

January 31, 2020

Transport Canada  
Navigation Protection Program  
800 Burrard St #1100, Vancouver, BC V6Z 2J8  
Attention: Eric Leung, Navigation Protection Officer

Re: Site C Clean Energy Project – Canadian Navigable Waters Act, Notice of Work  
For Temporary Moberly River Debris Boom

Dear Eric Leung:

### **Introduction**

This letter provides supplemental information for a Notice of Work submittal from BC Hydro for a temporary debris boom on a non-scheduled waterway under the *Canadian Navigable Waters Act*. This boom would replace the boom design proposed to Transport Canada and later permitted under *Navigation Protection Act* Approval 2014-500334, issued for the Site C Clean Energy Project (the Project) on September 28, 2015. Approval 2014-500334 authorizes the construction and operation of a debris boom on the Peace River near the Moberly River confluence (i.e. the Moberly debris boom).

### **Proposed Amendments**

The Moberly River debris boom location and general arrangement design have been revised. In the approved boom package, which was not constructed, two booms were proposed; one on the upstream side of the temporary bridge (NPA approval #2015-500045), and one on the downstream side. In the revised booms design, a single boom is proposed for the upstream side of the temporary bridge (see attached map figure and design drawing). This revised boom alignment is located downstream of the debris pile structure, recently approved by Transport Canada (CWNA approval # 2019-500365).

The revisions proposed for the debris boom are not expected to result in any incremental changes to boater access.

### **Revised Boom Location and Land Information**

The approximate location of the revised boom at the point where it crosses the Moberly River channel is: 56° 11' 51.62" N 120° 55' 44.89".

The boom and anchors are located on BCH-owned and crown lands with the following description.

BC Hydro land: District Lot 4426 Peace River District as shown on Plan EPP85446

Crown:

- Unsurveyed Crown Land North East 1/4 Section 16 Township 83 Range 19 West of The 6th Meridian Peace River District
- Crown Foreshore covered by water and within the high water boundary being part of the bed of the Moberly River, Peace River and the Peace River lying within Section 16 Township 83 Range 19 West of The 6th Meridian and within District Lot 4425 Peace River District; and
- That area of Unsurveyed Crown Land within the Peace River District as shown on the attached application

## Signage

The signs placed on the Moberly River, ~1,700 m upstream of the Moberly River confluence (1,000m upstream of the piles), serve to alert boaters arriving from upstream, of the river being closed to navigation<sup>1</sup>. Similarly, signage placed near the Moberly River confluence, in compliance with the debris piles CNWA approval conditions, would alert boater to an upstream closure. The proposed boom would be marked in accordance with the terms and conditions listed in Approval #2014-500334.

## Closure

We appreciate Transport Canada's involvement the Site C debris structure reviews to date and I would be pleased to arrange a further meeting to discuss the proposed boom changes and answer any questions. In the meantime, do not hesitate to contact me if you have any further questions.

Regards,



Michael McArthur  
Senior Environmental Coordinator  
Site C Clean Energy Project  
PH: (604) 699-5119  
[Michael.McArthur2@bchydro.com](mailto:Michael.McArthur2@bchydro.com)

Attachments: Map figure, Navigation Protection Act Approval #2014-500334

Cc: Roberta Dight, NPA Area Officer, Navigation Protection Program  
Tanya Martin, Aboriginal Relations Advisor, Navigation Protection Program  
Karen von Muehldorfer, Regulatory Manager, Site C Project

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<sup>1</sup> Condition #3 of the CNWA Approval 2019-500365

## **Attachments**

Map Figure Showing Original and Revised Debris Boom

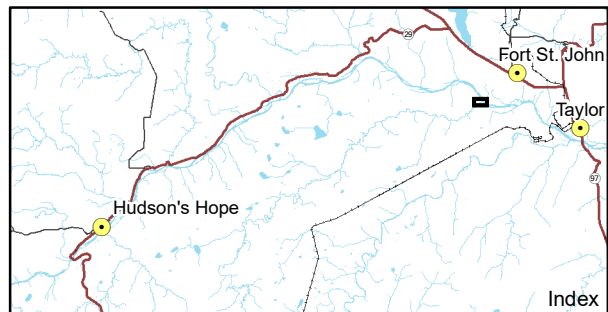
Engineering Design Drawing (Dwg No. 1020-C18-00185 R2)

*Navigation Protection Act* Approval for  
Temporary Boom on the Moberly River (Approval # 2014-500334)



Moberly River

Peace River



Map Notes:  
 1. Datum: NAD83  
 2. Projection: UTM Zone 10N  
 3. Imagery: © Digital Globe September 18, 2019

**Legend**

- - - PRHP Original Boom Alignment
- - - PRHP Modified Boom Alignment
- Float
- Safety Buoys

1:5,000 0 50 100 200 m



**Moberly River Temporary Debris Boom:  
Original and Modified Alignment**

|      |              |        |                |     |
|------|--------------|--------|----------------|-----|
| Date | Jan 23, 2020 | DWG NO | 1016-N11-00743 | R 0 |
|------|--------------|--------|----------------|-----|

**DRAFT - FOR DISCUSSION PURPOSES ONLY - CONFIDENTIAL**

Construction of the Site C Clean Energy Project is subject to required regulatory and permitting approvals.





Transport Canada Transports Canada

Navigation Protection Program  
Suite 620 – 800 Burrard Street  
Vancouver, BC V6Z 2J8

Our file Notre référence  
2014-500334

September 28, 2015

BC Hydro  
Suite 600 - Four Bentall Ctr, 1055 Dunsmuir St.  
PO Box 49260  
Vancouver, BC V7X 1V5

**Attention: Bettina Sander**

**RE: Notice to the Minister under the *Navigation Protection Act* for review of a Debris Boom, located on the Peace River at the confluence of the Moberly River, Site C Dam, on unsurveyed foreshore or land covered by water being part of the bed of Peace River, Site C, lying within Sec 16 TP 83, Rge 19, West of the 6th Meridian Peace River District, City of Fort St. John, in the Province of British Columbia**

Enclosed please find the Approval for the above-noted work issued by the Minister of Transport in accordance with subsection 6 (1) Placement, of the *Navigation Protection Act* (NPA).

Pursuant to Sec. 34 of the Navigation Protection Act, the owner shall provide unimpeded access to the Minister and their representative for inspection purposes.

Pursuant to Sec. 5 of the Navigable Waters Works Regulations, all temporary piles, false works, silt curtains, construction material or debris, etc. are to be completely removed from the waterway.

Please note that the attached document relates only to the effect of your work on navigation under the NPA. It is the owner's responsibility to comply with any other applicable laws and regulations.

**Should you have any questions, please do not hesitate to contact our office in Vancouver by phone at (604) 775-8867 or by e-mail at [NPPAC-PPNPAC@tc.gc.ca](mailto:NPPAC-PPNPAC@tc.gc.ca).**

Respectfully,

Ryan Greville  
Navigation Protection Program  
Programs Group  
Transport Canada  
Pacific Region

CP/co

cc DFO- Brain Naito  
CEAA – Steve Chapman  
MPMO – Timothy Archer



**NAVIGATION PROTECTION ACT**  
Section 6 (1)

2014-500334

## Approval

**APPLICANT:** BC Hydro  
Suite 600 - Four Bentall Ctr, 1055 Dunsmuir St.  
PO Box 49260  
Vancouver, BC V7X 1V5

**WORK:** Debris Boom

**SITE LOCATION:** Located at Approximately 56° 12' 01.00" N x 120° 55' 32.71" W, Peace River, Site C Dam, located on unsurveyed foreshore or land covered by water being part of the bed of Peace River at the confluence of the Moberly River, Site C, lying within Sec 16 TP 83, Rge 19, West of the 6th Meridian Peace River District, City of Fort St. John, in the Province of British Columbia.

Regarding the application (detailed above) to the Minister of Transport, submitted pursuant to the *Navigation Protection Act*, for an approval of the work per the attached plans (2), the Minister hereby approves the work pursuant to subsection s.6(1) Placement in accordance with the following terms and conditions:

1. The NPA Approval and its Terms and Conditions shall be posted at an easily accessible place at the worksite.
2. In the event that the operation of the above works is terminated, it will be the proponent's responsibility to remove the works and associated equipment in its entirety including any anchors and pilings. The banks and bed of the waterway disturbed by the works should be contoured to match the local conditions if required.
3. If the boom is placed downstream of the proposed bridges on the Moberly River, then yellow cautionary buoys no less than 0.6m in diameter shall be fitted to the boom at intervals of no greater than 220m
4. Debris boom shall only be in place if active construction is underway, unless otherwise authorized by TC.
5. Install and maintain a warning sign on the Moberly River at a location approximately 600m upstream of the construction site advising of the work in progress. Sign shall be a minimum of 72" x 48", a white background with black lettering, with text as outlined below. Sign to be emplaced prior to and for the duration of construction and placement.

### WARNING CONSTRUCTION AND BOOM AHEAD

6. If boom location is downstream of either of the proposed bridges on the Moberly River and vessel traffic on the Peace River is not blocked, the following conditions apply:
  - Install and maintain warning signs at locations approximately 100m upstream and downstream on the Peace River advising of the work in progress. Signs shall be a minimum of 72"x 48", a white background with black lettering, with text as outlined below. Sign to be emplaced prior to and for the duration of construction.

### WARNING BOOM AHEAD RIVER RIGHT

- The outermost extent of the work above the surface shall be marked with orange High visibility markers on the upstream and downstream corners.
- The outermost extent of the work above the surface shall be marked with a flashing yellow light on the upstream and downstream corners. The lights are to be in operation in darkness or limited visibility.
- Construction machinery left in the water during darkness or limited visibility shall be marked with a flashing yellow light, visible to upstream and downstream traffic.



- Any construction equipment anchored or left in or on the waterway shall be marked with a yellow flashing light placed on the outermost extremity from dusk to dawn.
7. If boom location is within 100m upstream of either of the proposed bridges on the Moberly River and vessel traffic on the Peace River is not blocked, the following conditions apply:
- Install and maintain warning signs at locations on the downstream side of the bridge structure, facing the upcoming traffic advising of the work in progress. Signs shall be a minimum of 72"x 48", a white background with black lettering, with text as outlined below. Sign to be emplaced prior to and for the duration of construction.

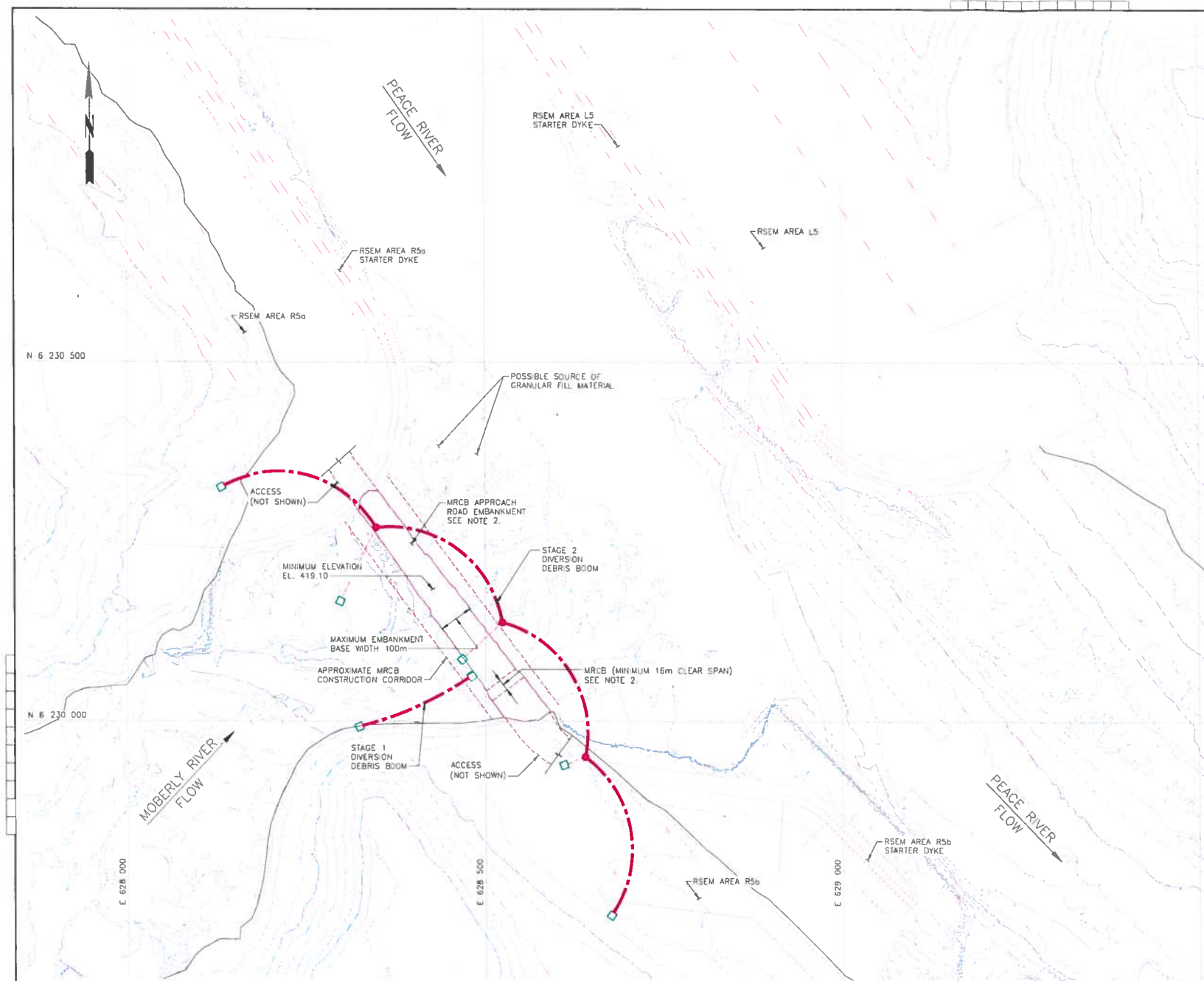
**WARNING BOOM AHEAD**

- The outermost extent of the work above the surface shall be marked with orange High visibility markers on the upstream and downstream corners.
8. Proponent may use the Canadian Dam Association signage standards in regards to shape, colour and size. Locations and wording are to be as per the Terms and Conditions of the permit or approval.

SIGNED in two copies on Sept 28/15 in, Vancouver BC

Ryan Greville  
Manager  
Navigation Protection Program  
Programs Group  
Transport Canada  
Pacific Region  
for the Minister of Transport





PLAN  
1:2500

L:\21\_DRAWINGS\04\_SKETCHES\51-531.dwg  
2/10/2015 10:00 AM

**Reviewed / Examiné**

Page 1 of 2  
2014-500334  
**SEP 14 2015**

By/par: Brent Magee  
**BRENT MAGEE**  
 Navigation Protection Program /  
 Programme de protection de la navigation

- NOTES:
1. TOPOGRAPHY FROM 2006 LIDAR SURVEY.
  2. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, MAINTAIN AND PARTIALLY DEMOLISH THE MRCB AND IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS.
  3. THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY.
  4. THE CONCEPT OPTION SHOWN INCLUDES AN UPSTREAM DEBRIS BOOM WITH A LOW (EL. 419) EMBANKMENT FOR USE ONLY DURING STAGE 1 DIVERSION WHEN WATER LEVELS IN THE MOBERLY WILL BE CLOSE TO EXISTING, AND A REPLACEMENT FULL WIDTH FOUR SPAN DEBRIS BOOM FOR USE ONLY DURING STAGE 2 DIVERSION WHEN THE PEACE RIVER AND THE MOBERLY RIVER FORM A HEADPOOND UPSTREAM OF THE DAM.
  5. ALTERNATIVE CONCEPT OPTIONS COULD INCLUDE:
    - A. HIGH EMBANKMENT / SMALL OPENING - AN UPSTREAM DEBRIS BOOM IN APPROXIMATELY THE SAME PLACE BUT ANCHORED AT A HIGHER LEVEL AND CONNECTED TO A HIGHER EMBANKMENT BUILT TO AN ELEVATION (APPROXIMATE EL. 433.9) ABOVE THE FLOODWATER AND USABLE DURING BOTH STAGE 1 AND DURING THE HIGH WATER LEVELS OF STAGE 2 DIVERSION.
    - B. LOW EMBANKMENT / WIDE OPENING - A SIMILAR LOW EMBANKMENT WITH A CULVERT OR BRIDGE OPENING SUFFICIENTLY WIDE TO PASS DEBRIS AND A DOWNSTREAM DEBRIS BOOM WITH A SPAN SUFFICIENT FOR THE LOW WATER OF STAGE 1 BUT CAPABLE OF BEING EXTENDED TO A FULL WIDTH BOOM FOR THE HIGH WATER LEVELS OF STAGE 2 WHEN THE EMBANKMENT IS SUBMERGED.

LEGEND:  
 MRCB MOBERLY RIVER CONSTRUCTION BRIDGE

NOT FOR CONSTRUCTION

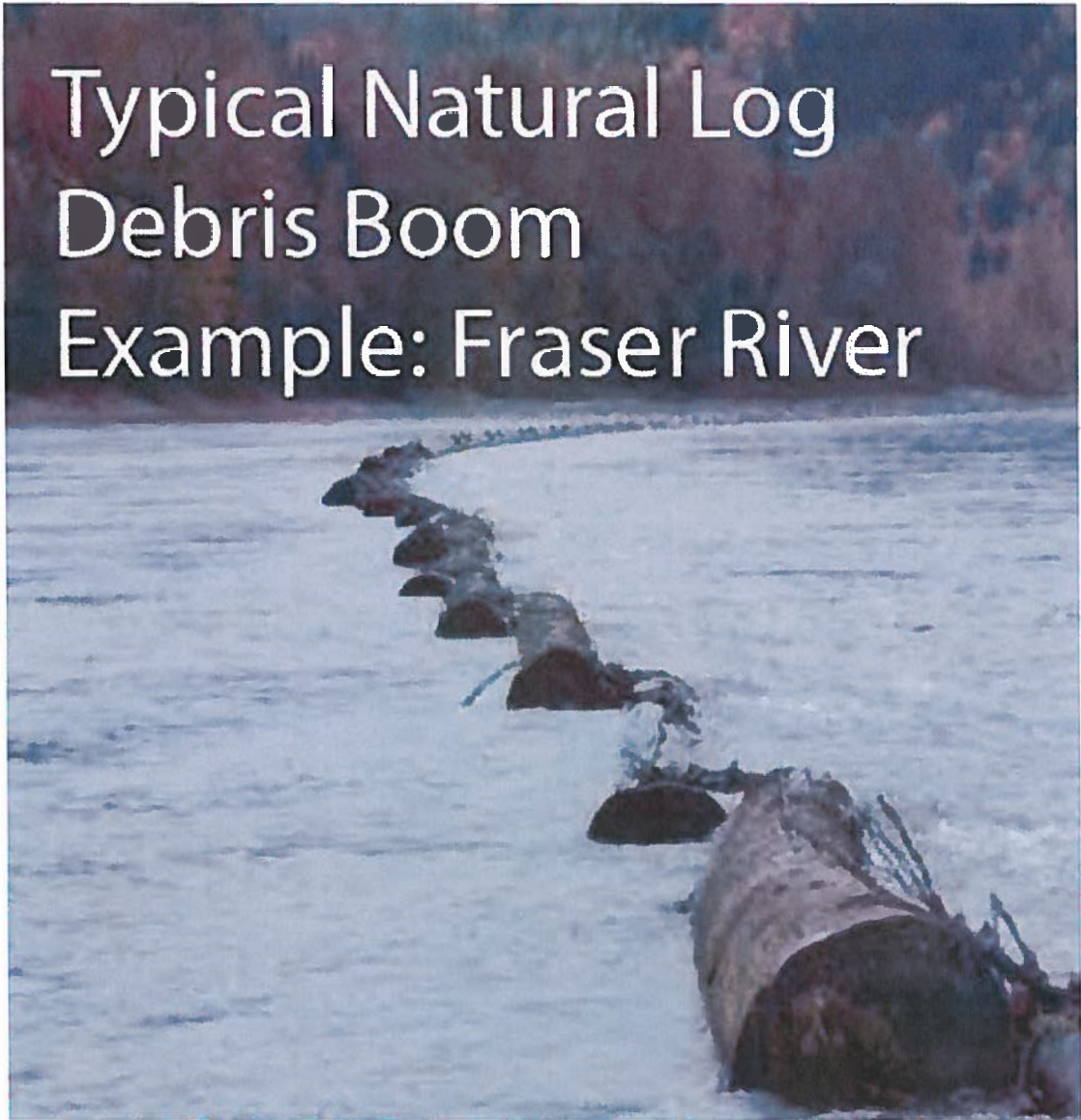
FOR INFORMATION ONLY



ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE

|  |        |
|--|--------|
|  |        |
| <b>SITE C CLEAN ENERGY PROJECT</b><br>MOBERLY RIVER<br>CONCEPT OPTIONS |        |
| DWG NO   | Sk-531 |
| SIZE   | A0     |
| R  | 0      |

Figure 5. Typical configuration of natural debris boom



Reviewed / Examiné

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2014-500334  
SEP 14 2015

By/par:   
COLIN PARKINSON  
Navigation Protection Program /  
Programme de protection de la navigation