



CanZinco Ltd. NWB Water Use Licence Renewal, 1AR-NAN0914

Nanisivik

Department of National Defence

Technical Hearing

June 18, 2014

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INTRODUCTION

- **Challenge #1:** Current CanZinco remedial plan, proposed April 2014, conflicts with DND's land use for the Nanisivik Naval Facility.
- **Challenge #2:** DND is requesting a new Abandonment and Reclamation Plan due to deviations from the approved 2010 plan.
 - This revised plan would require the excavation / relocation of all contaminated soils by end August 2014.
- NOTE: CanZinco April 2014 letter stated that DND did not support revised remedial approach (proposed November 2013), this is not accurate.

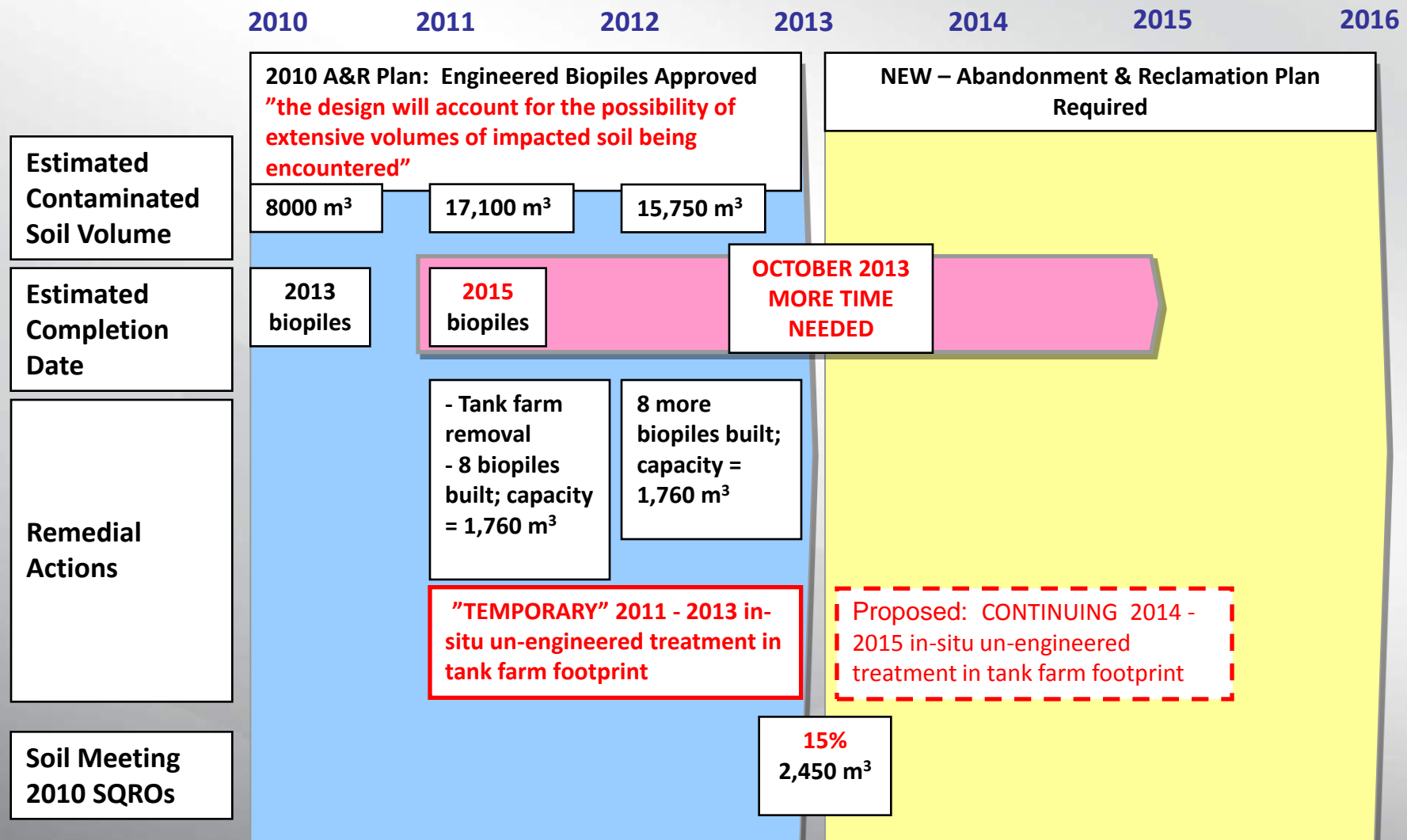


CHALLENGE # 1

LAND USE CONFLICT

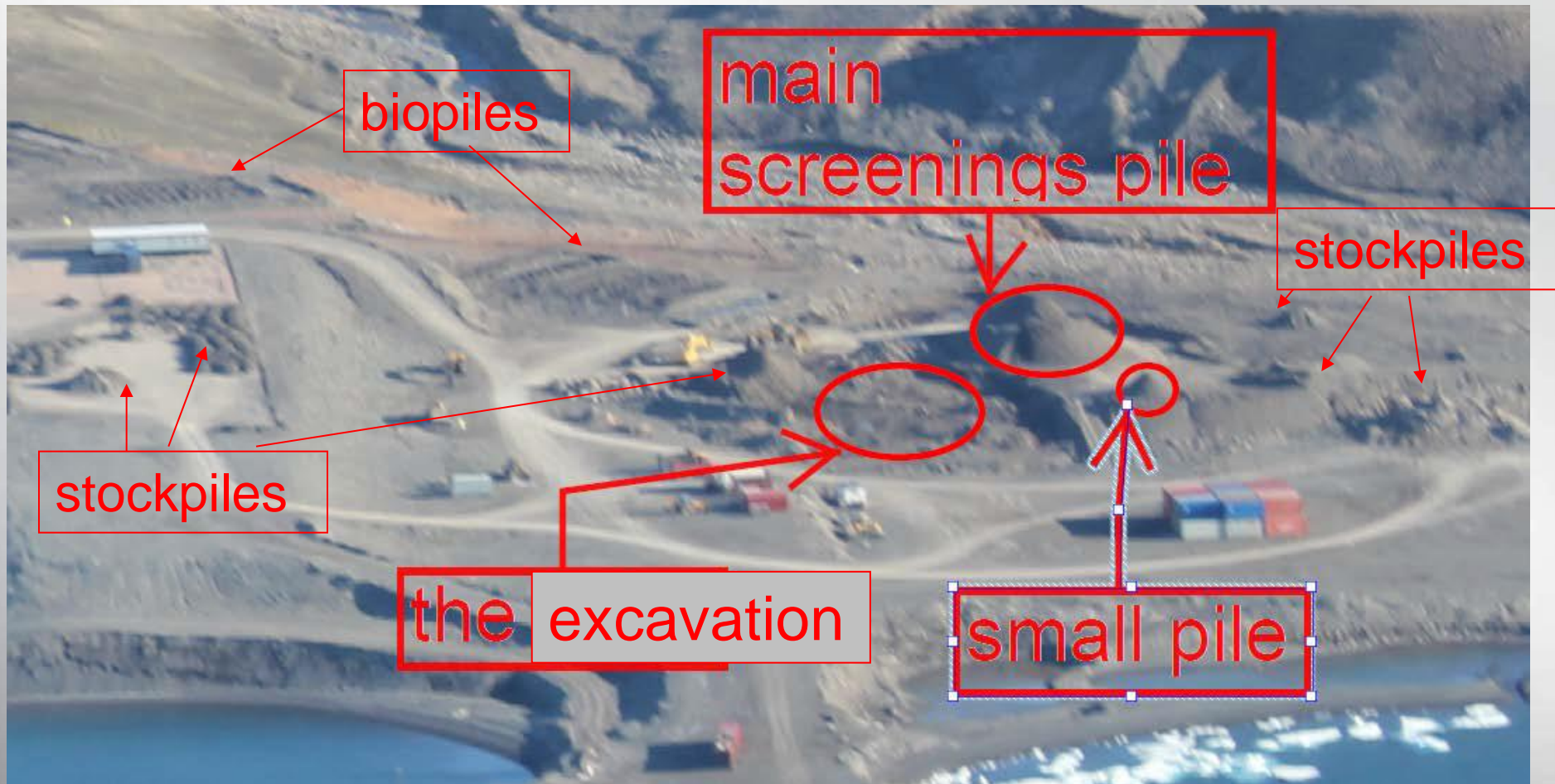


CANZINCO's REMEDIATION PROGRESS





CANZINCO REMEDIATION (AUGUST 2013)





DND's NAVAL FACILITY CONSTRUCTION SCHEDULE

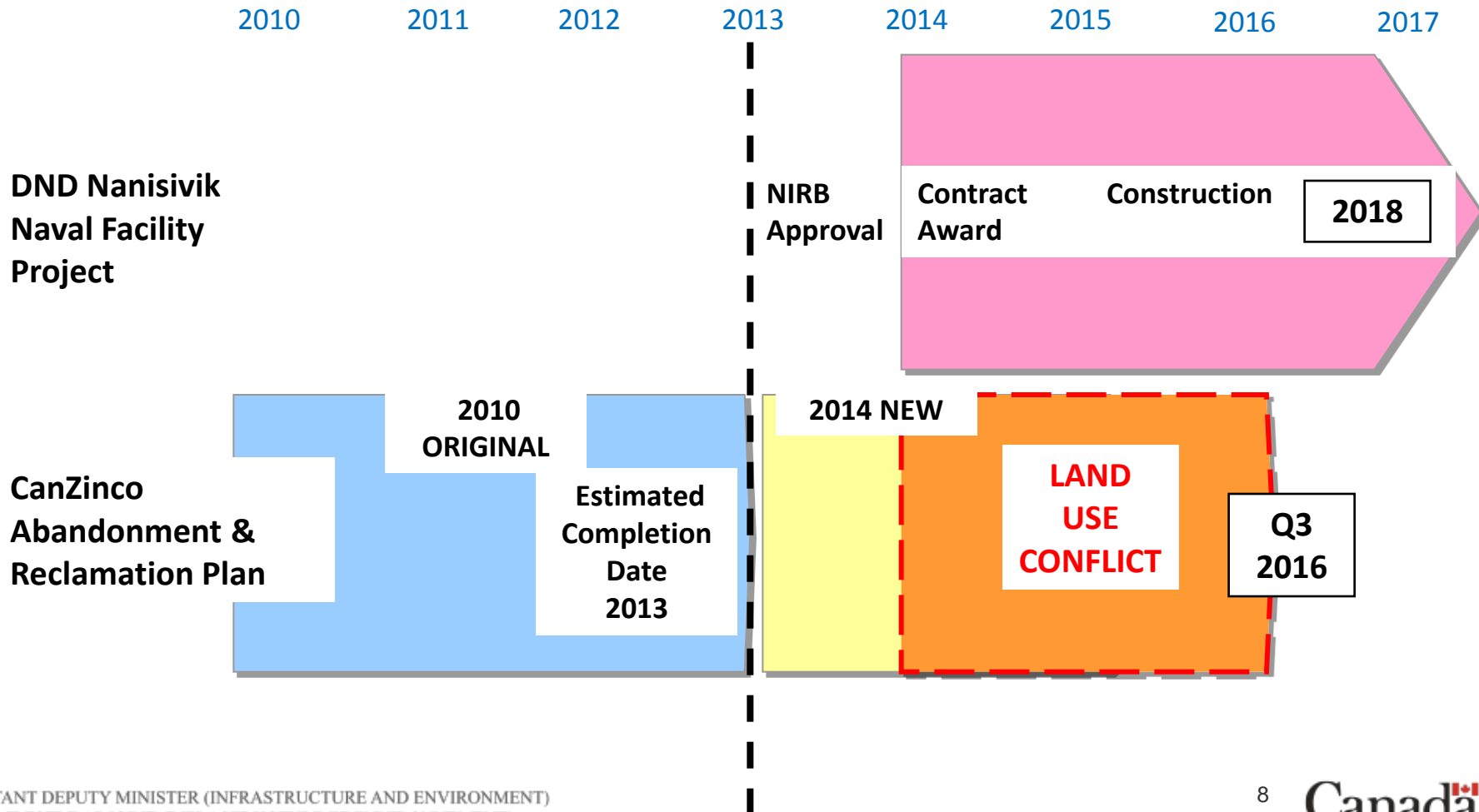
- In August 2007, the Prime Minister announced the construction of a new docking and refuelling facility for the Canadian Forces to be located at the Nanisivik Dock Site.
- October 2013: DND receives NIRB project approval expecting a remediated site
- Summer 2014: Contract award
- 2015-2018: The contractor requires access to the site, including the former tank farm area, the concrete pad and roadways.
- 2018: expected completion of the facility.

DND's CONCEPTUAL NANISIVIK NAVAL FACILITY





LAND USE CONFLICT



Biopiles

~3,500m³
contaminated
soil

Concrete Pad Area

Remains
minimum of
1,500 m³
contaminated
soil

Delineation Line
for Construction

DND Construction Footprint:

Remains
minimum of
~5,500m³
contaminated
soil

Location of Naval
Distillate Tanks and
Containment Berms

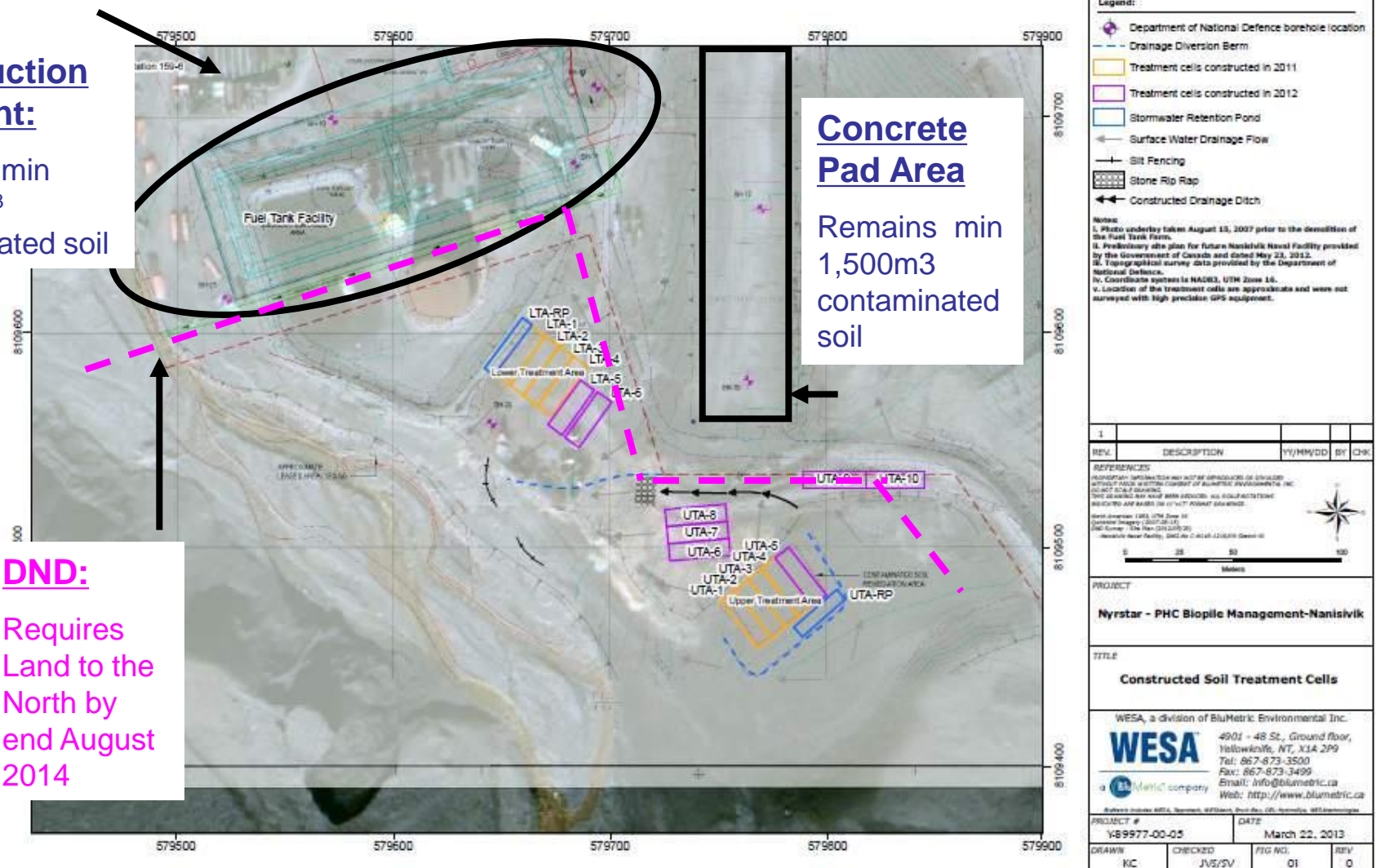
Proposed Construction
Camp Location





Remains min
~5,500m³
contaminated soil

DND:
Requires
Land to the
North by
end August
2014





LAND USE CONFLICT

- DND/DFO working on a Memorandum of Agreement, whereby CanZinco has the opportunity to use concrete pad and additional land for contaminated soil (with engineering controls). CanZinco has provided their 2014 soil relocation plan, however:
 - Contingent on acquiring NWB approval of new SQROs;
 - Assumes that soil will be 'remediated' within one season;
 - Underestimates the volume of contaminated soil;
 - Assumes that contaminated soil end of 2013 is clean at beginning of 2014;
 - Not incorporated into their remedial action plan.



MOA – ADDITIONAL LAND

DND requires all land North of **RED LINE**, by end August 2014.

Exception:
Concrete Pad

Approximate Location
Additional Land for Nyrstar,
(yellow hatched)

Legend:

- Department of National Defence borehole location
- Drainage Diversion Berm
- Treatment cells constructed in 2011
- Treatment cells constructed in 2012
- Stormwater Retention Pond
- Surface Water Drainage Flow
- Silt Fencing
- Stone Rip Rap
- Constructed Drainage Ditch

Notes:

- Photo underlay taken August 13, 2007 prior to the demolition of the Fuel Tank Farm.
- Preliminary site plan for future Nanisivik Naval Facility provided by the Government of Canada and dated May 23, 2012.
- Topographical survey data provided by the Department of National Defence.
- Coordinate system is NAD83, UTM Zone 18.
- Location of the treatment cells are approximate and were not surveyed with high precision GPS equipment.

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES:

ALPHEANIAN SPERMATOPHYTES MAY NOT BE SPERMATOPHYTES OR GYNOECIUM WITHOUT FURTHER STUDY. IN THE EVENT OF A GYNOECIUM, THE GYNOECIUM MAY NOT BE A GYNOECIUM. ALL GYNOECIUMS SHOULD BE REMOVED OR DESTROYED PRIOR TO CONSTRUCTION.

North Arrow: 180° True North
Coordinate System: UTM Zone 18
Datum: NAD83
Scale: 1:50,000
Map Date: 2012-05-23
Map Title: Fuel Tank Farm, Site Plan 2012-05-23

PROJECT:
Nyrstar - PHC Biopile Management-Nanisivik

TITLE:
Constructed Soil Treatment Cells

WESA, a division of BluMetric Environmental Inc.
WESA
4901 - 48 St., Ground floor,
Yellowknife, NT, X1A 2P9
Tel: 867-673-3500
Fax: 867-673-3499
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #: Y-89977-00-05
DATE: March 22, 2013

DRAWN	CHECKED	FIG NO.	REV
KC	JVS/SV	01	0



CHALLENGE # 2

NEW

**ABANDONMENT &
RECLAMATION PLAN
REQUIRED**



NEW ABANDONMENT & RECLAMATION PLAN

- DND has reviewed all information provided by CanZinco from 2009 to present and have compared to the 2010 approved plan and have noted the following deviations:



Remedial Action Plan (1/4)

Topic	The Plan (2010)	2010 Plan Deviations
1) Volume of Contaminated Soils	➤ 8,000 m3 (<u>underestimated by 200%</u>)	➤ 17,100 m3 (with 15,750 m3 soil to be treated)
2) Treatment Method	➤ 16 Biopiles: ➤ 400-500 m3 soil/biopile ➤ 8,000 m3 treatment capacity	➤ 16 Biopiles ➤ 220 m3/pile ➤ 3,500 m3 treatment capacity ➤ Unapproved remedial techniques: in-situ soil treatment without engineering controls



Remedial Action Plan (2/4)

Topic	The Plan (2010)	2010 Plan Deviations
3) Soil Sampling Methodology	<ul style="list-style-type: none">➤ Confirmatory Soil Analysis for TPH: “....sufficient sampling to confirm that boundary conditions of the remedial excavation meet the SQROs.”	<ul style="list-style-type: none">➤ Insufficient confirmatory sampling
4) Suite of Contaminants for Analytical Testing	<ul style="list-style-type: none">➤ Petroleum Hydrocarbons:➤ F1, F2, F3, F4 fractions➤ BTEX➤ PAH	<ul style="list-style-type: none">➤ Only F1-F4 fractions being tested;➤ Certificates of analysis results not provided;



Remedial Action Plan (3/4)

Topic	The Plan (2010)	2010 Plan Deviations
5) Completion Date	➤ Q3 - 2013	➤ Q3 - 2016
6) Volume of Soil Remediated	➤ 8,000 m3 by Q3 2013	➤ 2,450 m3 remediated Q3 2013 ➤ 85 % of the total soil volume remains to be remediated
7) Concrete Pad	➤ “the area will not infringe on any other potential uses of the equipment laydown area and the concrete pad”	➤ “ the concrete pad is to be used for locating temporary contaminated soil stockpiles”



Remedial Action Plan (4/4)

Topic	The Plan (2010)	2010 Plan Deviations
8) Alternative Remediation	➤ “In the unlikely event that the soil remediation facility does not succeed...the soil will be remediated with an alternative remedial option to achieve the approved clean up objective. The soil may have to be shipped off-site...to an approved disposal facility or alternatively, a more aggressive on site approach..”	➤ Current plan (April 2014 letter) shows status quo, including continued unapproved use of in-situ tank farm area



RECOMMENDATIONS:

Challenge #1 – Land Use Conflict:

- Complete all contaminated soil excavation and removal in tank farm area by end August 2014
- No in-situ soil treatment in tank farm area and relocation of all contaminated soil to approved locations by end August 2014
- MOA Additional land & use of concrete pad be included in NEW Abandonment & Reclamation Plan.



RECOMMENDATIONS:

Challenge #2 – Abandonment & Reclamation Plan Deviations from the 2010 Approved Plan:

- CanZinco to submit a NEW Abandonment & Reclamation Plan for NWB & Proponent review and approval.
- Reduce NWB water use license length from 5 years to 2 years to align with CanZinco's scheduled remediation completion of Q3 2016.