREAKER SF6 FILL KIT, (HECS 80S), S/N 1HC211015861	In Stock	1			N/A	
	FILTER KIT, FUEL	LOW PRESSURE FUEL FILTER REPLACEMENT KIT, CENTAUR:912555C3	In Stock	1 20			N/A	
58400764 58400802	FILTER,AIR (ELEMENT) FILTER,AIR 4P0710S	INGERSOLL RAND 32012957	In Stock	20		-	N/A N/A	
30400802	HELLINAIN 4FU/103	AIR FILTER, CAT: 4P0710  FILTER AUTOMATIC FLOW CONTROL, 4"FNPT, MODEL:ST-400-25, 240GPM,	In Stock	<u> </u>		+	IN/A	
58400797	FILTER,FLOW CONTROL	PENTAIR:LWT 3949	In Stock	1			N/A	
20.00757		FILTER AUTOMATIC BACKWASH FLOW CONTROL, 4" FNPT, MODEL:ST-400-		† *		1	.,,,,	
58400798	FILTER,FLOW CONTROL	25, 245GPM, MODULAR PIPING SUPPLY INC: LWT5430	In Stock	1			N/A	
	FILTER,FUEL BOOST KIT	LOW PRESSURE, 912343C1	In Stock	1			N/A	
		FOR USE ON STAGE I AND II, EMERGENCY DIESEL MANUAL PRIMING PUMPS,						
58400504	FILTER,FUEL CAT 1R0749	CATERPILLAR #1R-0749	In Stock	10			N/A	
	FILTER,IGV ACTUATOR	MOOG:B64567-1V	In Stock	6		1	N/A	
58400791	FILTER,LUBE OIL	LUBE OIL FILTER, CLARKE RELIANCE:A2200A4, NFS:2200A4	In Stock	20		1	N/A	
	FILTER,OIL 275-2604	OIL FILTER, CAT:275-2604	In Stock	6		1	N/A	
58400787	FILTER,PRESSURE	PALL: ELEMENT HC9600FCP4H	In Stock	4		1	N/A	
		PNEUMAFIL:S52538B1, V-CELL STMPM16 STATIC BARRIER FILTER,	In Charle					
59400702	EILTER TMR-QS EINAL	24"X24"X12", INJECTION MOLDED PLASTIC FRAME, 100% SYNTHETIC MEDIA, NEOPRENE SPONGE RUBBER GASKET - DOWN STEAM SIDE	In Stock				N/A	
58400783 54800069	FILTER,TMP-95 FINAL FILTER,WATER	CLARK RELIANCE 2500PW	In Stack	55 24		+	N/A N/A	
	FILTER,961131C1 FUEL	CENTAUR:9125555C1 (ELEMENT & GASKET KIT)	In Stock In Stock	6		+	N/A N/A	
	FLOAT,SURESITE	FLOAT, SURESITE:88111	In Stock	1		+	N/A N/A	
500154		p,	Stock	1 *	l	1	. 47 /5	

			Holyrood CT					
Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
uit ito.	Description	RAW WATER FLOW MAGNETIC FLOWMETER,		Quantity and the	HISK SCOTE	Lead Time	Expected Belivery	comments
100434	FLOWMETER,MAGNETIC	ROSEMOUNT:8705TSA060C1W0N0G1	In Stock	1			N/A	
	FUSE,AC 25A	ATQR25	In Stock	4			N/A	
	FUSE,AGC 1A 250V	AGC 1	In Stock	10			N/A	
000373	FUSE,AGC 3A 250V		In Stock	10			N/A	
0000485	FUSE,PANEL HEATER 4.5A	PANEL HEATER FUSE 4.5A, ATQR4.5	In Stock	3			N/A	
0000481	FUSE,POWER CLASS J 45A	A4J45	In Stock	10			N/A	
0000482	FUSE,PRIMARY 20A	ATQR20	In Stock	4			N/A	
0000483	FUSE,SECONDARY 8A	ATQR8	In Stock	4			N/A	
0000490	FUSE,1.0A	BUSSMAN:LP-CC-1	In Stock	10			N/A	
0000507	FUSE,1.25A GMC-1.25A	FUSE 1.25 AMP, GMC-1.25-A, BUSSMANN:LWT9119	In Stock	10			N/A	
0000488	FUSE,15.0A	BUSSMAN:LP-CC-15.0	In Stock	10			N/A	
0000491	FUSE,2.0A 300 VDC	BUSSMAN:LP-CC-2	In Stock	10			N/A	
0000500	FUSE,2AMP	FUSE 2 AMP, GMC-2-A, BUSSMAN:GMC-2-A	In Stock	10			N/A	
000492	FUSE,3.0A	BUSSMAN:LP-CC-3.0	In Stock	20			N/A	
000501	FUSE,3AMP GMC-R	FUSE 3AMP, BUSSMAN:GMC-3-R	In Stock	10			N/A	
000489	FUSE,5.0A	BUSSMAN:LP-CC-5.0	In Stock	20			N/A	
000506	FUSE,6A GMC-6A	6AMP, GMC-6A, BUSSMANN:LWT7345	In Stock	10			N/A	
200364	GASKET,FILTER HOUSING	GASKET,CLARK RELIANCE:A10137455, NFS# 10117455	In Stock	6			N/A	
		FUEL UNLOADING PUMPS OUTLET PRESURE/GAUGE PRESSURE	In Stock					
0101083	GAUGE,PRESSURE	TRANSMITTER, ROSEMOUNT:3051S2TG3A2E11A1AB4K6M5Q4	III SLUCK	1		<u> </u>	N/A	
		ATOMIZING AIR HEADER PRESSURE GAUGE, PRESSURE TRANSMITTER,	In Stock					
1100426	GAUGE,PRESSURE	ROSEMOUNT:3051S2TG3A2A11A1AM5Q4	III SLUCK	1			N/A	
		RAW WATER PUMP 1 & 2, DISCHARGE GAUGE, PRESSURE TRANSMITTER,	In Charle					
1100436	GAUGE,PRESSURE	ROSEMOUNT: 3051S2TG2A2A11A1AB4M5Q4	In Stock	1			N/A	
3900023	HEATER,400W PANEL	PANEL HEATER 120V 60HZ 400W, PH40011	In Stock	1			N/A	
7900016	IGNITER,SPARK PLUG	SOLAR SPARK PLUG IGNITER, CENTAUR:903316C1	In Stock	2			N/A	
100427	INDICATOR, BLUE MOISTURE	BLUE MOISTURE INDICATOR, INGERSOLL RAND 705001-SP	In Stock	1			N/A	
0101138	INDICATOR, LEVEL	HYD FLUID RESERVOIR LEVEL INDICATOR, REXROTH:CS3615-244910	In Stock	1			N/A	
		HYDRUALIC FLUID PUMP #1 - DISCHARGE PRESSURE INDICTATOR,	In Stock					
1100432	INDICTATOR, DISCHG PRESS	REXROTH:2-1/2/1500PUA31-10A-4 JIC	III SLOCK	1			N/A	
		INTAKE AIR STATIC FINAL-FILTER - DIFFERENTIAL PRESSURE INDICTATOR,	In Stock					
1100452	INDICTATOR,PRESSURE	DWYER INSTRUMENTS:4006	III SLOCK	1			N/A	
		INTAKE AIR STATIC PRE-FILTER - DIFFERENTIAL PRESSURE INDICTATOR,	In Stock					
1100453	INDICTATOR,PRESSURE	DWYER INSTRUMENTS:4002	III SLOCK	1			N/A	
		ANALOG INPUT CARD FOR PLC, VARIOUS SKIDS, AUTOMATION DIRECT:F0-	In Stock					
0101155	INPUT CARD,PLC	04AS1	III SLOCK	1			N/A	
8400792	KIT,SOFT PARTS	SOFT PARTS KIT, CLARKE RELIANCE:A10400107, NFS:10400107	In Stock	1			N/A	
		FUEL OIL TANK HIGH LEVEL SWITCH, ULTRASONIC GAP LEVEL SWITCH,	In Stock					
0101085	LEVEL SWITCH, DAY TANK	MAGNETROL:961-2DA0-030 C/W 9A1-A43A-018	III SLOCK	1			N/A	
		FUEL OIL DAY TANK LEVEL RADAR LEVEL TRANSMITTER,	In Stock					
0101088	LEVEL TRANSMITTER, LEVEL	ROSEMOUNT:5402AH1E64PNACAM1C1	III SLOCK	1			N/A	
1100423	MANIFOLD, PRESSURE TRANSMITTER	ROSEMOUNT 0305RC22B11	In Stock	1			N/A	
		SHAFT ABSOLUTE I/O MODULE WITH - EXTERNAL TERMINATIONS, BENTLY	In Stock					
1600106	MODULE, ABSOLUTE SHAFT	NEVADA:138700-01	III SLUCK	1			N/A	
		DISCRETE I/O MODULE WITH - EXTERNAL TERMINATIONS, BENTLY	In Stock		-			
1600111	MODULE, DISCRETE I/O	NEVADA:133434-01	III SLUCK	1		<u> </u>	N/A	
-		I/O MODULE WITH INTERNAL BARRIERS - (INTERNAL TERMINATIONS) (4 X	In Stock		-			
4600105	MODULE,I/O	VELOMITER), BENTLY NEVADA:135489-03	III SLOCK	1		<u> </u>	N/A	
		I/O MODULE WITH INTERNAL BARRIERS - (INTERNAL TERMINATIONS), (2 X	In Stock		-			
1600108	MODULE,I/O	PROX/ACCEL + 2 X VELOMITER), BENTLY NEVADA:135489-02	III SLUCK	1			N/A	
101173	MODULE, POWER SWITCH	LEVEL SWITCH MODULES, SURESITE: 87480	In Stock	1			N/A	
		PROX/SEISMIC I/O MODULE WITH EXTERNAL TERMINATIONS, BENTLY	In Stock					
600104	MODULE,PROX/SEISMIC	NEVADA:128240-01	III SLUCK	1			N/A	
		PROX/SEISMIC I/O MODULE WITH INTERNAL TERMINATIONS, BENTLY	In Stock					
600107	MODULE,PROX/SEISMIC	NEVADA:128229-01	In Stock	1		<u> </u>	N/A	
1600110	MODULE,PROX/SEISMIC	3500/42M PROXIMITOR/SEISMIC MONITOR, BENTLY NEVADA:140734-02	In Stock	1			N/A	
		PROX/VELOM I/O MODULE WITH INTERNAL TERMINATIONS, BENTLY	In Charle					
4600101	MODULE,PROX/VELOM I/O	NEVADA:140471-01	In Stock	1			N/A	
		PROX/VELOM I/O MODULE WITH EXTERNAL TERMINATIONS, BENTLY	In Charle					
1600102	MODULE,PROX/VELOM I/O	NEVADA:140482-01	In Stock	1			N/A	
		SHAFT ABSOLUTE I/O MODULE WITH EXTERNAL TERMINATIONS, BENTLY					l i	
		SHALL ABSOLUTE TO MODULE WITH EXTERNAL TERMINATIONS, BENTEL	In Stock				l l	

			Holyrood CT					
Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
4600112	MODULE,SIGNAL OUTPUT	3500 BUFFERED SIGNAL OUTPUT MODULE, BENTLY NEVADA:147364-01	In Stock	1			N/A	
4600100	MODULE,TMR I/O	PROX/SEISMIC TMR I/O WITH EXTERNAL TERMINATIONS, BENTLY NEVADA:126632-01	In Stock	1			N/A	
4600115	MODULE,3500/50	3500/50 MODULE, BENTLY NEVADA:133388-02	In Stock	1			N/A	
5000442	MOTOR,BALDOR	BALDOR:VEM3770T NEMA	In Stock	1			N/A	
5000439	MOTOR,10 HP DC TURNING GEAR	KOENIG: DG6711A	In Stock	1			N/A	
6400183	O-RING,FISHER	O-RING, FISHER:T1205106562	In Stock	1			N/A	
88600152	OIL,COMPRESSOR	ALL SEASON SELECT OIL, INGERSOLL RAND 38436721	In Stock	2			N/A	
39200233	OIL,LUBE	TURBOFLOXL32, MANUFACTURER: PETRO CANADA	In Stock	2			N/A	
50101094	PICKUP,MAGNETIC	CENTAUR:P/N 190430-1	In Stock	1			N/A	
74600097	PILOT LIGHT ASSEMBLY.AMBER	PILOT LIGHT ASSEMBLY AMBER 120VAC, A13200-05	In Stock	6			N/A	
58400785	PRE-FILTER, PARKER AIR DRYER	PARKER AIR DRYER PRE-FILTER, PARKER FILTER CARTRIDGE# 6C10-050	In Stock	8			N/A	
		PNEUMAFIL:S52709C1, PRE-FILTER PANEL, 24"X24"X4"73 (FT2) SYNTHETIC MEDIA, PLASTIC FRAME FOR HIGHER PERFORMANCE AND LOWER PRESSURE	In Stock	130				
58400784	PRE-FILTER,Z-100	DROP					N/A	
12900001	PUMP,CONVERTER CHARGING	TORQUE CONVERTER CHARGING PUMP, KOENIG:X216228-J	In Stock	1			N/A	
54900163	RACK & PINION,PNEUMATIC	ACTUATOR, TYPE PNEUMATIC RACK & PINION, FLOWSERVE:20E39SWZ24D	In Stock	1			N/A	
		STAGE 2 TEMPERATURE CONTROL VALVE - AIR SIGNAL PRESSURE	In Stock					
1100437	REGULATOR, SIGNAL PRESSURE	REGULATOR, FISHER:67CF-1663-38656	III SLUCK	1			N/A	
8601089	RELAY,DPDT 120VAC	RCP8002 120AC	In Stock	1			N/A	
			In Stock					
50101179	RELAY,SINGLE POLE	SINGLE POLE RELAYS - VARIOUS SKIDS, AUTOMATION DIRECT:781-1C-120A	III SLOCK	2			N/A	
68601090	RELAY,TPDT 120VAC	RCP1103 120AC	In Stock	1			N/A	
58101231	REPAIR KIT,INJ. PUMP	CHEMICAL INJECTION PUMP REPAIR KIT, GRAINGER:K4PTC1	In Stock	1			N/A	
12900002	REPAIR KIT,SSS CLUTCH MINOR	KOENIG:SL17998MNKT	In Stock	1			N/A	
50101123	RTD,#1 PRIMARY SIGNAL	INLET SCROLL RTD #1 PRIMARY SIGNAL, ROSEMOUNT:0078-N-25-N-00-A-060- T26-XA	In Stock	1			N/A	
50101087	RTD,HEATER DISCHARGE TEMP.	FUEL OIL INLINE HEATER DISCHARGE TEMPERATURE RTD, ROSEMOUNT:68 SERIES/0068D21C30A020T26	In Stock	1			N/A	
50101117	SENSOR,#1 OVERSPEED TRIP	OVERSPEED TRIP SENSOR #1, ELECTRO CORP:3090A35	In Stock	2			N/A	
50900049	SENSOR,CONDUCTIVITY	CONDUCTIVITY SENSOR - RO, RYAN HERCO:5926-200	In Stock	1			N/A	
51100439	SOLENOID, BLEED VALVE	LP COMPRESSOR BLEED VALVE SOLENOID, ASCO:JKC8316G034V	In Stock	1			N/A	
50101090	SWITCH ASSEMBLY,LIMIT	MICROSWITCH # LSA2B	In Stock	2			N/A	
50101126	SWITCH, LOW ALARM PRESSURE	INSTR.AIR COMPRESSOR RECEIVER - LOW PRESSURE ALARM SWITCH, UNITED ELECTRIC CONTROLS: H122-274	In Stock	1			N/A	
0101149	SWITCH,CHLORINE FLOW	CHLORINE INJECTION FLOW SWITCH, DWYER INSTRUMENTS:FS2	In Stock	1			N/A	
50101191	SWITCH, DIFF PRESSURE	IGV ACT HYD FLUID FILTER- DIFF PRESS HIGH SWITCH, MOOG:G4444-2	In Stock	1			N/A	
51100433	SWITCH,DIFF PRESSURE	HYDRUALIC FLUID CONDITIONING LOOP - FILTER DIFFERENTIAL PRESSURE SWITCH, PALL:RC0113CZ090H	In Stock	1			N/A	
0101143	SWITCH,DIFF. PRESSURE	HYD FLUID SUPPLY FILTER - DIFFERENTIAL PRESSURE SWITCH, PALL:RC0113CZ097H	In Stock	1			N/A	
0101120	SWITCH, DIFFERENTIAL PRESS	DIFFERENTIAL PRESSURE SWITCH, PNEUMAFIL:552033-B1	In Stock	2			N/A	
0101121	SWITCH, DIFFERENTIAL PRESSURE	INTAKE AIR STATIC FILTER DIFFERENTIAL- PRESSURE SWITCH, SOR:107AL-K12-P1-F1A	In Stock	1			N/A	
	SWITCH,DISCH PRESSURE	HYD FLUID PUMP #1 DISCHARGE - PRESSURE SWITCH, REXROTH:HED 3 OAEX/63/12	In Stock	1			N/A	
50101089	SWITCH,DISPLACER LEVEL	FUEL OIL TANK HIGH LEVEL SWITCH, DISPLACER LEVEL SWITCH, MAGNETROL MODEL # A15-1E2B-HM3, SERIAL # 744243-01-001	In Stock	1			N/A	
50101082	SWITCH,HEATER SUPPLY FLOW	FUEL OIL INLINE HEATER SUPPLY FLOW SWITCH, MAGNETROL TD2-7D01-0G0 C/W TEA-A110-004, THERMAL DISPERSION FLOW SWITCH	In Stock	1			N/A	
0101119	SWITCH,MANIFOLD PRESSURE	INLET AIR MANIFOLD PRESSURE SWITCH, UNITED ELECTRIC CONTROLS: J400K 455-1520	In Stock	1			N/A	
0101015	SWITCH,OVERSPEED	CENTAUR KIT P/N1071653-2600	In Stock	1			N/A	
	SWITCH, PRESSURE	DIFFERENTIAL PRESSURE SWITCH, JOHNSON CONTROLS: JCI P 233 A-10-AAC	In Stock	1			N/A	
	SWITCH,PRESSURE	BEARING LUBE OIL HEADER PRESS#1 LOW, PRESSURE SWITCH, UNITED ELECTRIC CONTROLS: J402-146-1521	In Stock	1			N/A	
50101110	SWITCH,PRESSURE	EMERGENCY LUBE OIL PUMP DISCHARGE - PRESSURE SWITCH, UNITED ELECTRIC CONTROLS - J400-146-1521	In Stock	1			N/A	
0101115	SWITCH,PRESSURE	MAIN LUBE OIL PUMP #1 - DISCHARGE PRESSURE SWITCH, UNITED ELECTRIC CONTROLS: J402-164-1521	In Stock	1			N/A	
0404474	SWITCH,PRESSURE	PRESSURE SWITCH, BARKSDALE:X1T-4100-25	In Stock	1			N/A	

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Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
0101172	SWITCH, PRESSURE	PRESSURE SWITCH, DRUCKSCHALTER: D1 TM80 SS	In Stock	1	MISK SCOTE	Lead Time	N/A	comments
		PUMP DISCHARGE PRESSURE SWITCH, CCS 646GZEM5	In Stock	1			N/A	
101072	*	PUMP SUPPLY PRESSURE SWITCH, CCS 646GZEM1	In Stock	1			N/A	
	SWITCH, TEMPERATURE	LUBE OIL RESERVOIR TEMPERATURE SWITCH, HONEYWELL:T775A2009	In Stock	1			N/A	
7101114	SWITCH, TEINFERATORE	LOBE OF RESERVOIR TENTER SWITCH, HONETWEEL. 1773A2003	III SLUCK	1			IN/A	
100420	THERMOCOUPLE,SHELL	SIEMENS:MQ 0206-PVDF8 3XTC(K), INSTALLATION LENGTH 375MM, HAN 8D	In Stock	1			N/A	
1100429		MECHANICAL PACKAGE - VENTILATION THERMOSTAT, T631C1012	L. Ch. d.	1			N/A N/A	
)1011/5	THERMOSTAT, VENTILATION		In Stock	1			N/A	
		FUEL OIL INLINE HEATER DISCHARGE TEMPERATURE TRANSMITTER,	In Stock					
0101086	TRANSMITTER, HEATER DISCHARGE	ROSEMOUNT:644HAK6J6M4		1			N/A	
400790	TRANSMITTER,PRESSURE	ROSEMOUNT:3051S2TG3A2A11A1AM5Q4	In Stock	1			N/A	
		HYD FLUID HEADER SUPPLY - PRESSURE TRANSMITTER, ROSEMOUNT:	In Stock					
0101139	TRANSMITTER,PRESSURE	3051TG4A2A21AM5Q4		1			N/A	
		0-500 PRESSURE TRANSMITTER - RO SKID, AUTOMATION DIRECT: PTD25-20-	In Stock					
0101153	TRANSMITTER,PRESSURE	0500H	III Stock	1			N/A	
		PRESSURE TRANSMITTER, AUTOMATION DIRECT:PTD25-20-0100H, 0-100 PSI -	In Stock					
0101154	TRANSMITTER,PRESSURE	VARIOUS SKIDS	III Stock	3			N/A	
		FUEL OIL TANK 1 LEVEL RADAR LEVEL TRANSMITTER,	In Charle					
101084	TRANSMITTER,RADAR LEVEL	ROSEMOUNT:5402AH1E64SPVDAM1C1S3	In Stock	1			N/A	
		RAW WATER STORAGE TANK LEVEL RADAR - LEVEL TRANSMITTER,						
1100435	TRANSMITTER, TANK LEVEL	ROSEMOUNT:5402AH1E64SPVCAM1C1S3	In Stock	1			N/A	
0101071	VALVE,ACTUATED THROTTLE	PNEUMATICALLY ACTUATED THROTTLE VALVE, FISHER ET-677-DVC-6200	In Stock	1		1	N/A	
0101134	VALVE,AIR BLEED	HYD FLUID AIR BLEED VALVE, HYDAC:AEV6/5 00230023	In Stock	1			N/A	
	,			-		1	.9	
1900169	VALVE,AIR FILTER DRAIN	COOLING AIR FILTER BLEED DRAIN VALVE, 1", WORCHESTER:B4446 XG SW	In Stock	1			N/A	
	VALVE, AUTO SHUT-OFF	MODEL ASV-1 AUTOMATIC - SHUT-OFF VALVE, TYCO:92-343-1-021	In Stock	2			N/A	
900165	VALVE, AUTOMATIC DRAIN	MODEL AD-1 AUTOMATIC DRAIN VALVE, TYCO:52-793-2-004	In Stock	2			N/A	
	VALVE, BALL	1.5", STAINLESS STEEL, MCMASTER CARR: 45995K84		1			N/A N/A	
101162			In Stock	1				
1100208	VALVE,CHECK	CHECK VALVE, SUN HYDRAULICS:CXDA-XAN	In Stock	1			N/A	
		MANUFACTURER: FISHER, MODEL: 1008 HANDWHEEL ACTUATOR W/LOCKING						
		MECHANISM, SIZE 40, TRAVEL LENGHT:3/4", CAPABLE OF GIVING PRECISE	In Stock					
		MANUAL - THROTTLING CONTROL, TRAVEL INDICTATOR MOUNTED ON	III Stock					
4300750	VALVE,FUEL BYPASS	ACTUATOR - YOKE FOR VISUAL VALVE PLUG POSITION		1			N/A	
4100206	VALVE,FUEL CHECK	FUEL LINE CHECK VALVE, PARKER:10A-CBG8L-10-PF-SS, VOGT:SW9871T	In Stock	3			N/A	
4900176	VALVE,NEEDLE	1 SERIES NEEDLE VALVE, SWAGELOCK:B-1VM4-S4/SS-1VM4-S4	In Stock	1			N/A	
4400332	VALVE,PRESSURE CONTROL	PRESSURE CONTROL VALVE, SUN HYDRAULICS:RDBA-LAN	In Stock	1			N/A	
4400326	VALVE,PRESSURE RELIEF	HYDRAULIC FLUID PRESS RELIEF VALVE, REXROTH:R900341066	In Stock	1			N/A	
4400327	VALVE,PRESSURE RELIEF	PUMP DISCHARGE - PRESSURE RELIEF VALVE, REXROTH:R900420276	In Stock	1			N/A	
4400328	VALVE,PRESSURE RELIEF	VALVE MANIFOLD PRESSURE RELIEF VALVE, REXROTH:R900423723	In Stock	1			N/A	
4400328	VALVE,FRESSORE RELIEF	VALVE MANNI GEO I RESSORE REELET VALVE, REXROTTING GOAZST 25	III Stock	1			N/A	
4400329	VALVE,PRESSURE RELIEF	MAIN PUMP DISCHARGE - PRESSURE RELIEF VALVE, REXROTH:R900424147	In Stock	1			N/A	
1100209	· ·	·	L. Charle	1				
	VALVE, SOLENOID	SOLENOID VALVE, SUN HYDRAULICS:DLDA-MCN	In Stock				N/A	
1500437	VALVE,SOLENOID	SOLENOID VALVE, TYCO: 52-287-10-024	In Stock	2			N/A	
1500511	VALVE,SOLENOID	AIR CONTROL SOLENOID VALVE, 24VDC MINI, INGERSOLL RAND 633658	In Stock	1		1	N/A	
)101101	VALVE,SOLENOID	RAC FILTER DRAIN SOLENOID VALVE, PARKER:H2223N	In Stock	1		ļ	N/A	
	1		In Stock					
000438	VALVE,SOLENOID	GENERATOR JACKING OIL - SOLENOID VALVE, SUN HYDRAULICS:DLDA-MCN	III Stock	1			N/A	
100203	VALVE,SS POPPET CHECK	SS POPPET CHECK VALVE, SWAGELOCK:SS-6C-1	In Stock	1			N/A	
1800068	VALVE,STOP	FISHER 3", 560iit-TH66 QS1600-4 DXP-L21GNEB	In Stock	1			N/A	
1900197	VALVE,THROTTLE	THROTTLE VALVE, NFBC-LCN	In Stock	1			N/A	
1900178	VALVE,6Z-PR4-BNT-SS	PARKER VALVE, MODEL# 6Z-PR4-BNT-SS	In Stock	1			N/A	
3400768	FILTER, AIR	GEN AIR FILTERS, COMPACT FILTER G4/F7 287 X 292 X 300, SIEMENS	In stock	8		1	TBD	
2100315	BELT,RADIATOR FAN	RADIATOR FAN BELT GROUP 1, CAT:7W5228	In stock	0		1	TBD	
	FILTER, LIQUID FUEL	CLARK RELIANCE 2200A3	In Stock	25		1	TBD	
	7		20001			1	<del>                                     </del>	
		REPAIR KIT FOR FUEL START-UP BYPASS VALVE, MANUFACTURER:FISHER,						
		MODEL:EZ, SIZE:1", TRIM:1/4" M-FORM, USED FOR THROTTLING ON-OFF	In Stock	1				
	1	CONTROL OF LIQUID OR GASES, SINGLE PORT, GLOBE-STYLE BODY FOR -	III SLUCK	1				
4200751	DEDAID WE DVDAGG VALVE			1			T00	
4300751	REPAIR KIT, BYPASS VALVE	QUICK CHANGE TRIM & POST GUIDED UNBALANCED VALVE PLUG				-	TBD	
			In Stock	0				
1900190	VALVE ASSY,PILOT	PILOT VALVE ASSEMBLY, CLIPPARD FV-SP W/MPA-3P, CLIPPARD:LWT3732					TBD	
1900223	TRANSMITTER, DEW POINT -100F	-40F AND -100F, INGERSOLL RAND P/N 23182603	On Order	0			TBD	
1200812	R-DIODE	SIEMENS PG:840C411F04	On Order	0			TBD	
1200812	F-DIODE	SIEMENS PG:840C411F03	On Order	0			TBD	

			Holyrood CT					
Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
		PRESSURE GAUGE - FOR INSTR AIR COMPRESSOR, ASHCROFT:45-13772204b,	On Order	0				
	GAUGE,PRESSURE	RANGE:0-200 PSI		-			TBD	
51100454	GAUGE,CAPSUHELIC	CAPSUHELIC GOUGE 0-2" W.C., PNEUMAFIL:S51646-B6	On Order	0			TBD	
	L	PRESSURE TRANSMITTER 0-300 PSI 4-20MA,	On Order	0				
61100455	TRANSMITTER,PRESSURE	ROSEMOUNT:3051TA3A2B21AES		·			TBD	
		PRESSURE REGULATOR - AIR SUPPLY FROM INST AIR COMPRESSOR,	On Order	0				
61100456	REGULATOR,PRESSURE	FISHER:FS64-29					TBD	
61100457	GAUGE,PRESSURE	INSTR. AIR COMPRESSOR PRESSURE GAUGE, AIR CENTERS OF FLORIDA:5ZP76	On Order	0			TBD	
01100437	GAUGE, PRESSURE	PRESSURE REGULATING GAUGE - AIR SUPPLY FROM INSTR AIR COMPRESSOR,					IBU	
61100460	GAUGE, PRESS REGULATING	FAIRCHILD:4066AT	On Order	0			TBD	
01100100	Creaty, ness nesselvints	PRESSURE GAUGE 0-160PSI, LIQUID FILLED BACK MOUNT, STAINLESS STEEL,				1	100	
61100463	GAUGE,PRESSURE	AUTOMATION DIRECT:G25-SL160-4LB	On Order	0			TBD	
		PRESSURE GAUGE 0-100PSI, LIQUID FILLED LOWER MOUNTED, STAINLESS		_				
61100464	GAUGE,PRESSURE	STEEL, AUTOMATION DIRECT:G25-SD100-4LS	On Order	0			TBD	
		PRESSURE GAUGE 0-100PSI, LIQUID FILLED BACK MOUNTED, STAINLESS	00	0				
61100465	GAUGE,PRESSURE	STEEL, AUTOMATION DIRECT:G25-SD100-4CS	On Order	U			TBD	
		PREESSURE GUAGE 0-500PSI, LIQUID FILLED BACK MOUNTED, STAINLESS	On Order	0				
61100466	PRESSURE GUAGE 0-500PSI	STEEL, DWYER INSTRUMENTS:SGY-D11142N-GF	On Order	U			TBD	
		PRESSURE GAUGE 0-500 PSI, LIQUID FILLED LOWER MOUNTED, STAINLESS	On Order	0				
61100467	GAUGE,PRESSURE 0-500PSI	STEEL, DWYER INSTRUMENTS:SGY-D11122N-GF	Oli Oldei				TBD	
65000437	ACTUATOR,AUMA	ACTUATOR, AUMA, MODEL:SA10.2-216/GS200.3/GZ200.3	In procurement process	0			TBD	
		INLET GUIDE VALVE HYD DEMAND CONTROL - ACTUATOR, MOOG:85-	In procurement process	0				
60101192	ACTUATOR, DEMAND CONTROL	616C101					TBD	
	ACTUATOR,LOUVER	ELECTRICAL PACKAGE LOUVER ACTUATOR, ML4115B1008	In procurement process	0			TBD	
58400773	AIR FILTER,SOLAR FINAL	CENTAUR:AAF 515-564-002	In procurement process	0			TBD	
98200199	ALARM,PANEL DISCHARGE	FIRE CONTROL PANEL DISCHARGE -ALARM TO DCS, NOTIFIER:AFP-300	In procurement process	0			TBD	
98200198	ALARM,TROUBLE	FIRE CONTROL PANEL TROUBLE ALARM TO DCS, DET-TRONICS:U9500A	In procurement process	0			TBD TBD	
60101182 65900003	ANALYZER,CONDUCTIVITY BRUSH SET,TURNING MOTOR GEAR	E-CELL CONDUCTIVITY ANALYZER, BURKERT:3059495	In procurement process	0		-	TBD	
05900003	BROSH SET, TORNING MOTOR GEAR	TURNING GEAR MOTOR BRUSH SET, 419904-51AC WEATHER STATION DRY BULB TEMP A, VAISALA:	In procurement process	U		-	IBU	
80900088	BULB.TEMP A DRY	HMT3301A0B101CGAB200B01CABAA1	In procurement process	0			TBD	
	BUSHING ASSY, FISHER POT	POT/BUSHING ASSEMBLY, FISHER:27B6208X012	In procurement process	0			TBD	
37900015	CABLE, TITAN IGNITER	TITAN IGNITER CABLE, CENTAUR:115352-1	In procurement process	0			TBD	
	CAPACITOR ASSEMBLY,RC	SIEMENS PG:153C684	In procurement process	0		1	TBD	
74201105	CONTACT,BRUSH	TWO LAYER CONTACT BRUSH, SIEMENS:EMT 513-005, 20X8X32 EG5U/AG20	In procurement process	0			TBD	
74201106	CONTACT,1NC BLK	CONTACT BLK 1NC, SIEMENS:52BAK	In procurement process	0			TBD	
60101185	CONTACTOR,E-CELL 32A	E-CELL 32A CONTACTOR, GENERAL ELECTRIC:3060877	In procurement process	0			TBD	
		LUBE OIL RESERVOIR - VACUUM CONTROL DAMPER, INTEGRAL WITH		0				
43900018	DAMPER, VACUUM CONTROL	BLOWER HOUSING, 4"	In procurement process	U			TBD	
03900028	ELEMENT,CHROMOLOX	ELEMENT, CHROMOLOX:118-305471-112	In procurement process	0			TBD	
58400769		GEN AIR FILTERS, COMPACT FILTER, G4/F7 592 X 292 X 300, SIEMENS	In procurement process	0			TBD	
58400781	FILTER,HIGH PRESSURE FUEL	CENTAUR:1125423	In procurement process	0			TBD	
			In procurement process	0				
58400789	FILTER,LUBE OIL	TURBOHYDRAULIC START LUBE OIL FILTER, CENTAUR FAUCET: 038062 10M		-			TBD	
58400779	FILTER,TITAN FUEL	CENTAUR:11246882	In procurement process	0			TBD	
58400777	FILTER,TITAN LUBE OIL	CENTAUR:38062	In procurement process	0			TBD	
C440C ***	ELONG ASTER TURRISTS	FUEL OIL UNLOADING FLOW LIQUID TURBINE FLOWMETER, HOFFER FLOW	In procurement process	0			TOD	
51100431	FLOWMETER, TURBINE	CONTROLS: HO SERIES/6X6-75-1250-CB-1M/XE2-F1CS-EXP REPLACEMENT FUSE FOR AC PIMS, BENTLY NEVADA:1720025		2		1	TBD	
70000509 50101156	FUSE,AC PIM	REPLACEMENT FUSE FOR AC PIMS, BENTLY NEVADA: 1720025  REPLACEMENT FUSE (LOW VOLTAGE DC PIM), BENTLY NEVADA: 1720045	In procurement process	0		+	TBD TBD	
70000487	FUSE,LOW VOLTAGE DC FUSE,SIEMENS PG	SIEMENS PG 840C208FO1	In procurement process In procurement process	0		+	TBD	
70000487	FUSE,12A	FUSE 12A, SIEMENS:S00232012	In procurement process	0		+	TBD	
	FUSE,12A FUSE,2A E-CELL	E-CELL FUSE 2A, BUSSMANN:3060755	In procurement process	0		+	TBD	
70000504	FUSE,25A E-CELL	E-CELL FUSE 25A, BUSSMANN:1154697	In procurement process	0		+	TBD	
70000503	FUSE.3A E-CELL	E-CELL FUSE 3A. BUSSMAN:3060756	In procurement process	0		1	TBD	
70000508	FUSE,8A E-CELL	E-CELL FUSE 8A, MERSEN ELECTRIC POWER:3060752	In procurement process	0		1	TBD	
56200363	GASKET,CENTAUR	GASKET, CENTAUR:946933C1	In procurement process	0		1	TBD	
	<u> </u>	ROTOR COOLING AIR FILTER COVER - FLANGE GASKET, NATIONAL						
56200362	GASKET,FLANGE	FILTRATION SYSTEMS:10300002	In procurement process	0			TBD	
	GAUGE,CAPSUHELIC	CAPSUHELIC GUAGE 0-6" W.C., PNEUMAFIL:551646-B1	In procurement process	0		İ	TBD	

			Holyrood CT					
Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
		STARTING PACKAGE TORQUE CONVERTER PRESSURE GAUGE, KOENIG:BAC-		· ·				
61100450	GAUGE,CONVERTER PRESSURE	160-25	In procurement process	0			TBD	
61100442	GAUGE,DIAL PRESSURE	DIAL PRESSURE GAUGE, ECODYNE:2172-1067	In procurement process	0			TBD	
50101106	GAUGE,OIL TEMPERATURE	LUBE OIL COOLER OUTLET TEMP GAUGE, ASHCROFT:600B-01-CEXSG	In procurement process	0			TBD	
		DIFFERENTIAL PRESSURE GAUGE - COMPRESSOR INSTR AIR COALESCING	In procurement process	0				
61100459	GAUGE,PRESSURE	FILTER, HEADLINE FILTERS:DPP-975		0			TBD	
03900029	HEATER,CHROMOLOX HEATER,12KW OPEN COIL	HEATER, CHROMOLOX:1281537  12KW OPEN COIL HEATER, CHROMOLOX:OCE-12120-210-480V	In procurement process	•			TBD TBD	
03900025	HEATER, 12KW OPEN COIL	12KW OPEN COIL HEATER, CHROMOLOX:OCE-12120-210-480V	In procurement process	0			IBD	
03900026	HEATER,3PH COMFORT	5KW/3PH/480V COMFORT HEATER, CHROMOLOX:HD3D-500 (PCN#520153)	In procurement process	0			TBD	
05500020	nerven,si ii comi oni	HYD FLUID CONDITIONING LOOP - PRESSURE INDICATOR, 2-1/2",					155	
60101136	INDICATOR,LOOP PRESSURE	REXROTH:/400PUA31-10A-4 JIC	In procurement process	0			TBD	
61100447	INDICATOR,OIL LEVEL	LUBE OIL RESERVOIR LEVEL INDICTATOR, GEMS:806601	In procurement process	0			TBD	
		LUBE OIL RESERVOIR VACUUM - PRESSURE INDICATOR, ASHCROFT:45-	In procurement process	0				
60101111	INDICATOR, VACUUM PRESSURE	11877SS-04B	In procurement process	U			TBD	
		INSTRUMENT AIR COMPRESSOR LOW - OIL LEVEL INDICTATOR, INGERSOLL	In procurement process	0				
60101129	INDICTATOR,LOW OIL LEVEL	RAND:22102388					TBD	
54900189	INDICTATOR,SIGHT	1-1/2", JACOBY:100-S(NF)	In procurement process	0		1	TBD	
58400775	KIT,OIL FILTER & O-RING	LUBE OIL FILTER & O-RING KIT, CENTAUR:9161283C1	In procurement process	0		1	TBD	
60101178	KIT,STACK FITTINGS	E-CELL STACK FITTINGS KIT, GENERAL ELECTRIC:3019638	In procurement process	0		+	TBD	
74600114	LAMP,115VAC PILOT	115VAC PILOT LAMP - VARIOUS SKIDS, RADWELL INTERNATIONAL:D5N130	In procurement process	0			TBD	
		POWER SUPPLY MODULE, MANUAL, BENTLY NEVADA:129767-01	In procurement process	0			TBD	
	METER,FLOW	ROSEMOUNT:3051SFC1CS030N065-T33EA1A5Q4E6M5	In procurement process	0			TBD	
60101073	METER,FLOW	ROSEMOUNT:3051SFC1CS030NXT33DA1A5DQ4E6M5	In procurement process	0			TBD	
60101183	METER,30-199.9 MV	E-CELL 30-199.9 MV METER, GENERAL ELECTRIC: 3038073	In procurement process	0			TBD	
58400796	MICROSWITCH ASSY, FILTER	MICROSWITCH ASSEMBLY - FILTER SKIDS & SOFTENER, PENTAIR:LWT3215	In procurement process	0			TBD	
60101157	MODULE,DC POWER SUPPLY	HIGH VOLTAGE DC POWER SUPPLY MODULE, BENTLY NEVADA:129486-01	In procurement process	0			TBD	
		DISCRETE I/O MODULE WITH - INTERNAL TERMINATIONS, BENTLY	In procurement process	0				
74600113	MODULE, DISCRETE I/O	NEVADA:133422-01	in procurement process	0			TBD	
		DISCRETE INTERNAL BARRIERS I/O MODULE WITH INTERNAL TERMINATIONS,	In procurement process	0				
74600109	MODULE,I/O	BENTLY NEVADA:136703-01	, ,				TBD	
C01011E0	MODULE BOWER INDUIT	LOW VOLTAGE DC POWER INPUT MODULE (PIM), BENTLY NEVADA:133300-	In procurement process	0			TBD	
60101159	MODULE,POWER INPUT MODULE,POWER SUPPLY	LOW VOLTAGE DC POWER SUPPLY MODULE, BENTLY NEVADA:133292-01	In procurement process	0			TBD	
00101130	MODULE, I OWER SOLVE	I/O MODULE WITH INTERNAL BARRIERS - (INTERNAL TERMINATIONS)(4 X					155	
74600099	MODULE,TMR I/O	PROX/ACCEL)	In procurement process	0			TBD	
	, , , , , , , , , , , , , , , , , , , ,	TRUCK UPLOADING GROUND VERIFICATION MONITOR, 8030-120 GROUND		_				
61900225	MONITOR, GROUND VERIFICATION	VERIFICATION MONITOR, CIVACON	In procurement process	0			TBD	
		MULTIFUNCTION MONITOR - ORP OR CONDUCTIVITY, RYAN HERCO:5924-	In procurement process	0				
60800395	MONITOR, MULTIFUNCTION	562	in procurement process				TBD	
65000435	MOTOR,FLAP ACTUATOR	JOHNSON CONTROLS, JCI M9132-GGA-1	In procurement process	0			TBD	
56400182	O-RING,BUNA	HEAD TO BOWL O-RING BUNA, PALL:UK19672	In procurement process	0		1	TBD	
	PICK UP, GENERATOR SPEED	TURBINE GENERATOR SPEED PICK UP, BRAUN:A5508T165C0.5	In procurement process	0		1	TBD	
60101118 60800396	PICK UP,TORQUE CONVERTER SP POWER SUPPLY,24VDC	TORQUE CONVERTER SPEED PICK UP, ELECTRO CORP:725833 24VDC POWER SUPPLY, AUTOMATION DIRECT:PSB24-060D	In procurement process	0		+	TBD TBD	
58400776	PRE-FILTER, SOLAR	CENTAUR AMERKLEEN M-80 FILTER	In procurement process In procurement process	0		+	TBD	
60800398	PREAMPLIFIER, ORP	ORP PREAMPLIFIER, RYAN HERCO:5905-273	In procurement process	0		+	TBD	
58101225	PUMP,GEAR	DANFOSS:BERENDEN FLUID POWER SNP 2/11	In procurement process	0		1	TBD	
54900195	REPAIR KIT, SOLENOID	PURGE SOLENOID REPAIR KIT, SURESITE:3153515	In procurement process	0		1	TBD	
	·	GENERATOR EXCITER END COLD AIR TEMPERATURE RTD, 100 OHM						
61100430	RTD,AIR TEMPERATURE	PLATINUM, TMG GERABERG	In procurement process	0		1	TBD	
56500208	SEAL.MECHANICAL	MECHANICAL SEAL, EAGLE:ABPN Q1Q1VMG	In procurement process	0			TBD	
60101181	SENSOR,E-CELL FLOW	E-CELL FLOW SENSOR 8020 SHORT, BURKERT:3033067	In procurement process	0		1	TBD	
60101177	SENSOR,INLINE FLOW	E-CELL INLINE FLOW SENSOR, BURKERT: 3059466	In procurement process	0			TBD	
			In procurement process	0			1	
60800397	SENSOR, ORP	ORP SENSOR, RYAN HERCO:5909-751, RAW WATER PUMP - VARIOUS SKIDS				1	TBD	
60101080	SENSOR, TEMPERATURE	JCI TS-9103-8324  GENERATOR TURBINE END VIBRATION X, BENTLY NEVADA: 3300 SERIES	In procurement process	0		+	TBD	
00101104	SENSOR, VIBRATION	TURBINE EXHAUST END VIBRATION X - RELATIVE SENSOR, BENTLY NEVADA:	In procurement process	-		+	TBD	
60101170	SENSOR, VIBRATION	3500 SERIES	In procurement process	0			TBD	
	SHAFT, FISHER	SHAFT, FISHER:7000400800	In procurement process	0		+	TBD	
	SPEED CONTROL, NUMATICS	SPEED CONTROL, BRONZE, NUMATICS A1MN, EMERSON:LWT21254	In procurement process	0		1	TBD	

			Holyrood CT					
Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
4600098	SWITCH, AUXILIARY	AUX SWITCH, SIEMENS:A01JLD64	In procurement process	0			TBD	
101180	SWITCH,E-CELL PRESSURE	E-CELL PRESSURE SWITCH, AUTOMATION DIRECT:3039305	In procurement process	0			TBD	
101145	SWITCH,FLUID LOW LEVEL	HYD FLUID RESERVOIR LOW LEVEL SWITCH, REXROTH:500PUA31-05 2 SW	In procurement process	0			TBD	
101104	SWITCH,HIGH PRESSURE	LUBE OIL FILTER DELTA HIGH PRESS SWITCH, MIDWEST:120-AA-09-0-CZ	In procurement process	0			TBD	
101150	SWITCH,INSULATOR #58-PA	MICRO SWITCH INSULATOR #58-PA, PENTAIR:LWT7696	In procurement process	0			TBD	
		GENERATOR TURBINE END BEARING - JACKING OIL FLOW SWITCH,						
101132	SWITCH,OIL FLOW	MEISTER:DKM/A-1/10	In procurement process	0			TBD	
		GENERATOR MAIN JACKING OIL PUMP - PRESSURE SWITCH, BARKSDALE:B1T-						
101130	SWITCH,OIL PUMP PRESSURE	H32	In procurement process	0			TBD	
		GENERATOR MAIN JACKING OIL PUMP - PRESSURE SWITCH, BARKSDALE:B1T-						
101131	SWITCH,OIL PUMP PRESSURE	H04	In procurement process	0			TBD	
101131	over on, ore room rates one	INSTRUMENT AIR SYSTEM PRESSURE SWITCH, UNITED ELECTRIC CONTROLS:					155	
101125	SWITCH,PRESSURE	H122-184, MFG PN 0409-007	In procurement process	0			TBD	
101123	SWITCH, STAGER 48-03	STAGER (110V) SERIES 48-03 - W/HOMING SWITCH, OSMONICS: 48-03	In procurement process	0			TBD	
101131	3W11C11,31AGER 48-03	INSTR.AIR COMPRESSOR START STOP, PRESSURE SWITCH, HUBBELL	in procurement process				100	
101128	SWITCH,START STOP PRESSURE	INDUSTRIAL CONTROL: 69HA109779U	In procurement process	0			TBD	
101120	SWITCH, START STOP PRESSURE	BARKESDALE HEATER CONTROL TEMPERATURE SWITCH, MODEL # T1X-S154-				1	עטו	
600160	SWITCH TEMPERATURE	A, STAINLESS STEEL	In procurement process	0			TRD	
008400	SWITCH,TEMPERATURE	HYD FLUID RESERVOIR HEATER - TEMPERATURE SWITCH, UNITED ELECTRIC					TBD	
404443	CANTON TEA ADED ATURE		In procurement process	0			TDD	
101142	SWITCH, TEMPERATURE	CONTROLS: C402-120-1070-M202 73/86F	In				TBD	
1011/6	SWITCH,TEMPERATURE	ELECTRICAL PACKAGE TEMPERATURE SWITCH, SERIES 54	In procurement process	0			TBD	
	SUMPON TEL 1959 17 195 (955)	HYD FLUID COOLER FAN MOTOR - TEMPERATURE SWITCH (OFF), UNITED	In procurement process	0			W0.0	
101140	SWITCH,TEMPERATURE (OFF)	ELECTRIC CONTROLS: C402-120-1070-M202 135/120F					TBD	
		HYD FLUID COOLER FAN MOTOR - TEMPERATURE SWITCH (ON), UNITED	In procurement process	0				
	SWITCH,TEMPERATURE (ON)	ELECTRIC CONTROLS: C402-120-1070-M202 135/120F					TBD	
	SWITCH, VALVE OPEN LIMIT	HP BLEED VALVE OPEN LIMIT SWITCH, WESTLOCK:2007XBY/4SPDT	In procurement process	0			TBD	
101100	SWITCH, VALVE OPEN LIMIT	LP BLEED VALVE OPEN LIMIT SWITCH, WESTLOCK:2007XBY/6SPDT	In procurement process	0			TBD	
100424	THERMOCOUPLE ASSEMBLY TYPE J	THERMOCOUPLE ASSEMBLY TYPE J, C11637-07-001	In procurement process	0			TBD	
100440	THERMOCOUPLE,BLADE PATH	COMPRESSOR BLADE PATH THERMOCOUPLE, DUPLEX TYPE K	In procurement process	0			TBD	
100441	THERMOCOUPLE, DISC CAVITY	DISC CAVITY THERMOCOUPLE, PYCO:DUPLEX TYPE K	In procurement process	0			TBD	
100438	THERMOCOUPLE,EXHAUST	TURBINE EXHAUST END BEARING - THERMOCOUPLE, DUPLEX TYPE K	In procurement process	0			TBD	
		BEARING LUBE OIL SUPPLY TEMPERATURE - THERMOCOUPLE, PYCO:02-3174	In procurement process	0				
101108	THERMOCOUPLE,LUBE OIL TEMP	W/16-0049 (TYPE K)	in procurement process	0			TBD	
			In procurement process	0				
101144	THERMOCOUPLE,RESERVOIR	HYD FLUID RESERVOIR THERMOCOUPLE, OMEGA:NB1-CASS-14U-12" DUAL	In procurement process	0			TBD	
		COMBUSTOR SHELL DISCHARGE - TEMPERATURE THERMOCOUPLE DUPLEX	In management management	0				
900167	THERMOCOUPLE,TEMPERATURE	TYPE K	In procurement process	U			TBD	
		STARTING PACKAGE MOTOR STATOR - TEMPERATURE THERMOCOUPLE,	In management management	0				
100448	THERMOCOUPLE,TEMPERATURE	S102629PD-120T305Z96	In procurement process	U			TBD	
		STARTING PACKAGE MOTOR FORWARD - BEARING TEMPERATURE T/C ,	1	0				
100449	THERMOCOUPLE,TEMPERATURE	S16820PD-300Z96	In procurement process	U			TBD	
100425	THERMOCOUPLE, TYPE K	K316G316-0-60-120-1ASP	In procurement process	0			TBD	
100428	THERMOMETER, RESISTANCE	SIEMENS:WQ 0233 2XPT100, INSTALLATION LENGTH 250MM, HAN 8D	In procurement process	0			TBD	
900024	THERMOSTAT KIT,WR-90	WR-90 THERMOSTAT KIT, CHROMOLOX:WR-90 KIT	In procurement process	0			TBD	
100468	THERMOSTAT,AC#1	ELECTRICAL PACKAGE AC#1 THERMOSTAT, HH01AD045	In procurement process	0		1	TBD	
101105	TOWER, LUBE OIL FILTER	LUBE OIL FILTER TOWER #1 PRESS, MARSH:J4652	In procurement process	0		1	TBD	
101184	TRANSDUCER,55A CURRENT	E-CELL 55A CURRENT TRANSDUCER, PHOENIX CONTACT:3062518	In procurement process	0		1	TBD	
101078	TRANSMITTER, GROUND FAULT	SIEMENS PG:153C691G02	In procurement process	0		1	TBD	
101070	TRANSMITTER, GUIDE POSITION	INLET GUIDE VANE POSITION TRANSMITTER, FISHER:4200 SERIES (4200)	In procurement process	0		1	TBD	
101137	TRANSMITTER, LEVEL	HYD FLUID RESERVOIR - LEVEL TRANSMITTER, GEMS:XT-800	In procurement process	0		<del> </del>	TBD	
10110/	TO THOMAS I LENGLE V.L.	THE TESTS RESERVOIR LEVEL TRANSPIRITER, GENS, AT 600	p. ocurement process			+	100	
	TRANSMITTER,LIQUID FUEL TEMP	LIQUID FUEL TEMPERATURE TRANSMITTER, ROSEMOUNT 644HAK6M5Q4J6	In procurement process	0			TBD	

			Holyrood CT					
Part No.	Description	Recommended Component	Stock Status	Quantity on Hand	Risk Score	Lead Time	Expected Delivery	Comments
		BEARING OIL PRESSURE TRANSMITTER, SIEMENS: 7MF4033-1CA10-1AC7-					, , , , , , , , , , , , , , , , , , ,	
1100445	TRANSMITTER,OIL PRESSURE	Z+B21+A02+Y01+Y21+Y15+Y16	In procurement process	0			TBD	
		INLET FILTER HOUSE BAROMETRIC - PRESSURE TRANSMITTER, SIEMENS:	In procurement process	0				
	TRANSMITTER,PRESSURE	7MF4233-1FA10-1AC1-Z+B21+Y01+Y15	in procurement process	-			TBD	
0101186	TRANSMITTER,PRESSURE	E-CELL PRESSURE TRANSMITTER, BURKERT:3059497	In procurement process	0			TBD	
		COMBUSTOR SHELL PRESS TRANSMITTER, SIEMENS:7MF4233-1HA10-1AC1-	In procurement process	0				
0101193	TRANSMITTER,PRESSURE	Z+B21+Y01+Y15		-			TBD	
		PUMP DISCHARGE PRESSURE TRANSMITTER, ROSEMOUNT	In procurement process	0				
0101070	TRANSMITTER, PUMP DISCHARGE	3051CG5A22A1AS5B4C6M5Q4					TBD	
0404433	TO A NICH AUTTED 24 TEA ADED ATURE	INLET SCROLL TEMPERATURE TRANSMITTER #1, YOKAGAWA:YTA320-	In procurement process	0			TDD	
	TRANSMITTER,31 TEMPERATURE	EA2NN/FU1/D2/Z	I	0			TBD	
4600160	VALVE 2" NPT BALL	FEMALE 316 SS FULL PORT BALL VALVE, 2"NPT, MCM:46495K86  ACTUATOR, VALWORX:561055A, ELECT FOR RO INLET VALVE & RINSE VALVE -	In procurement process	U			TBD	
0101161	VALVE,ACTUATOR	RO SKID	In procurement process	0			TBD	
	VALVE, ACTUATOR  VALVE, AIR INLET	ATOMIZING AIR RECEIVER INLET VALVE, WORCESTER:5166TT150	In procurement process	0			TBD	
	VALVE, AIR RELIEF	INST AIR HEADER RELIEF VALVE, PARKER:6M-6M-RL4A-VTSSMNKD	In procurement process	0			TBD	
4400324	VALVE,AIN NELIEI	BUTTERFLY VALVE, GEAR OPERATED, VELAN TOURQUESEAL: L16-1CP02-	in procurement process				100	
4800070	VALVE,BUTTERFLY	ACAA C/W MODEL M15	In procurement process	0			TBD	
	VALVE, CHECK	CHECK VALVE, MODEL 210, 4"	In procurement process	0		+	TBD	
	VALVE, CHECK 3"	3MB60-6047-WR	In procurement process	0			TBD	
	-,	LP COMPRESSOR BLEED VALVE, 18", METSO AUTOMATION:815W 11 22HB		-				
4900171	VALVE,COMPRESSOR BLEED	XZC VA	In procurement process	0			TBD	
	VALVE,COMPRESSOR BLEED	HP COMPRESSOR BLEED VALVE, 14", FISHER:A31A-1031/33082 SR80	In procurement process	0			TBD	
0101096	VALVE,COMPRESSOR SOLENOID	HP COMPRESSOR BLEED VALVE SOLENOID, ASCO:JKC8316G74V	In procurement process	0			TBD	
4900161	VALVE,CONTINUOUS PURGE	3", QS0600-4 DXP-L21GNEB EFHC8321G1	In procurement process	0			TBD	
		STAGE 3 TEMPERATURE CONTROL VALVE - I/P W/POSITIONER,						
1100443	VALVE,CONTROL	FISHER:DVC5030	In procurement process	0			TBD	
		STAGE 2 TEMPERATURE CONTROL VALVE - I/P W/POSITIONER,		٩				
1100444	VALVE,CONTROL	VRC:VE700GT1	In procurement process	0			TBD	
4900177	VALVE,FEMALE NEEDLE	FEMALE NEEDLE VALVE, MCMASTER CARR:4644K33, 3/8"NPT	In procurement process	0			TBD	
		GLOBE VALVE, STEEL, VOGT:SW9871T, LUBE OIL FILTER TOWER #1 VENT		0				
4900188	VALVE,GLOBE	VALVE	In procurement process	U			TBD	
4900193	VALVE,INLET SHUFFLE	INLET SHUTTLE VALVE, SURESITE:4010031	In procurement process	0			TBD	
		LO BEARING PRESSURE REGULATING VALVE, FISHER:44 ACTUATOR 4 BODY	In procurement process	0				
	VALVE,PRESS REGULATING	655ED	in procurement process				TBD	
0101109	VALVE,PRESSURE CONTROL	BEARING LUBE OIL PRESSURE CONTROL VALVE, FISHER:ED-655	In procurement process	0			TBD	
4400325	VALVE,PRESSURE RELIEF	POLISHING LOOP PRESSURE RELIEF VALVE, REXROTH:RR00347261	In procurement process	0			TBD	
4400330	VALVE,PRESSURE RELIEF	POLISHING LOOP PRESSURE RELIEF VALVE, REXROTH:HH8670A20KPRBV	In procurement process	0			TBD	
		PUMP DISCHARGE PRESSURE REGULATING VALVE, MOOG/FISHER:ET-657-						
		DVC-6200, SERIAL # F000642304, TYPE:ET CAV 111, SIZE 1-1/2, PORT SIZE:1-	In procurement process	0				
		5/16, RATING:CL600/1500 PSI CWP, PLUG:SST, STEM:SST, BODY:STL,						
4400323	VALVE,PUMP DISCHARGE	SEAT:SST					TBD	
******		DIVEN DATTEDNI CHECKANALVE All LINITED STATES DI ASTIS CORD E422 020	In procurement process	0				
	VALVE, PVC CHECK	PVC Y-PATTERN CHECK VALVE, 3", UNITED STATES PLASTIC CORP:5132-030		^			TBD	
4900160	VALVE,SHUTDOWN PURGE	1", QS0065-4 DXP-L21GNEB JBHC8327G041-125VDC	In procurement process	0			TBD	
4500434	VALVE,SOLENOID	MECHANICAL PACKAGE LOUVER - SOLENOID VALVE, ASCO:WPKP8320A89MS	In procurement process	0			TBD	
	VALVE, SOLENOID	E-CELL SOLENOID VALVE, EMERSON:3022390	In account account	0			TBD	
	VALVE,SOLENOID	INST AIR SYSTEM ISOLATION SOLENOID VALVE, ASCO:HCL8316G66MB	In procurement process	0			TBD	
	VALVE,SUPPLY FILTER	HYD FLUID SUPPLY FILTER SELECTION VALVE, ASCO: HCL8310G000WB	In procurement process	0		+	TBD	
4500130	VALVE,SUPPLI FILIER	STAGE #3 DISC CAVITY TEMPERATURE - CONTROL VALVE, 3", FISHER:A41-	In procurement process			+	עפו	
4900168	VALVE,TEMP CONTROL	1032425AS	In procurement process	0			TBD	
4500108	VALVE, LEIVIP CONTROL	STAGE #2 DISC CAVITY TEMPERATURE - CONTROL VALVE, 4", FISHER:A41-				+	עפו	
4900170	VALVE,TEMP CONTROL	1032425SR	In procurement process	0			TBD	
	VALVE,1" SW BALL	1" SW BALL VALVE, WORCESTER:K466TSW	In procurement process	0			TBD	
4100204	VALVE,150# CHECK	150# CHECK VALVE, MODEL 210, 6"	In procurement process	0		+	TBD	
7100204		TRUE UNION BALL VALVES, 2", PVC, INDELCO:2TUBV	In procurement process	0		1	TBD	
4600163	VALVE,2" PVC BALL							

	2016-17 Winter Readiness Planning
Appendix G	
Critical Spares Status Listing – Hydraul	ic Generation

			Spare Cost	
Critical Spare Component	Stock Status	Risk Score	>\$50,000	Comments
BDE - INTAKE STRUCTURE NO. 1 - TRANSMITTER,PRESS 0-6MH20	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 1 - TRANSMITTER,PRESS 0-375	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 2 - TRANSMITTER, PRESS 0-375	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 3 - TRANSMITTER, PRESS 0-375	In Stock	MEDIUM	NO	
BDE - PENSTOCK NO. 4 - TRANSMITTER, PRESS 0-375	In Stock	MEDIUM	NO	
BDE - TURBINE - Turbine Carbon Seal (Units 1 to 4)	In Stock	HIGH	NO	
BDE - TURBINE - Turbine Carbon Seal (Units 5 & 6)	In Stock	HIGH	NO	
BDE - WICKET GATES AND LINKAGES - Shear Pins	In Stock	MEDIUM	NO	
BDE - WICKET GATES AND LINKAGES - PACKING, V TYPE 2-EASY	In Stock	MEDIUM	NO	
BDE - WICKET GATES AND LINKAGES - PIN,ECCENTRIC	In Stock	MEDIUM	NO	
BDE - WICKET GATES AND LINKAGES - RING,PISTON SERVO MOTOR 18"OD	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 13.8KV	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 1000:	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,PT 14400KV	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 30332313	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - XFMR,CT 800:5	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - CT 50/51	In Stock	HIGH	NO	
BDE - GATE HOIST - BAY D'ESPOIR - ST - Remote I/O Adapter	In Stock	MEDIUM	NO	
BDE - HEADCOVER ASSEMBLY - UNIT 1 - BUSHING, UPPER HEAD COVER P003	In Stock	HIGH	NO	
BDE - HEADCOVER ASSEMBLY - UNIT 1 - BUSHING,UPPER WICKET	In Stock	HIGH	NO	
BDE - RUNNER - UNIT 1 - BOLT,SHAFT TO RUNNER	In Stock	HIGH	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, ANALOG QUANTUM	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE,CPU MODICON	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, DISCRETE IN	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, DISCRETE OUT	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, ETHERNET QUANTUM	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE,GPS QUANTUM	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, HOT STANDBY	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, INTERFACE PLC	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, RACK FILLER	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - MODULE, RELAY OUT	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - POWER SUPPLY, 125-24 VDC	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - POWER SUPPLY,125 VDC	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - POWER SUPPLY,125VDC 8A	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - POWER SUPPLY,24 VDC	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - REMOTE I/O HEAD, MODICON	In Stock	MEDIUM	NO	
BDE - PLC, Model Quantum- Modicon - ADAPTER, REMOTE I/O	In Stock	MEDIUM	NO	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - PLC, Model Quantum- Modicon - BACKPLANE,10 SLOT MODICON	In Stock	MEDIUM	NO	
BDE - STATION SERVICE - BDE PH1 - ACB	In Stock	HIGH	NO	
BDE - STATION SERVICE - BDE PH1 - Trip Unit - Breaker control device	In Stock	HIGH	NO	
BDE - ROTOR SHAFT - Rotating Ring	In Stock	HIGH	TBD	
BDE - STATOR ASSEMBLY - BAR,COPPER 1/2"X2"X10'	In Stock	HIGH	NO	
BDE - STATOR ASSEMBLY - BAR,ROTOR CONNECTION	In Stock	HIGH	NO	
BDE - STATOR ASSEMBLY - BAR,ROTOR CONNECTION	In Stock	HIGH	NO	
BDE - STATOR ASSEMBLY - BAR,STATOR	In Stock	HIGH	TBD	
BDE - STATOR ASSEMBLY - BAR,STATOR	In Stock	HIGH	TBD	
BDE - SPILLWAY #1-SALMON RIVE - Lift gearboxes/nuts	In Stock	HIGH	NO	
BDE - INTAKE GATE - BACKPLANE,6 SLOT MODICON	In Stock	MEDIUM	NO	
BDE - DISCONNECT SWITCH 29-1 - Complete Unit	In Stock	HIGH	YES	
BDE - Generator SLIPRING/BRUSH RIGGING - Carbon Brushes	In Stock	MEDIUM	NO	
BDE - Generator SLIPRING/BRUSH RIGGING - Brush Holders	In Stock	MEDIUM	NO	
BDE - Generator SLIPRING/BRUSH RIGGING - Slip Ring	In Stock	HIGH	YES	
BDE - TURBINE GUIDE BEARING - Bearing	In Stock	HIGH	YES	
BDE - EXCITATION CONTROLS - CARD, ABB HIEE200130R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD, ABB HIEE205011R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD, ABB HIEE205012R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE205014R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300661R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300686R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300690R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300698R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE300766R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE305043R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE305069R0001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE30598R1	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - CARD,ABB HIEE401481RD001	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - COIL,ABB HIER464920P1	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - MAINBOARD, ABB HIER465176R22	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - POWER SUPPLY,TRACO HIER46651-	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - POWER SUPPLY,TRACO HIER46651-	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - RESISTOR, FIELD DISCHARGE	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - SHUNT,ABB UXAB269330R909	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - VARISTOR,ABB 3ACD5245A003	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - BREAKER,ABB HIER466757P2331 (entire unit)	In Stock	HIGH	NO	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - FIELD BREAKER QO2 - PANEL EE - SHUNT,ABB UXAB269350R909	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - CONTACT,ABB UXAB239Z60R002	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - CONTACT,ABB UXAB239299R0003	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - CONTACT,ABB UXAB269399R032	In Stock	HIGH	NO	
BDE - FIELD BREAKER QO2 - PANEL EE - ARC-CHUTE,ABB UXAB269399R012	In Stock	HIGH	NO	
BDE - GENERATOR - CREEP DETECTOR ASSY,129 VCD	In Stock	HIGH	NO	
BDE - GENERATOR - PLATES, BRAKE (24 PER SET)	In Stock	HIGH	NO	
BDE - GENERATOR - SWITCH, WOODWARD 8935-139	In Stock	HIGH	NO	
BDE - Exciter POWER ELECTRONICS - Pulse Transformers	In Stock	MEDIUM	NO	
BDE - Exciter POWER ELECTRONICS - BRIDGE, ABB S00772	In Stock	HIGH	NO	
BDE - Exciter POWER ELECTRONICS - FUSE,ABB 6,6URD32TTF0800	In Stock	MEDIUM	NO	
BDE - Exciter POWER ELECTRONICS - FAN ASSY,ABB 500773	In Stock	HIGH	NO	
BDE - Exciter POWER ELECTRONICS - THYRISTOR,ABB 5STP27F1200	In Stock	HIGH	NO	
BDE - RECTIFYING TRANSFORMER - Full Unit	In Stock	HIGH	YES	
BDE - SURFACE AIR COOLERS - SAC Unit	In Stock	MEDIUM	TBD	
BDE - SURFACE AIR COOLERS - Tubes	In Stock	MEDIUM	NO	
BDE - THRUST/GUIDE BEARING COOLERS - Cooler	In Stock	HIGH	YES	
BDE - ROTOR POLES - Pole	In Stock	HIGH	TBD	
BDE - STATOR WINDINGS - UNIT 1 - CONNECTOR, STATOR CU	In Stock	HIGH	NO	
BDE - STATOR WINDINGS - UNIT 1 to 4 - Coils	In Stock	HIGH	TBD	
BDE - THRUST/GUIDE BEARING ASSEMBLY - Springs	In Stock	HIGH	NO	
BDE - THRUST/GUIDE BEARING ASSEMBLY - Oil	In Stock	MEDIUM	NO	
BDE - THRUST/GUIDE BEARING ASSEMBLY - TRANSMITTER,DIFF	In Stock	MEDIUM	NO	
BDE - GOVERNOR - BEARING, DASHPOT LINK	In Stock	HIGH	NO	
BDE - GOVERNOR - BRACKET,WOODWARD 11002-57	In Stock	HIGH	NO	
BDE - GOVERNOR - BRACKET, WOODWARD 91588	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING,PILOT VALVE	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING, SNAP ACTION	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING,WW 11002-65	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING, DASHPOT - SMALL	In Stock	HIGH	NO	
BDE - GOVERNOR - BUSHING, DASHPOT - LARGE	In Stock	HIGH	NO	
BDE - GOVERNOR - CABLE,AIRCRAFT 1/4 187083	In Stock	HIGH	NO	
BDE - GOVERNOR - CLIP,WW 11002-16	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,DASHPOT	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,PARTIAL SHUTDOWN RESET	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,SHUTDOWN SOLENOID	In Stock	HIGH	NO	
BDE - GOVERNOR - COIL,SHUTDOWN SOLENOID 65SD	In Stock	HIGH	NO	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - GOVERNOR - COIL,WW 202132	In Stock	HIGH	NO	
BDE - GOVERNOR - CONTACT,CONTACTOR-TYPE DG-	In Stock	HIGH	NO	
BDE - GOVERNOR - DASHPOT,WW 161314	In Stock	HIGH	NO	
BDE - GOVERNOR - DIODE,WW 202891	In Stock	HIGH	NO	
BDE - GOVERNOR - DISC,RELIEF VALVE	In Stock	HIGH	NO	
BDE - GOVERNOR - DISC,UNLOADER	In Stock	HIGH	NO	
BDE - GOVERNOR - GASKET KIT, WOODWARD 8926-137	In Stock	HIGH	NO	
BDE - GOVERNOR - GASKET, WOODWARD 1327-816	In Stock	HIGH	NO	
BDE - GOVERNOR - GASKET, WOODWARD 206317	In Stock	HIGH	NO	
BDE - GOVERNOR - LEVER,CONNECTING LOWER	In Stock	HIGH	NO	
BDE - GOVERNOR - LEVER,LOWER FLOATING	In Stock	HIGH	NO	
BDE - GOVERNOR - LEVER,UPPER FLOATING	In Stock	HIGH	NO	
BDE - GOVERNOR - LINK,WOODWARD 070346	In Stock	HIGH	NO	
BDE - GOVERNOR - LOCKWASHER,BEARING	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR ASSY,C/W SHAFT & GEAR	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR ASSY,GATE LIMIT	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR, GOVERNOR SPEED 28 VOLT	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR, SYNCHRONIZING	In Stock	HIGH	NO	
BDE - GOVERNOR - MOTOR, VIBRATING OIL	In Stock	HIGH	NO	
BDE - GOVERNOR - FILTER,HYD 932633Q	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,BALLARM	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,DASHPOT	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,LOWER DRIVE	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,PIVOT	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,WOODWARD 11002-71	In Stock	HIGH	NO	
BDE - GOVERNOR - PIN,WOODWARD 11002-75	In Stock	HIGH	NO	
BDE - GOVERNOR - PLUNGER,SNAP ACTION	In Stock	HIGH	NO	
BDE - GOVERNOR - POTENTIOMETER,1250OH 0.24A	In Stock	HIGH	NO	
BDE - GOVERNOR - PUMP,OIL IMO A3DB-275	In Stock	HIGH	NO	
BDE - GOVERNOR - RETAINER,SWITCH	In Stock	HIGH	NO	
BDE - GOVERNOR - RING,SNAP (PILOT SERVO PLUG)	In Stock	HIGH	NO	
BDE - GOVERNOR - ROTOR,BALL HEAD MOTOR	In Stock	HIGH	NO	
BDE - GOVERNOR - SOLENOID,125 V DC	In Stock	HIGH	NO	
BDE - GOVERNOR - SOLENOID,125VDC 211E	In Stock	HIGH	NO	
BDE - GOVERNOR - SPRING,PILOT VALVE LINK	In Stock	HIGH	NO	
BDE - GOVERNOR - SPRING,RELIEF	In Stock	HIGH	NO	
BDE - GOVERNOR - SPRING,UNLOADER	In Stock	HIGH	NO	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - GOVERNOR - STATOR,BALL HEAD MOTOR	In Stock	HIGH	NO	
BDE - GOVERNOR - SWITCH, PRESS OIL ALARM	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING, SPEED SIGNAL	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN, DOWEL - SPEED SWITCH	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - PLATE, MOUNTING - MERCURY	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - RING, ROTOR	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN,ROCKER ARM	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING, WW 1800125	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING, WW 111006	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BEARING, PMG P/N Z995205	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN,BALLARM	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - BUSHING, URETHANE UPPER D	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BUSHING, URETHANE LOWER D	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - BALLARM, SPEED SWITCH	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - PIN, TAPERED	In Stock	MEDIUM	NO	
BDE - GOVERNOR SPEED GENERATOR - SPRING, SPEED SWITCH	In Stock	HIGH	NO	
BDE - GOVERNOR SPEED GENERATOR - STATOR,P.M.G.	In Stock	HIGH	NO	
BDE - GUIDE BEARING SEGMENTS - Bearing segments,	In Stock	HIGH	YES	
BDE - THRUST BEARING SEGMENTS - Bearing segments,	In Stock	HIGH	YES	
BDE - UNIT 7 GOVERNOR - FILTER,HYD 932633Q	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,BALLARM	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN, DASHPOT	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,LOWER DRIVE	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,PIVOT	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,ROCKER ARM	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,WOODWARD 11002-71	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PIN,WOODWARD 11002-75	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PLUNGER, SNAP ACTION	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - POTENTIOMETER,1250OH 0.24A	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - PUMP,OIL IMO A3DB-275	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - RETAINER,SWITCH	In Stock	MEDIUM	N/A	
BDE - UNIT 7 GOVERNOR - RING, SNAP (PILOT SERVO PLUG)	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - ROTOR,BALL HEAD MOTOR	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SENSOR,LOAD GOVERNOR	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SOLENOID,125 V DC	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SOLENOID,125VDC 211E	In Stock	HIGH	N/A	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - UNIT 7 GOVERNOR - SPRING, PILOT VALVE LINK	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - STATOR, BALL HEAD MOTOR	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SWITCH, PRESS OIL ALARM	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - STATOR, PERMANENT MAGNET	In Stock	HIGH	N/A	
BDE - UNIT 7 GOVERNOR - SPRING, SPEED SWITCH	In Stock	HIGH	N/A	
BDE - UNIT 7 TURBINE - Carbon Seal	In Stock	HIGH	N/A	
BDE - UNIT 7 TURBINE - Wicket gate	In Stock	HIGH	N/A	
BDE - UNIT 7 TURBINE - Turbine bearing	In Stock	HIGH	N/A	
BDE - Unit 7 DRAFT TUBE-TURBINE - Water Level Probe	In Stock	MEDIUM	N/A	
BDE - Unit 7 HEADCOVER ASSEMBLY - BOTTOM RING P001 bushing	In Stock	HIGH	N/A	
BDE - Unit 7 HEADCOVER ASSEMBLY - BUSHING,LOWER HEAD COVER P001	In Stock	HIGH	N/A	
BDE - Unit 7 HEADCOVER ASSEMBLY - PACKING, V-TYPE 3/8 EASY	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - Linkage	In Stock	HIGH	N/A	
BDE - Unit 7 OPERATING RING - BUSHING,LINK PIN	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - CAP,SHEARPIN	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN, ECCENTRIC P005	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN,LINK P006	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN,ROD SHEARPIN	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - PIN,UPPER DRIVE	In Stock	MEDIUM	N/A	
BDE - Unit 7 OPERATING RING - LEVER, WICKET GATE	In Stock	HIGH	N/A	
BDE - Unit 7 ROTOR ASSEMBLY - POLE	In Stock	HIGH	N/A	
BDE - Unit 7 RUNNER - TURBINE - CARBON SEAL	In Stock	HIGH	N/A	
BDE - Unit 7 SERVOMOTOR # 1 - Piston Ring	In Stock	HIGH	N/A	
BDE - Unit 7 SERVOMOTOR # 1 - PACKING, SERVOMOTOR	In Stock	MEDIUM	N/A	
BDE - Unit 7 SERVOMOTOR # 1 - PACKING,V TYPE 2-EASY	In Stock	MEDIUM	N/A	
BDE - Unit 7 SERVOMOTOR # 1 - PACKING,V-TYPE 9"X8"ID	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD,DIGITAL I/O	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD,I/O ANALOG	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD,MEASURING ABB	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - BOARD, POWER SYSTEM STABI	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - CAPACITOR,20 MF +-10% 150 V	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - COMPONENT, INTEG CCT	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - INTEG CCT	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - CONTACT,ISOLATING	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - MODULE,ABB DCS500B200361	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - PANEL,CONTROL	In Stock	MEDIUM	N/A	
BDE - UNIT 7 EXCITER - POWER SUPPLY,ABB 3BHE013940R00	In Stock	MEDIUM	N/A	

Stock Status   Risk Score   Spans   Comments
BDE - Unit 7 Generator Field Breaker - Main Moving Contacts  BDE - Unit 7 Generator Field Breaker - Main Fixed Contacts  BDE - Unit 7 Generator Field Breaker - COIL, SHUNT CLOSING  BDE - Unit 7 Generator Field Breaker - COIL, SHUNT OPENING  BDE - Unit 7 Generator Field Breaker - COIL, SHUNT OPENING  BDE - Unit 7 Generator Field Breaker - Charging Motor  BDE - Unit 7 Generator Field Breaker - Charging Motor  BDE - Unit 7 Generator Field Breaker - BREAKER, ABB EZNE1600MS4-B1  BDE - Unit 7 Generator Field Breaker - ARC CHUTE, ABB UXAB289199215  In Stock  BDE - Unit 7 Generator Field Breaker - MOTOR, CHARGING  BDE - Unit 7 Generator Field Breaker - MOTOR, CHARGING  BDE - Unit 7 Generator Field Breaker - CONTACT, ABB UXAB239Z60R0  In Stock  MEDIUM  N/A  BDE - Unit 7 Control Board - BOARD, CONTROL  BDE - Unit 7 THYDRAULIC GENERATOR - coolers  In Stock  MEDIUM  N/A  BDE - Unit 7 PMG - BEARING, SPEED SIGNAL  In Stock  MEDIUM  N/A  BDE - Unit 7 PMG - BEARING, SPEED SWITCH  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH  BDE - Unit 7 PMG - PIN, DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE, MOUNTING - MERCURY  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING, ROTOR
BDE - Unit 7 Generator Field Breaker - Main Fixed Contacts  BDE - Unit 7 Generator Field Breaker - COIL,SHUNT CLOSING  BDE - Unit 7 Generator Field Breaker - COIL,SHUNT OPENING  BDE - Unit 7 Generator Field Breaker - COIL,SHUNT OPENING  BDE - Unit 7 Generator Field Breaker - Charging Motor  BDE - Unit 7 Generator Field Breaker - BREAKER,ABB EZNE1600MS4-B1  BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215  BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING  BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING  BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0  In Stock MEDIUM N/A  BDE - Unit 7 Control Board - BOARD,CONTROL  BDE - Unit 7 THYDRAULIC GENERATOR - coolers  In Stock MEDIUM N/A  BDE - Unit 7 PMG - BEARING,SPEED SIGNAL  BDE - Unit 7 PMG - BEARING,SPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  In Stock HIGH N/A  BDE - Unit 7 PMG - RING,ROTOR  In Stock HIGH N/A  BDE - Unit 7 PMG - RING,ROTOR
BDE - Unit 7 Generator Field Breaker - COIL,SHUNT CLOSING BDE - Unit 7 Generator Field Breaker - COIL,SHUNT OPENING BDE - Unit 7 Generator Field Breaker - Charging Motor BDE - Unit 7 Generator Field Breaker - Charging Motor BDE - Unit 7 Generator Field Breaker - BREAKER,ABB EZNE1600MS4-B1 BDE - Unit 7 Generator Field Breaker - BREAKER,ABB EZNE1600MS4-B1 BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215 In Stock BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING In Stock BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0 In Stock BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0 In Stock BDE - Unit 7 Control Board - BOARD,CONTROL In Stock BDE - Unit 7 Control Board - BOARD,CONTROL In Stock BDE - Unit 7 PMG - BEARING,SPEED SIGNAL In Stock BDE - Unit 7 PMG - BEARING,SPEED SIGNAL In Stock BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY In Stock BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY In Stock BDE - Unit 7 PMG - RING,ROTOR In Stock HIGH N/A BDE - Unit 7 PMG - RING,ROTOR
BDE - Unit 7 Generator Field Breaker - COIL,SHUNT OPENING BDE - Unit 7 Generator Field Breaker - Charging Motor In Stock BDE - Unit 7 Generator Field Breaker - BREAKER,ABB EZNE1600MS4-B1 BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215 In Stock BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215 In Stock BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING In Stock BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0 In Stock BDE - Unit 7 Control Board - BOARD,CONTROL In Stock BDE - Unit 7 PMG - BEARING,SPEED SIGNAL In Stock BDE - Unit 7 PMG - BEARING,SPEED SIGNAL In Stock BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY In Stock BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY In Stock BDE - Unit 7 PMG - RING,ROTOR In Stock BDE - Unit 7 PMG - RING,ROTOR In Stock BDE - Unit 7 PMG - RING,ROTOR In Stock BDIUM N/A BDE - Unit 7 PMG - RING,ROTOR In Stock BDIUM N/A BDE - Unit 7 PMG - RING,ROTOR In Stock BDIUM N/A BDE - Unit 7 PMG - RING,ROTOR In Stock BDIUM N/A BDE - Unit 7 PMG - RING,ROTOR
BDE - Unit 7 Generator Field Breaker - Charging Motor  BDE - Unit 7 Generator Field Breaker - BREAKER,ABB EZNE1600MS4-B1  BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215  BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215  BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING  BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0  In Stock  MEDIUM  N/A  BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0  In Stock  MEDIUM  N/A  BDE - Unit 7 Control Board - BOARD,CONTROL  In Stock  MEDIUM  N/A  BDE - Unit 7 PMG - BEARING,SPEED SIGNAL  In Stock  MEDIUM  N/A  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING,ROTOR
BDE - Unit 7 Generator Field Breaker - BREAKER,ABB EZNE1600MS4-B1  BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215  In Stock MEDIUM N/A  BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING  BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239260R0  In Stock MEDIUM N/A  BDE - Unit 7 Control Board - BOARD,CONTROL  BDE - Unit 7 Control Board - BOARD,CONTROL  BDE - Unit 7 PYDRAULIC GENERATOR - coolers  In Stock MEDIUM N/A  BDE - Unit 7 PMG - BEARING,SPEED SIGNAL  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  BDE - Unit 7 PMG - RING,ROTOR  In Stock HIGH N/A  BDE - Unit 7 PMG - RING,ROTOR  In Stock HIGH N/A
BDE - Unit 7 Generator Field Breaker - ARC CHUTE,ABB UXAB289199215  BDE - Unit 7 Generator Field Breaker - MOTOR,CHARGING  BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0  In Stock  MEDIUM  N/A  BDE - Unit 7 Control Board - BOARD,CONTROL  BDE - UNIT 7 HYDRAULIC GENERATOR - coolers  In Stock  MEDIUM  N/A  BDE - Unit 7 PMG - BEARING,SPEED SIGNAL  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A
BDE - Unit 7 Generator Field Breaker - MOTOR, CHARGING  BDE - Unit 7 Generator Field Breaker - CONTACT, ABB UXAB239Z60RO  In Stock  MEDIUM  N/A  BDE - Unit 7 Control Board - BOARD, CONTROL  BDE - UNIT 7 HYDRAULIC GENERATOR - coolers  In Stock  MEDIUM  N/A  BDE - Unit 7 PMG - BEARING, SPEED SIGNAL  In Stock  MEDIUM  N/A  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN, DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE, MOUNTING - MERCURY  BDE - Unit 7 PMG - RING, ROTOR  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING, ROTOR  In Stock  HIGH  N/A
BDE - Unit 7 Generator Field Breaker - CONTACT,ABB UXAB239Z60R0  BDE - Unit 7 Control Board - BOARD,CONTROL  BDE - Unit 7 HYDRAULIC GENERATOR - coolers  In Stock  HIGH  N/A  BDE - Unit 7 PMG - BEARING,SPEED SIGNAL  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A
BDE - Unit 7 Control Board - BOARD,CONTROL  BDE - UNIT 7 HYDRAULIC GENERATOR - coolers  In Stock  HIGH  N/A  BDE - Unit 7 PMG - BEARING,SPEED SIGNAL  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A
BDE - UNIT 7 HYDRAULIC GENERATOR - coolers  In Stock HIGH N/A BDE - Unit 7 PMG - BEARING,SPEED SIGNAL In Stock MEDIUM N/A BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY In Stock HIGH N/A BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH In Stock MEDIUM N/A BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY In Stock HIGH N/A BDE - Unit 7 PMG - RING,ROTOR In Stock HIGH N/A
BDE - Unit 7 PMG - BEARING,SPEED SIGNAL  BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A
BDE - Unit 7 PMG - BUSHING, OILITE OVERSPEED SWITCH ASSEMBLY  BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING,ROTOR
BDE - Unit 7 PMG - PIN,DOWEL - SPEED SWITCH  BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  In Stock  HIGH  N/A  BDE - Unit 7 PMG - RING,ROTOR  In Stock  HIGH  N/A
BDE - Unit 7 PMG - PLATE,MOUNTING - MERCURY  BDE - Unit 7 PMG - RING,ROTOR  In Stock HIGH N/A  N/A
BDE - Unit 7 PMG - RING,ROTOR In Stock HIGH N/A
DDE LINIT 7 DMC DIN DOCKED ADM
IDDE - UIII / FIVIG - FIIV, NOCKEN ANIVI   III SLUCK   TIGHT   IV/A
BDE - Unit 7 PMG - BEARING,WW 1800125 In Stock MEDIUM N/A
BDE - Unit 7 PMG - BEARING,WW 111006 In Stock MEDIUM N/A
BDE - Unit 7 PMG - BEARING,PMG P/N Z995205 In Stock MEDIUM N/A
BDE - Unit 7 PMG - PIN,BALLARM In Stock HIGH N/A
BDE - Unit 7 PMG - BUSHING, URETHANE UPPER D In Stock MEDIUM N/A
BDE - Unit 7 PMG - BUSHING, URETHANE LOWER D In Stock MEDIUM N/A
BDE - Unit 7 PMG - BALLARM, SPEED SWITCH In Stock HIGH N/A
BDE - Unit 7 PMG - PIN, TAPERED In Stock MEDIUM N/A
BDE - Unit 7 PMG - SPRING,SPEED SWITCH In Stock HIGH N/A
BDE - Unit 7 PMG - STATOR,P.M.G. In Stock HIGH N/A
BDE - Unit 7 VIBRATION MONITORING - PICK-UP,NON-CONTACT In Stock MEDIUM N/A
BDE - Unit 7 VIBRATION MONITORING - PICK-UP, SPEED SENSING In Stock MEDIUM N/A
BDE - Unit 7 VIBRATION MONITORING - POWER SUPPLY,IRD PCB 29128 In Stock HIGH N/A
BDE - Unit 7 GENERATOR COOLING WATER SYSTEM - TRANSMITTER, DIFF In Stock MEDIUM N/A
BDE - Unit 7 WICKET GATES - GATE, WICKET In Stock HIGH N/A
BDE - Unit 7 SLIPRING/BRUSH RIGGING - Collector rings In Stock HIGH N/A
BDE - Unit 7 SLIPRING/BRUSH RIGGING - Brushes In Stock MEDIUM N/A
BDE - Unit 7 SURFACE AIR COOLERS - Tubes In Stock MEDIUM N/A
BDE - Unit 7 THRUST/GUIDE BEARING COOLERS - Coolers In Stock HIGH YES New Ordered

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - Unit 7 NEUTRAL GROUND TRANSFORMER - transformer	In Stock	MEDIUM	N/A	
BDE - Unit 7 ROTOR - Pole	In Stock	HIGH	N/A	
BDE - Unit 7 STATOR WINDINGS - Stator Bars	In Stock	HIGH	N/A	
BDE - Unit 7 STATOR WINDINGS - Wedges	In Stock	HIGH	N/A	
BDE - Unit 7 TURBINE GUIDE BEARING - bearing	In Stock	HIGH	YES	New Ordered
BDE - Unit 7 GENERATOR GUIDE BEARING - segments	In Stock	HIGH	N/A	
BDE - Unit 7 THRUST BEARING - Thrust Pads	In Stock	HIGH	N/A	
BDE - Unit 7 THRUST BEARING - Rotating Ring	In Stock	HIGH	N/A	
BDE - PANEL STATION SERVICE - PH #2 - ACB	In Stock	HIGH	YES	
CAT - ACCUMULATOR TANK - COIL AUTO AIR CHARGING SOLND	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE DEFLECTOR FDBK AMP	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE FEEDBACK 20'	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE FEEDBACK 200'	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE FEEDBACK 50'	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE, NEEDLE FDBK AMP,	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE PROPORTIONAL VLV	In Stock	HIGH	N/A	
CAT - Governor Control System - CABLE90 DEG.5' ZVPU,	In Stock	HIGH	N/A	
CAT - Governor Control System - Power Supply	In Stock	MEDIUM	N/A	
CAT - Governor Control System - Power Supply 24V	In Stock	MEDIUM	N/A	
CAT - Governor - JOINT, UNIVERSAL SSG #1787058	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Tip	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Shuttle Valve	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CONNECTOR, MINIATURE CHAIN	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Casing guide U/S	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Casing guide D/S	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Needle seat	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - BUSHING NOZZLE 374527007/P001	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CABLE AIRCRAFT,	In Stock	MEDIUM	N/A	
CAT - NEEDLE VALVE ASS (6) - CABLE AIRCRAFT 20,	In Stock	MEDIUM	N/A	
CAT - NEEDLE VALVE ASS (6) - CHAIN, DBS FCS-A1-15	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CONTROL DEVICE, NEEDLE	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - CONNECTOR, MINIATURE CHAIN	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - Amplifier/proportional	In Stock	HIGH	N/A	
CAT - NEEDLE VALVE ASS (6) - seal piston ring	In Stock	MEDIUM	N/A	
CAT - NEEDLE VALVE ASS (6) - Seal	In Stock	MEDIUM	N/A	
CAT - Electronic Governor - BUSHING CABLE PROP VLV,	In Stock	HIGH	N/A	
CAT - Electronic Governor - CONNECTOR, MLDT ROD BALL	In Stock	HIGH	N/A	

		l	Spare Cost	
Critical Spare Component	Stock Status	Risk Score	>\$50,000	Comments
CAT - Electronic Governor - CONVERTER, SERIAL/ETHERNET	In Stock	HIGH	N/A	
CAT - Electronic Governor - HOLDER,CIRCUIT BREAKER	In Stock	HIGH	N/A	
CAT - Electronic Governor - INTERFACE,ETHERNET VERSA	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,GE AMPLIFIER	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,GE PT INTERFACE	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE,PLUG-IN DIODE	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE, VERSAMAX 16 PT	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE, VERSAMAX 32 PT	In Stock	HIGH	N/A	
CAT - Electronic Governor - MODULE, VERSAMAX 4 AO	In Stock	HIGH	N/A	
CAT - Electronic Governor - PC,ATLAS VX WORKS	In Stock	HIGH	N/A	
CAT - Electronic Governor - VERSAMAX power supply	In Stock	HIGH	N/A	
CAT - Electronic Governor - PROBE,SPEED ZVPU	In Stock	HIGH	N/A	
CAT - Electronic Governor - RELAY,14 PIN PLUG 24VDC	In Stock	HIGH	N/A	
CAT - Electronic Governor - LVDT deflector	In Stock	HIGH	N/A	
CAT - Electronic Governor - Pos.Xducer	In Stock	HIGH	N/A	
CAT - Electronic Governor - POs.Xducer	In Stock	HIGH	N/A	
CAT - Electronic Governor - Deflector proportional	In Stock	HIGH	N/A	
CAT - Electronic Governor - Rod deflector	In Stock	HIGH	N/A	
CAT - Electronic Governor - PC, Atlas 2	In Stock	HIGH	N/A	
CAT - Electronic Governor - Guide Ball Slide	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - ELEMENT, FILTER SM 10	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - ELEMENT,FILTER SM 25	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - DEFLECTOR, SERVOMOTOR	In Stock	HIGH	YES	New Ordered
CAT - Governor Hydraulics - PLUG,C/V 010168-390-163	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - PLUG,C/V 021002-281-208	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - PLUG,ESCHER WYSS	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - Deflector valve	In Stock	HIGH	N/A	
CAT - Governor Hydraulics - Piston seal 725X8 X3/8	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - Piston seal 9X8X1/2	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - Seal	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - Pressure Switch	In Stock	MEDIUM	N/A	
CAT - Governor Hydraulics - OIL,TURBINE 46 (205L)	In Stock	MEDIUM	N/A	
CAT - POWER TUNNEL (ROCKCUT) - Seal, Adit Door	In Stock	HIGH	N/A	
CAT - ROTOR - GENERATOR - Pole	In Stock	HIGH	N/A	
CAT - Turbine - Runner	In Stock	HIGH	N/A	
CAT - GENERATOR - MODULE,TYP 1CD 108 M 2-02 vibro-meter	In Stock	MEDIUM	N/A	
CAT - GENERATOR - OVERCURRENT relay	In Stock	MEDIUM	N/A	

	T		Spare Cost	
Critical Spare Component	Stock Status	Risk Score	>\$50,000	Comments
CAT - GENERATOR - RELAY,TIME DELAY .6 - 1.0	In Stock	MEDIUM	N/A	
CAT - GENERATOR - rotating ring	In Stock	HIGH	N/A	
CAT - GENERATOR - INSLTR,SLIP RING	In Stock	MEDIUM	N/A	
CAT - GENERATOR - Brake ring	In Stock	HIGH	N/A	
CAT - GENERATOR - Brake valve	In Stock	HIGH	N/A	
CAT - GENERATOR - Brake Solenoid	In Stock	HIGH	N/A	
CAT - Isolated Phase Bus - PT fuse	In Stock	MEDIUM	N/A	
CAT - STATION SERVICE SYSTEM - COIL, CLOSING 129 V DC	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Arc Chute	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Trip Coil	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Main Drawout Contact	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Contact Moving Arc	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Contact Stationary Arc	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Undervoltage Coil	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - Contact 1600Amp	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - CT 400-800	In Stock	HIGH	N/A	
CAT - STATION SERVICE SYSTEM - CT 800-1600	In Stock	HIGH	N/A	
CAT - SURFACE AIR COOLERS - Surface Air Cooler	In Stock	HIGH	N/A	
CAT - Generator Bearing - Cooler	In Stock	HIGH	YES	New Ordered
CAT - Stator Assembly - BAR STATOR BOTTOM,	In Stock	HIGH	N/A	
CAT - Stator Assembly - BAR STATOR TOP,	In Stock	HIGH	N/A	
CAT - Stator Assembly - CAP STATOR WINDING END,	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR ASM 105	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER, STATOR ASM 107	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR ASM 108	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER,STATOR ASM 109	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER, STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER, STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Assembly - JUMPER, STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Assembly - Wedge	In Stock	HIGH	N/A	
CAT - Stator Assembly - Wedge	In Stock	HIGH	N/A	
CAT - Stator Assembly - Connector	In Stock	HIGH	N/A	
CAT - Stator Assembly - Slider	In Stock	HIGH	N/A	
CAT - Stator Assembly - Slider	In Stock	HIGH	N/A	
CAT - Stator Assembly - Slider	In Stock	HIGH	N/A	
CAT - Exciter # 1 - COIL,SHUNT CLOSING	In Stock	HIGH	N/A	
CAT - Exciter # 1 - COIL,SHUNT OPENING	In Stock	HIGH	N/A	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
CAT - Exciter # 1 - CONTACT,ISOLATING	In Stock	HIGH	N/A	
CAT - Exciter # 1 - MODULE,THYRISTOR BRIDGE	In Stock	HIGH	N/A	
CAT - Exciter # 1 - SUPPLY,110-220 VOLT	In Stock	HIGH	N/A	
CAT - Exciter # 1 - Breaker	In Stock	HIGH	N/A	
CAT - Exciter # 1 - Arc Chute	In Stock	HIGH	N/A	
CAT - Exciter # 1 - Control Board	In Stock	HIGH	N/A	
CAT - Exciter # 1 - I/O ANALOG BOARD CONTROL,	In Stock	HIGH	N/A	
CAT - Exciter # 1 - DIGITAL I/O BOARD,	In Stock	HIGH	N/A	
CAT - Exciter # 1 - PANEL,CONTROL	In Stock	HIGH	N/A	
CAT - Exciter # 1 - BOARD POWER SYSTEM STABI,	In Stock	HIGH	N/A	
CAT - Exciter # 1 - BOARD MEASURING,	In Stock	HIGH	N/A	
CAT - Exciter # 1 - MOTOR,CHARGING	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CONTROL BOARD,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB HIER319619R2,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB KX9170A V1,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN 2010B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UNCO01D-E,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UNS0026A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD\ ABB UN0014B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0016A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0025A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0026A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0027A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0031A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN004A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0079A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0083A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0089A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0091A-P,CARD ABB UN0093A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0503A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Unitrol Card	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Thyristor	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Transformer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Field Voltage Transducer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Shunt Voltage Transducer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Analog Input Transducer	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - Fuse 600Amp	In Stock	HIGH	N/A	

	l		Spare Cost	
Critical Spare Component	Stock Status	Risk Score	>\$50,000	Comments
CAT - EXCITER NO. 2 - CARD ABB UN0510C-9,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0516A,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0900B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN0901B-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN1001C-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN1004A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - COIL,SHUNT CLOSING	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - COIL,125 VOLT 60HZ	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD\ ABB UN1004A-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB UN1024C-P,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD ABB 1WX 174-2,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD BBC UN0077AP,	In Stock	HIGH	N/A	
CAT - EXCITER NO. 2 - CARD,BBC UN2001F-P	In Stock	HIGH	N/A	
CAT - BREAKERS BY BROWN BOVERI, 600V - spare field breaker in used spare exciter	In Stock	HIGH	N/A	
CAT - Slipring/brush Rigging Assembly - Ring, Collector Assembly	In Stock	HIGH	N/A	
CAT - Slipring/brush Rigging Assembly - Brushes	In Stock	MEDIUM	N/A	
CAT - Slipring/brush Rigging Assembly - Brush Holder	In Stock	HIGH	N/A	
CAT - Slipring/brush Rigging Assembly - Insulator	In Stock	HIGH	N/A	
CAT - Governor Pumps - Pump	In Stock	HIGH	N/A	
CAT - Governor Pumps - INSERT,CURVED JAW SPIDER	In Stock	HIGH	N/A	
CAT - Rotor Poles - Entire Pole	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 105	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 107	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 108	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR ASM 109	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - Stator Windings - JUMPER,STATOR WINDING	In Stock	HIGH	N/A	
CAT - THRUST BEARING - thrust pads	In Stock	HIGH	N/A	
CAT - Turbine Guide Bearing - Bearing	In Stock	HIGH	N/A	
CAT - Guide Bearing Segments - Bearing	In Stock	HIGH	N/A	
CAT - Thrust Bearing Segments - Segments	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - PUMP UNLOADER,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COILDASHPOT,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL OIL PUMP UNLOADER SOLND. ,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL PARTIAL SHUTDOWN RESET ,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL SHUTDOWN SOLENOID 65SD ,	In Stock	HIGH	N/A	

		<u></u>	Spare Cost	_ ,
Critical Spare Component	Stock Status	Risk Score	>\$50,000	Comments
HLK - GOVERNOR HYDRAULIC SYSTEM - COIL RESET SOLENOID ,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - WOODWARD 1447- 634,motor	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - WOODWARD 1447-640,MOTOR	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - GATE LIMIT,ROD,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - UNLOADER PISTON,	In Stock	HIGH	N/A	
HLK - GOVERNOR HYDRAULIC SYSTEM - filter	In Stock	HIGH	N/A	
HLK - GOVERNOR ACCUMULATOR TANK - SWITCH PRESS OIL ALARM,	In Stock	HIGH	N/A	
HLK - GOVERNOR ACCUMULATOR TANK - Air admission solenoid	In Stock	HIGH	N/A	
HLK - GOVERNOR SPEED GENERATOR - GEAR, WOODWARD 1447-640	In Stock	HIGH	N/A	
HLK - GOVERNOR SPEED GENERATOR - gear drive	In Stock	HIGH	N/A	
HLK - MECHANICAL GOVERNOR CONTROLS - Motor limit	In Stock	HIGH	N/A	
HLK - MECHANICAL GOVERNOR CONTROLS - Motor speeder	In Stock	HIGH	N/A	
HLK - MECHANICAL GOVERNOR CONTROLS - Unloader timing valve	In Stock	HIGH	N/A	
HLK - OPERATING RING - Bearing pads	In Stock	HIGH	N/A	
HLK - SERVOMOTOR #1 - servomotor repair kit	In Stock	HIGH	N/A	
HLK - SERVOMOTOR ASSEMBLY - shear pins	In Stock	HIGH	N/A	
HLK - Rotor Assembly - HLK Generator - Rotor pole	In Stock	HIGH	N/A	
HLK - TURBINE - Carbon seal,	In Stock	HIGH	N/A	
HLK - TURBINE - BEARING SEGMENT TURBINE,	In Stock	HIGH	N/A	
HLK - TURBINE - PLATE BEARING,	In Stock	HIGH	N/A	
HLK - TURBINE - SEAL TURBINE,	In Stock	HIGH	N/A	
HLK - TURBINE - Wicket gate lever	In Stock	HIGH	N/A	
HLK - TURBINE - Friction hub	In Stock	HIGH	N/A	
HLK - TURBINE - Friction hub	In Stock	HIGH	N/A	
HLK - TURBINE - Packing box	In Stock	HIGH	N/A	
HLK - TURBINE - link thin	In Stock	HIGH	N/A	
HLK - TURBINE - link thick	In Stock	HIGH	N/A	
HLK - TURBINE - wicket gate seal	In Stock	HIGH	N/A	
HLK - TURBINE - Dowel	In Stock	HIGH	N/A	
HLK - TURBINE - Link pin	In Stock	HIGH	N/A	
HLK - TURBINE - Eccentric pin	In Stock	HIGH	N/A	
HLK - WICKET GATES - wicket gate	In Stock	HIGH	N/A	
HLK - GENERATOR - brake shoes	In Stock	HIGH	N/A	
HLK - GENERATOR - SOLENOID,GENERATOR AIR VALVE,	In Stock	HIGH	N/A	
HLK - GENERATOR - Generator air valve	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - SEAL TURBINE,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - SEALWICKET GATE,	In Stock	HIGH	N/A	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
HLK - HEADCOVER ASSEMBLY - BUSHING 60X75 MM,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - BUSHING GATE STEM - LOWER,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - BUSHING GATE STEM - UPPER,	In Stock	HIGH	N/A	
HLK - HEADCOVER ASSEMBLY - Bushing upper	In Stock	HIGH	N/A	
HLK - INTAKE HEADGATE AND HOIST EQUIP - Pressure druk	In Stock	MEDIUM	N/A	
HLK - STATION SERVICE SWITCHGEAR - Breaker (EATON)	In Stock	HIGH	N/A	
HLK - Thrust/Guide Bearing Coolers - Hi pressure lift pump	In Stock	HIGH	N/A	
HLK - ISOLATED PHASE BUS - PT fuse	In Stock	HIGH	N/A	
HLK - STATOR ASSEMBLY - Stator connection caps	In Stock	HIGH	N/A	
HLK - STATOR ASSEMBLY - Stator bars	In Stock	HIGH	N/A	
HLK - EXCITATION - Bridge (entire module)	In Stock	HIGH	N/A	
HLK - Slipring /Brush Rigging - Carbon brush	In Stock	MEDIUM	N/A	
HLK - Slipring /Brush Rigging - Brush holder	In Stock	HIGH	N/A	
HLK - Rotor - Pole	In Stock	HIGH	N/A	
HLK - STATOR WINDINGS - UNIT 1 - robel bars	In Stock	HIGH	N/A	
HLK - TURBINE GUIDE BEARING - BEARING, Segment TURBINE	In Stock	HIGH	N/A	
HLK - GUIDE BEARING SEGMENTS (SET) - BEARING, SEGMENT	In Stock	HIGH	N/A	
HLK - HD-1N - HINDS LAKE INTAKE - TRANSMITTER, PRESS 0-375	In Stock	MEDIUM	N/A	
HLK - THRUST BEARING SEGMENTS (SET) - Thrust Bearing Segments	In Stock	HIGH	N/A	
HLK - UPPER GUIDE BEARING SEGMENTS - Upper Guide Bearing Segments	In Stock	HIGH	N/A	
HLK - IN FRAZIL ICE SYS - INTAKE - TRANSMITTER, TEMPERATURE	In Stock	MEDIUM	N/A	
HLK - GOVERNOR SPEED GENERATOR - Speed switch bracket	In Stock	HIGH	NO	
GCL - Governor Control System - Pressure Switch	In Stock	MEDIUM	N/A	
GCL - Governor Control System - POWER SUPPLY,18-32VDC	In Stock	MEDIUM	N/A	
GCL - Governor Control System - TRANSMITTER, PRESS 0-2000	In Stock	MEDIUM	N/A	
GCL - Governor Control System - TRANSMITTER, TEMP 4-20 MA	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Filter, Element NS-7	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Joint, Shaft Parker	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Pump, Vane Vick	In Stock	HIGH	N/A	
GCL - Governor Hydraulic System - Seal, Polypak "U" Cup	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Valve, Relief	In Stock	HIGH	N/A	
GCL - Governor Hydraulic System - Valve, Check 1 6000 psi	In Stock	MEDIUM	N/A	
GCL - Governor Hydraulic System - Valve, Proportional	In Stock	HIGH	N/A	
GCL - Operating Ring - Washer, Ring Seal	In Stock	MEDIUM	N/A	
GCL - Operating Ring - BUSHING,GE 226043126X015	In Stock	MEDIUM	N/A	
GCL - Servomotor - Rod, Seal H254-918	In Stock	MEDIUM	N/A	
GCL - Servomotor - Rod, Seal H092-730	In Stock	MEDIUM	N/A	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
GCL - Servomotor Assembly - Ring, Piston GE	In Stock	HIGH	N/A	
GCL - Speed Signal Generator - Pickup, Zero Velocity	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Packing Ring, Segment	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Pad, Stop GE	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Seal, Inflatable	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Transmitter, Pressure GE	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Transmitter, Pressure -5TO55	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Transmitter, Pressure 0-90 PSIG	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Transmitter, Diff Pressure	In Stock	MEDIUM	N/A	
GCL - Turbine Assembly - Ring, Rotating GE	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Ring, Sealing C/W Spring	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Ring, Wear	In Stock	HIGH	N/A	
GCL - Turbine Assembly - Valve, Check Wafer 12"D	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Bushing, GE 226043126X015	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Gate, Wicket GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Level, Gate GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Lever, Shear GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Liner, Gate Operating	In Stock	HIGH	N/A	
GCL - Wicket Gates - Link, GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Pin, Eccentric	In Stock	HIGH	N/A	
GCL - Wicket Gates - Pin, Shear GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Pin, Taper GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Plate, Retaining GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Plate, Top GE	In Stock	HIGH	N/A	
GCL - Wicket Gates - Shim, Laminum	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Sleeve, BRS 210mm	In Stock	MEDIUM	N/A	
GCL - Wicket Gates - Spacer	In Stock	MEDIUM	N/A	
GCL - Generator - Top Stator Bars (36)	In Stock	HIGH	N/A	
GCL - Generator - Bottom Stator Bars (18)	In Stock	HIGH	N/A	
GCL - Generator - Guide Bearing, GE	In Stock	HIGH	N/A	
GCL - Generator - Converter, RTD Temperature	In Stock	HIGH	N/A	
GCL - Generator - Converter, RTD Universal	In Stock	HIGH	N/A	
GCL - Generator - Creep Detector ASSY, 129 V	In Stock	HIGH	N/A	
GCL - Generator - Device, Surge Suppression	In Stock	MEDIUM	N/A	
GCL - Generator - Fuse, TEMP Limiter	In Stock	MEDIUM	N/A	
GCL - Generator - Fuse, Voltage XFMR	In Stock	MEDIUM	N/A	
GCL - Generator - Jumper, Pole ASM #1	In Stock	HIGH	N/A	

Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
GCL - Generator - Jumper Pole ASM #2	In Stock	HIGH	N/A	
GCL - Generator - Jumper Pole ASM #3	In Stock	HIGH	N/A	
GCL - Generator - Jumper Pole ASM #4	In Stock	HIGH	N/A	
GCL - Generator - Level, Indicator Magnetic	In Stock	HIGH	N/A	
GCL - Generator - Oil, Turbine 46 (205L)	In Stock	MEDIUM	N/A	
GCL - Generator - Packing, V-Type GE	In Stock	MEDIUM	N/A	
GCL - Generator - Pin, Taper 25MM x 90MM	In Stock	MEDIUM	N/A	
GCL - Generator - Plate, Brake GE	In Stock	HIGH	N/A	
GCL - Generator - Plate, Locating Pivoted	In Stock	HIGH	N/A	
GCL - Generator - Pole, Wound GE	In Stock	HIGH	N/A	
GCL - Generator - Probe, 741 GE	In Stock	HIGH	N/A	
GCL - Generator - RTD, 12.5" -50-550 DEG	In Stock	HIGH	N/A	
GCL - Generator - RTD, 17" -50-550 DEG C	In Stock	HIGH	N/A	
GCL - Transmitter, PFM	In Stock	MEDIUM	N/A	
GCL - Transmitter, Temp 4-20 MA	In Stock	MEDIUM	N/A	
GCL - Switch, Press 200 PSI 15A	In Stock	MEDIUM	N/A	
GCL - Switch, 20-160 ABB 104-324-46	In Stock	MEDIUM	N/A	
GCL - Thermometer, ADJ 0-55	In Stock	MEDIUM	N/A	
GCL - Transducer, Balluff Track	In Stock	HIGH	N/A	
GCL - Shim, GE 007	In Stock	MEDIUM	N/A	
GCL - Shim, GE 008	In Stock	MEDIUM	N/A	
GCL - Shoe, brake GE 6201B6815L005	In Stock	HIGH	N/A	
GCL - Spring, GE	In Stock	MEDIUM	N/A	
GCL - Valve, Purge GE	In Stock	HIGH	N/A	
GCL - Washer, Brake Plate	In Stock	MEDIUM	N/A	
GCL - Washer, GE 105000100	In Stock	MEDIUM	N/A	
GCL - Ring Assy, Collector	In Stock	HIGH	N/A	
GCL - Stick, Joint Horz	In Stock	MEDIUM	N/A	
GCL - Stick, Joint Vert	In Stock	MEDIUM	N/A	
GCL - Switch, Press Actuated	In Stock	MEDIUM	N/A	
GCL - Switch, Press Gran 20W	In Stock	MEDIUM	N/A	
GCL - Seal, Top Guide Bearing	In Stock	MEDIUM	N/A	
GCL - Runner - Seal, 770mm x 730mm x 25mm	In Stock	MEDIUM	N/A	
GCL - Surface Air Coolers - Cooler, Surface Air	In Stock	HIGH	N/A	
GCL - Thrust/Guide Bearing Coolers - Coil, Cooling GE	In Stock	HIGH	YES	
BDE - RECTIFYING TRANSFORMER - Insulating Fluid	In Stock	MEDIUM	NO	
BDE - ISOLATED PHASE BUS - Surge Capacitor	In Stock	HIGH	NO	

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Critical Spare Component	Stock Status	Risk Score	Spare Cost >\$50,000	Comments
BDE - EXCITATION CONTROLS - Field Flashing Resistor	In Stock	HIGH	NO	
BDE - UNIT 7 GOVERNOR - Unloader/Relief Valve	In Stock	HIGH	NO	
CAT - ACCUMULATOR TANK - Air Admission Valve	In Stock	HIGH	NO	
HLK - GOVERNOR ACCUMULATOR TANK - Solenoid valve	In Stock	HIGH	NO	
BDE - ISOLATED PHASE BUS - Surge Capacitor	In Stock	HIGH	NO	
BDE - EXCITATION CONTROLS - Field Flashing Resistor	In Stock	HIGH	NO	
BDE - UNIT 7 GOVERNOR - Unloader/Relief Valve	In Stock	HIGH	NO	
BDE - TURBINE GUIDE BEARING - oil cooler	In Stock	HIGH	NO	
HLK - CIRCUIT BREAKER - Primary disconnect	In Stock	HIGH	NO	Item #68001594
HLK - CIRCUIT BREAKER - Charging motor	In Stock	HIGH	NO	Item #58608396
HLK - CIRCUIT BREAKER - Motor brush kit	In Stock	HIGH	NO	Item #65300060
HLK - CIRCUIT BREAKER - Spring release coil	In Stock	HIGH	NO	Item #68001592
HLK - CIRCUIT BREAKER - Shunt trip coil	In Stock	HIGH	NO	Item #68001591
HLK - CIRCUIT BREAKER - Anti-pump relay	In Stock	HIGH	NO	Item #60101058
CAT - Governor Hydraulics - Cooler	In Stock	HIGH	NO	
CAT - BRAKING JET ASSEMBLY - Control Valve	In Stock	HIGH	TBD	Item #58800486
HLK - EXCITER FIELD BREAKER - Entire unit	In Stock	HIGH	TBD	Item #68001626