

Environmental Working Group Teleconference Meeting Minutes

Date: 08 February 2002
 Time: 11:15 to 12:45 EST
 Participants: Philippe Simon-NTI
 Karl Cote-NTI
 Sheila Street
 Tanya Schulz-DND
 Daniela Loock-DND (ESG)
 Absentees: Wayne Ingham-DND (ESG) regrets

 Distribution: Meeting Participants
 Members of the EWG
 Designated Contact Members of the Steering Committee

Item	Discussion	Action By:
4.	Updates on questions raised during the meeting on February 1, 2002	
	<ul style="list-style-type: none"> There is no road crossing agreement with the Hamlet for the Middle Site Landfill at FOX-5. There is an SRR right of way associated with the FOX-5 access road. Although the high water mark at the airstrip landfill was not surveyed, the design calls for Type 1A rip-rap to a minimum elevation of 1.2 m. The 1.2 m elevation is generally considered to be sufficient to get to the beach ridge in this area. The extent of rip-rap on the south portion of the Airstrip Landfill - West (section D) does not reach an elevation of 1.2 m and will be adjusted on the Amendment Drawings. The request for the creosote poles was made in an e-mail from Don Pickle to Pete Quinn on July 19, 2001. 	

Environmental Working Group Teleconference Meeting Minutes

Date: 01 February 2002
 Time: 11:00 to 12:15 EST
 Participants: Philippe Simon-NTI
 Karl Cote-NTI
 Sheila Street
 Tanya Schulz-DND
 Wayne Ingham-DND (ESG)
 Daniela Loock-DND (ESG)

 Distribution: Meeting Participants
 Members of the EWG
 Designated Contact Members of the Steering Committee

Item	Discussion	Action By:
1.	Landfills	

Item	Discussion	Action By:
	<ul style="list-style-type: none"> After evaluation of the erosion mitigation measures (rip-rap, shallower slopes) at the Main landfill at the Upper Site all EWG members accepted the proposed design for leachate containment. After discussion the proposed design for the proposed Non-Hazardous Waste Landfill at the Middle Site has been accepted. It was pointed out that this is the first occasion at a DEW-Line site where a non-hazardous waste landfill will be co-located with a Tier II disposal facility. After examination of the drawings concerns about drainage patterns and differential settlement were resolved. The non-hazardous waste landfill will be monitored according to the Tier II waste disposal facility monitoring program. Questions were raised concerning the possible extension of the middle site landfills if larger volumes of waste were generated. DND representatives said that in such a case the site volume would be increased in height rather than in length or width. T. Schulz to follow up on whether issues with the hamlet have been resolved. All EWG members agreed to the proposed design for the Airstrip landfill. T. Schulz to follow up on fact that high water has not been surveyed. 	<p>T. Schulz</p> <p>T. Schulz</p>
2.	Proposed Landfarms	
	<ul style="list-style-type: none"> All EWG members agreed to the design and location of the Lower Site Landfarm Concerns about the location of the proposed landfarm in the station area were raised since it will be located on previously undisturbed land. It was clarified that this landfarm will only be constructed if the landfarm at the lower site proves too small for the volumes of hydrocarbon-contaminated soil excavated. A better estimate of actual volumes will be obtained after completing the hydrocarbon evaluation matrices for the contaminated areas during the next EWG meeting. 	
3.	Other issues regarding the tender drawings	
	<ul style="list-style-type: none"> Clarification: Contractor has to demolish garage prior to any other buildings as contamination is suspected below the slab and delineation will be carried out during the field season. Clarification Drawing 202, General Notes 6: "All poles to be removed and stockpiled for pick-up by others" refers to pick-up by a representative from the hamlet. The details of storage location and design were not available at the time. There was question as to whether or not the original concerns of the Hamlet were resolved and incorporated into the tender documents. This was not confirmed, but assumed since some of the relevant changes were noted. 	

Subject: Meeting Minutes - EWG FOX-5

Date: Tue, 23 Oct 2001 09:09:23 -0600

From: "Tanya Schulz" <tmschulz@telusplanet.net>

To: "Wayne Ingham" <ingham-w@rmc.ca>, "Sheila Street"

<sstreet@netidea.com>, "Philippe Simon" <psimon@sinanni.com>, "Karl Cote"

<kcote@sinanni.com>

CC: "Michelle Rurka" <mrurka@umagroup.com>

FOX-5: EWG

All, please find the final meeting minutes for the teleconference of October 16th. Philippe, please distribute to NTL.

Regards
Tanya M. Schulz, P.Eng.

The EWG met by teleconference on October 16, 2001, to discuss the potential landfill locations at FOX-5. The participants in the teleconference are as follows:

- Sheila Street
- Karl Cote
- Philippe Simon
- Wayne Ingham
- Tanya Schulz

A package of information had been forwarded in advance of the call.

This information included the geotechnical assessment by EBA, aerial photographs with drainage paths annotated on the drawing, color photographs of the proposed areas, and survey plans.

The objective of the call was to confirm whether the proposed sites are considered technically appropriate for the development of landfills. As part of this process, the sites were ranked in order of preference from a technical standpoint, as follows:

1. Site K - located inside the DND reserve near the "middle site".

Meets siting criteria:

This was the preferred site. It was noted that an access road would be constructed on Hamlet property. This was considered a potential political issue but not a technical disadvantage. As noted in the summary prepared by EBA, final grading of the landfill would require redirection of drainage in a portion of the area to ensure that drainage is not directed toward the proposed secondary water supply lake. [Note: There is no road and no current access to this lake [proposed secondary water supply] at this time. It is well removed from the current community. There is also no growth/development of the area to suggest that this lake will be used in the near future. It is currently a proposed supply lake should the community develop to the point that an additional lake is required.] A shallow water table was observed at this location. It was noted that although construction may be more challenging at this location, the moisture would ultimately improve the performance of the anchor trench by providing a saturated media, which when frozen acts as a relatively impermeable barrier.

2. Site M - located upgradient of the Main Landfill, at the Upper Site.

Meets siting criteria.

Advantages - located in previously disturbed area, surface water run-on into area is limited, access to the site requires little to no new disturbance. There are very few large boulders therefore tying in a liner to the permafrost is more manageable. Disadvantages - It was recognized that the community has concerns regarding the Main Landfill and Landfill M is located directly adjacent to the Main Landfill. As discussed in previous conversations, there are significant technical considerations with regard to the remediation plans for the Main Landfill, but there may be local concerns related to this location.

3. Site G - located at Upper Station Area

Meets siting criteria

Disadvantages - large boulder area, receives drainage from former facilities area. Construction of a landfill in this location would require new site disturbance of virgin tundra and a new road to the site. Large boulders at this location would increase the difficulty of construction of an anchor trench for the placement of saturated soil

4. Site L - located at Middle Site

Generally meets siting criteria. However, it was noted that surface water drainage would eventually flow towards the proposed secondary water supply lake, similar to the initial location proposed in the tender documents. The overland drainage is in approximately 400 metres, followed by a further 3.5 kilometres. It was noted that this is a significant distance. It was also noted that this location would require new site disturbance of virgin tundra and the construction and maintenance of a road to the site could result in unnecessary disturbance.

EWG Meeting Minutes – September 13, 2001, 13:00 to 14:00 MDT

Participants:

Philippe Simon – NTI
Karl Cote – NTI (alternate)
Sheila Street – NTI
Wayne Ingham – DND
Tanya Schulz - DND

The EWG met by conference call to discuss issues at FOX-5 relating to landfill siting and landfill remediation, identified as potential concerns by community residents. Specifically, these included:

- Main Landfill – Upper Site [existing]
- Proposed Landfills – between upper and lower site.

It was noted that no additional site inspections were carried out by NTI representatives in 2001.

Further, it was understood that NTI Board Members will be meeting in Qikiqtarjuak this weekend. At this time, they have not requested any specific assistance from the NTI representatives of the EWG.

The following summarizes the EWG discussions.

Main Landfill:

- The Main Landfill at the Upper Site was evaluated by the Environmental Working Group utilizing the Landfill Evaluation Matrix as included in the Environmental Provisions of the NTI Agreement. This evaluation was carried out following the 1998 Site Investigation and Inspection by DND personnel and NTI representatives. The potential environmental risk associated with the Main Landfill at the Upper Site was ranked as moderate. Recommendations for remediation included leachate containment with provision for surface water run-on control due to the presence of a drainage channel in the vicinity of the landfill.
- Community concerns suggested that a) significant surface water flow through the landfill and b) instability from earthquake activity were serious considerations, and that the landfill should be excavated.
- As requested, the EWG carried out a second review of the design for the Main Landfill and offer the following observations and recommendations:
 - The receptor sensitivity is low therefore the environmental risk of leaving the landfill in place is low.
 - The current drainage pathway is ephemeral (ie. seasonal drainage). It is not fish bearing, is not considered a drinking water source and terminates at a cliff, therefore there is no chance of seasonal use of the drainage channel by spawning fish.
 - In the current design, the drainage pathway will be backfilled.
 - Significant thickness of fill material will be placed on the landfill.
 - Erosion protection, consisting of geotextile and rip-rap (large boulders) will be placed over the landfill to prevent erosion.
 - The landfill design modifies the topography such that drainage will not flow through the landfill, but around it instead.
- **It was agreed that landfill excavation is not required.**
- **It was agreed that the surface water run-on will be re-examined by design personnel, and if considered necessary, slight modifications to the design may be incorporated. These**

modifications may include extending the rip-rap into a man-made drainage feature near the perimeter of the toe of the landfill.

New Landfills

The previous sites proposed for the development of new landfills at the FOX-5 site, were located approximately mid-way between the community and the Upper Site. Two primary concerns were raised by the community:

1. The landfill locations were not located on DND property.
2. Alternate landfill locations drained to the Secondary Water supply on the North side of Broughton Island.

Accordingly, in 2001, the following activities were carried out by or on behalf of DND.

- Legal survey of the property boundary in the area of the proposed landfills were carried out.
- Proposed sites were selected based on geotechnical and hydrological considerations (ground conditions and drainage).
- Two sites were identified in the middle site, identified as K and L on drawings, as provided to the EWG.

Information provided to the EWG for the review consisted of an aerial photograph of the site, an overall topographic map, and preliminary plan areas of the proposed landfill sites. It is to be noted, that the detailed survey and geotechnical information was not yet fully downloaded from the field, and a more detailed review will be carried out when this information is available to the EWG.

- Site K, located within the NW corner of the DND property boundary, and on the east side of the access road to the Upper Site, drains to the Northwest, eventually towards and past, not through the sewage lagoon and hamlet landfill (approximately 2 kilometres distant).
- Site L, is located on the south side of the access road to the Upper Site. Drainage from this area tends to the Southwest, eventually draining into Kuruluk River, some 3 kilometres downgradient.

Based on the preliminary review, the EWG agrees that the proposed sites K and L meet the requirement of no drainage to the secondary water supply lake, and are located within the DND reserve. A more detailed review is to be carried out once the design is completed.

All parties to review the above by 14 September a.m. and provide comments to that this information may be forwarded to the Steering Committee.

NTI/DND Environmental Working Group In-Person Meeting Minutes

Date: 5-6 May, 1999
Time: 9:00 to 17:00
Participants: Sheila Street - NTI (Vista Engineering)
Philippe Simon - NTI (LDS Consultants Inc.)
Wayne Ingham - DND (ESG)
Tanya Schulz - DND (UMA)
Jennifer Rogers - DND (ESG)

Location: UMA Engineering Ltd. Conference room, Edmonton
Distribution: Attendees
- DCC
- NTI

Item	Discussion	Action Required By:
4.	FOX-5 Broughton Island	
4.2	LANDFILLS <ul style="list-style-type: none"> ▪ There are two existing landfills at the FOX-5 Broughton Island DEW Line Site: Main Landfill at the Upper Site, and Airstrip Landfill – West at the Lower Site. ▪ The area at the former construction campsite for the DEW Line was investigated. Although there is extensive debris in the area, burial of debris was limited to very localized small areas. As a result, this area will be treated as debris, and was not evaluated using the landfill evaluation matrix. ▪ Preliminary evaluations of the two existing landfills at this site were carried out during the development of the landfill evaluation matrix. ▪ These evaluations were reviewed in the context of the additional information collected during the 1998 investigation. A brief summary of the evaluation is provided as follows. Detailed evaluations will be provided in the EWG Record of Decisions for FOX-5 Broughton Island. 	P. Simon
4.2.1	Airstrip Landfill – West <ul style="list-style-type: none"> ▪ 1998 data indicates the presence of contaminated soil and contaminant migration, therefore the score for this landfill increases from 85 to 105 (high potential environmental risk). ▪ It is recommended that the Airstrip Landfill be excavated. 	
4.2.2	Main Landfill – Upper Site <ul style="list-style-type: none"> ▪ The score for this landfill was adjusted as follows based on the 1998 field data, and the observations of the NTI representative: <ul style="list-style-type: none"> • Harvesting of sedentary organisms from below the toe of the landfill was removed from scoring, as the Straight below the landfill is too deep. • Likelihood of Human Exposure was reduced from high to moderate. ▪ The Total Score was revised from 95 to 88. Resultant classification: Moderate potential environmental risk (no change in classification). ▪ It is recommended that the remediation solution incorporate leachate containment. 	