ᐊᕿᒋᐊᕐᓯᓂᕐᒧᑦ ᐊᐅᓚᔾᔭᒋᐊᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎ
ᐃᐅᓕᒃᑲ ᖁᑦᑎᒃᑐᒥ ᓯᓚᓐᓂᐊᕐᕕᒃ

ᐊᕋᒍᖓᓂ 12/13

ᓇᐃᒃᓕᒋᐊᕐᓯᒪᔪᑦ ᐅᖃᐅᓯᒃᓴᐃᑦ

ᖃᐅᔨᓴᕐᑎᐅᔪᑦ SENES Consultants Ltd. (SENES), ᐃᑲᔪᕐᑎᖃᕐᓗᑎᒃ ᖃᐅᔨᓴᕐᑎᐅᔪᓂᒃᑕᐅᖅ ᐅᑯᓂᖓ Franz Environmental Inc. (FRANZ), ᑎᓕᔾᐅᓚᐅᕐᓯᒪᒃᒪᑕ ᓱᕋᒃᓯᒪᔪᓕᕆᔨᒃᑯᓐᓂᑦ ᑲᓇᑕᒥ ᐊᒻᒪᓗ ᒐᕙᒪᒃᑯᑦ ᐱᓕᔨᕋᕐᓂᖏᓐᓄᑦ ᑲᓇᑕᒥ Public Works and Government Services Canada (PWGSC) ᑭᒐᕐᑐᐃᓪᓗᑎᒃ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ Environment Canada (EC) ᐊᕿᒃᓱᐃᓪᓗᑎᒃ ᓴᓗᒻᒪᕐᓴᐃᓂᐅᒐᔾᔭᕐᑐᒥᒃ ᖃᓄᕐᑐᕈᑕᐅᓂᐊᕐᑐᓂᒃ ᖃᐅᔨᓇᓱᒃᓗᑎᒃ ᐱᔾᒃᓴᐅᑎᒋᓂᐊᕐᓂᖓᓂᒃ, ᐃᑲᔪᕐᑐᐃᓪᓗᑎᒃ ᓴᓗᒻᒪᕐᓴᐃᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᖓᓂᒃ, ᐅᐃᓕᑲᒥ ᖁᑦᑎᒃᑐᒥ ᓯᓚᓐᓂᐊᕐᕕᒃᒥ Eureka High Arctic Weather Station (HAWS).

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ᑕᓐᓇ ᐱᓕᕆᐊᖑᔪᖅ ᑲᔪᓯᑎᑕᐅᔪᓐᓴᕐᓚᐅᕐᑐᖅ ᒐᕙᒪᒃᑯᑦ ᑲᓇᑕᒥ ᓱᕋᒃᓯᒪᔪᓕᕆᔨᒃᑯᓐᓂᑦ ᐅᑭᐅᕐᑕᕐᑐᒥ ᐱᖁᑎᑕᕐᑎᑦᑎᓂᕐᒧᑦ ᐊᖏᖃᑎᖏᒍᑎᒃᑯᑦ ᓇᓴᐅᑕ EW699-100053/002/NCS, Call-up number EW699-123266/001/NCS, ᐊᕿᒋᐊᕈᑎᑦ 1 ᐊᒻᒪᓗ 2.. ᑕᒃᑯᐊ ᐅᓂᑲᓕᐊᖑᔪᑦ ᐅᖃᐅᓯᖃᕐᑐᑦ ᓴᓗᒻᒪᕐᓴᐃᓂᕐᒧᑦ ᐊᕿᒋᐊᕐᓯᓂᕐᒧᓪᓗ ᐸᕐᓇᐅᑎᓂᒃ ᐱᔾᓇᕐᑕᐅᓚᐅᕐᑐᓂᒃ ᐅᐃᓕᑲ ᓯᓚᓐᓂᐊᕐᕕᒃᒥ ᐊᒻᒪᓗ ᐊᕿᒃᓱᕐᑕᐅᓚᐅᕐᑐᖅ ᒪᓕᒃᓗᒍ ᐱᔾᓇᐊᖃᕐᓂᖏᑦ ᐊᑐᓇᐊᓕᑦ ᐅᖃᕐᓯᒪᔪᒧᑦ ᐊᕿᒋᐊᕐᓯᓂᕐᒧᑦ ᓴᓗᒻᒪᕐᓴᐃᓂᕐᒧᓪᓗ ᐸᕐᓇᒃᓂᕐᒧᑦ ᐊᒻᒪᓗ ᐊᕿᒋᐊᕐᓯᓂᕐᒧᑦ ᐊᐅᓚᔾᔭᐅᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒧᑦ ᐅᐃᓕᑲᒧᑦ ᓯᓚᓐᓂᐊᕐᕕᒃᒥ ᐊᕋᒍᖓᓂ 11/12 ᐊᒻᒪᓗ 12/13 ᐅᓪᓗᖃᕐᑐᖅ ᒪᓕ 2012, ᐊᒻᒪᓗ ᖃᐅᔨᓴᕐᑎᐅᔪᒃ SENES/FRANZ ᐱᓕᕆᐊᖑᓚᐅᕐᑐᑦ ᐅᓪᓗᖃᕐᑐᖅ ᔪᓂ 14, 2012.

ᐅᓂᑲᓕᐊᖑᔪᑦ ᐃᓗᐊᓂ ᐃᐅᓕᑲᒧᑦ ᖁᑦᑎᒃᑐᒥ ᓯᓚᓐᓂᐊᕐᕕᒃ ᑕᐅᔾᐃᓂᐊᕐᑐᖅ ᓄᓇᖓᓂ.

ᐱᓕᕆᐊᖑᓚᐅᕐᑐᑦ ᑎᓴᒪᐅᓕᖓᓚᐅᕐᑐᑦ, ᓱᕗᓪᓕᕐ ᐱᖃᓯᐅᑎᓯᒪᓪᓗᓂ ᖃᐅᔨᓴᕐᑕᐅᓯᒪᓂᖓᓂᒃ ᐃᐅᓕᑲᒥ ᐃᓚᓐᓂᐊᕐᕕᒃᒥ ᓇᓗᓇᐃᕐᑕᐅᓇᓱᒃᓗᑎᒃ ᐃᓚᑯᓂᖏᑦ ᑎᑎᕋᕐᑕᐅᓯᒪᔪᑦ. ᕿᐅᔾᔭᐅᔪᑦ ᐃᒪᒋᔭᖓᓂ ᖃᐅᔨᓴᕐᑕᐅᓂᖓᓂᒃ ᐅᓂᑲᐅᓯᐅᓯᒪᔪᑦ ᐊᓯᐊᒍᖓᓪᓗᑎᒃ.

ᐱᖃᑕ ᐊᐅᓚᓂᖓ ᐱᖃᓯᐅᑎᓯᒪᔪᖅ ᖃᐅᔨᓴᕐᑕᐅᓪᓗᓂ ᐱᔾᒃᓴᐅᓂᖓᓂᒃ ᖃᓄᑎᒋ ᐱᔾᒃᓴᐅᑎᒋᒃᒪᖓᑕ ᐊᔾᔨᒋᖏᑦᑐᑦ ᐊᑐᕐᑕᐅᔪᓐᓇᕐᑐᓂᒃ ᓴᓗᒻᒪᕐᓴᐃᓂᕐᒧᑦ. ᐱᔾᒃᓴᐅᓂᖓᓂᒃ ᖃᐅᔨᓴᕐᑕᐅᓂᖓ ᐱᖃᓯᐅᔾᔨᓯᒪᔪᖅ ᐱᓪᓚᑦᑕᖑᔪᒃᑯᑦ ᐱᕙᒃᓴᐅᔪᒃᑯᑦ, ᐊᑦᑕᕐᓇᕐᑕᐃᓕᒪᓂᒃᑯᑦ ᐊᑭᖓᓂᒃᓗ ᐊᒻᒪᓗ ᓇᒥᓐᓂᖓᓂᒃ ᐊᐅᓚᓂᖏᓐᓂᒃ ᐊᑐᓂ ᐊᔾᔨᒋᖏᑦᑐᑦ ᐊᑐᕐᑕᐅᔪᓐᓇᕐᑐᓂᒃ ᐅᓂᑲᒥ.

ᐱᖓᔪᖓᑦ ᐊᐅᓚᓂᖓ ᐃᓗᓕᖃᕐᑐᖅ ᐊᕿᒃᓱᐃᓂᕐᒥᒃ ᐊᕿᖏᓐᓂᒃ ᖃᓄᑎᒋᕐᓂᐊᕐᒪᖓᑦ, ᓴᓇᔾᐅᓂᐊᕐᑐᓂᒃᓗ ᐱᔾᓇᐊᒃᓴᐅᓂᐊᕐᑐᓂᒃ, ᐊᒻᒪᓗ ᓇᓴᐅᑎᒃᑯᑦ ᐊᕿᒃᑕᐅᓂᖏᓐᓂᒃ ᓴᓗᒻᒪᕐᓴᐃᓂᕐᒧᑦ ᓂᕈᐊᕐᑕᐅᒍᓂ ᓇᓕᐊᑐᐃᓐᓇᖅ ᒐᕙᒪᒃᑯᓐᓄᑦ ᑲᓇᑕᒥ ᓱᕋᒃᓯᒪᔪᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᒻᒪᓗ ᐊᕙᑎᓕᕆᔨᒃᑯᓐᓄᑦ ᑲᓇᑕᒥ. ᐊᕿᖏᑦ ᑎᑎᕋᕐᓯᒪᔪᑦ ᓇᓚᑦᑕᕐᑕᐅᓯᒪᔪᑦ, ᐱᓕᕆᐊᒃᓴᐅᔪᑦ ᑕᑯᔾᐅᓪᓗᑎᒃ, ᖃᓄᑎᒋᕐᓂᖏᓪᓗ, ᐊᑐᓂᓗ ᐊᕿᖏᑦ, ᐱᔾᕐᑕᐅᔪᓪᓗ ᐃᓚᓕᐅᔾᔭᐅᔪᓪᓗ ᑎᑎᕋᕐᑕᐅᓪᓗᑎᒃ ᐱᔾᔪᑎᒋᔭᖏᓪᓗ.

ᑭᖑᓪᓕᕐᐸᖅ ᐊᐅᓚᓂᕆᒐᔾᔭᕐᑕᖓ ᐸᕐᓇᒃᓯᓂᖅ ᓴᓗᒻᒪᕐᓴᕐᓂᕐᒧᑦ ᒪᓕᒃᓗᒍ ᐊᕿᒋᐊᕐᓯᓂᕐᒧᑦ ᓂᕈᐊᕐᑕᐅᔪᖅ ᓇᓂᐊᑐᐃᓐᓇᖅ ᒐᕙᒪᒃᑯᓐᓂᒃ ᑲᓇᑕᒥ ᐊᕙᑎᓕᕆᔨᒃᑯᓐᓄᑦ. ᑕᓐᓇ ᐅᓂᑲᓕᐊᖑᔪᖅ ᐅᖃᐅᓯᖃᕐᑐᖅ ᐱᖓᔪᖓᓐᓂ ᐊᒻᒪ ᓗᑎᓴᒪᖓᓐᓂ ᐊᐅᓚᓂᕆᒐᔾᔭᕐᑕᖓᓂᒃ ᐱᓕᕆᖑᔪᑦ. ᓚᓕᒃᓗᒋᑦ ᐅᖃᓪᓚᖃᑎᒋᔾᔭᐅᓯᒪᓂᖏᑦ ᒐᕙᒪᒃᑯᑦ ᑲᓇᑕᒥ ᓱᕋᒃᓯᒪᔪᓕᕆᔨᒃᑯᑦ ᐊᕙᑎᓕᕆᔨᒃᑯᓪᓗ, ᖃᓂᒋᔭᓂ ᒥᑦᑕᕐᕕᖓᑕ ᐱᖃᓯᐅᔾᔭᐅᓯᒪᖏᑦᑐᖅ ᓴᓕᒻᒪᕐᓴᐃᓂᕐᒧᑦ. ᐊᓯᐊᒍᑦ ᐅᓂᑲᓕᐊᖑᓯᒪᔪᖅ ᐊᑎᖃᕐᑐᖅ *ᐊᑯᓂᐅᔪᒧᑦ ᖃᐅᔨᓴᕐᑕᐅᓂᖓ ᐸᕐᓇᐅᑎ AEC A, ᐃᐅᓕᑲ ᓯᓚᓐᓂᐊᕐᕕᒃᒥ ᐊᕿᒃᓱᕐᑕᐅᓪᓗᓂ ᐅᑯᓇᖓᑦ ᖃᐅᔨᓴᕐᑎᐅᔪᓂᒃ* by SENES/Franz (2013) ᐅᓂᑲᕐᓯᒪᔪᑦ ᐊᑦᑕᕐᓇᕐᑐᓂᒃ ᐊᐅᓚᑕᐅᓂᖏᓐᓂᒃ ᐸᕐᓇᐅᑎᓂᒃ ᐅᒧᖓ AEC A.

1.1 ᖃᐅᔨᓴᕐᕕᐅᔪᖅ

ᐱᐅᓕᑲ ᓯᓚᓐᓂᐊᕐᕕᒃ ᓄᓇᖓ ᐅᐊᒃᓇᖓᓂᑦᑐᖅ ᑲᖏᕐᓗᑦ Slidre Fiord, ᐃᓱᐊᓂ ᐅᐃᕙᖓᑕ Fosheim Peninsula, ᕿᑭᕐᑕᒥ Ellesmere Island, ᓄᓇᕗᑦ (ᑕᑯᓗᒍ ᓄᓇᖑᐊᖅ Figure 1; Appendix A). ᐃᐅᓕᑲᒥ ᓯᓚᓐᓂᐊᕐᕕᒃ ᕗᓴᖑᐊᒃᑯᑦ ᓇᓴᐅᑎᖃᕐᑐᖅ ᐅᕙᓂ 79°59'41"N and 85°48'48"W (ᑎᑎᕋᕐᓯᒪᔪᖅ ᓴᕿᔾᕐᑎᑕᐅᔪᖅ ᓯᓂᕐᑕᕐᕕᐅᔪᑦ ᓯᓚᑕᓂ). ᓄᓇᒋᔾᐅᔪᖅ ᐃᓂᒋᔾᐅᔪᖅ ᐅᐸᒐᒃᓴᐅᓪᓗᓂ ᖃᖓᑕᓱᒃᑯᑦ, ᖃᖓᑐᐃᓐᓇᕐᓗ ᐊᑐᕐᑕᐅᒧ8ᓴᕐᑐᖅ ᒥᑦᑕᕐᕕᖓ ᐅᖓᓯᒃᓂᖃᕐᑐᖅ 1.5 ᐅᐊᒃᓇᕐᐸᓯᐊᓂ ᐱᖁᑎᒋᔾᖏᑕ ᓯᓂᕐᑕᕐᕕᐅᔪᓪᓗ. ᐃᐅᓕᑲ ᓯᓚᓐᓂᐊᕐᕕᒃ ᓯᕕᖓᔪᒥᑦᑐᖅ ᒥᑦᑕᕐᕕᒃᒥᑦ ᐊᑕᓂ ᓯᕕᖓᓂᖓᑕ, ᖃᐃᖃᒃᓗᓂᓗ ᐃᒃᓗᒋᔾᐅᔪᑦ ᓇᓚᒍᑦ, ᐃᒪᓄᑦ ᓯᕕᖓᒃᑲᓐᓂᓕᕐᓗᓂᓗ. ᐊᑕᓂ ᓯᕕᖓᔪᑦ ᓂᒋᐊᓂ ᐃᐅᓕᑲᐅᑦ ᓯᓚᓐᓂᐊᕐᕕᐅᑦ ᓄᓇᑕᖃᕐᓗᓂ ᒪᓂᕋᐅᔪᒃ ᐊᑎᖃᕐᑐᖅ Delta area. ᑕᓐᓇ ᓄᓇ ᐊᑐᕐᑕᐅᖃᑦᑕᕐᑐᖅ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ ᓂᐅᕋᐃᕕᐅᓪᓗᓂ ᓯᑯᓯᐅᑎᓕᕆᔨᒃᑯᓐᓂᑦ ᐱᖁᑎᓂᒃ ᐅᓯᒪᖓᑕ ᐅᒥᐊᕐᔪᐊᒃᑯᑦ. ᕐᖏᕐᓗᖓ ᓯᑯᖃᐃᓐᓇᖃᑦᑕᕐᑐᖅ ᐊᖃᒍ ᐃᓗᐊᓂ (ᓱᕐᓗ ᓯᑎᐱᓇᒥᑦ ᔪᓂᒧᑦ).

1.2 ᐱᓕᕆᐊᖑᔪᒧᑦ ᑐᕋᒐᐅᔪᑦ

ᑐᕋᒐᖃᕐᑐᑦ ᐱᓕᕆᐊᖑᔪᒧᑦ ᐱᖃᓯᐅᔾᔨᓯᒪᓪᓗᑎᒃ ᐸᕐᓇᒃᓂᕐᒥᒃ ᓴᓗᒻᒪᕐᓴᐃᓂᕐᒥᒃ ᐃᐅᓕᑲᒥ ᓯᓚᓐᓂᐊᕐᕕᒃᒥ. ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ ᓇᓗᓇᐃᕐᓯᓚᐅᕐᑐᑦ ᐊᑦᑕᕐᓇᕐᑐᖃᕐᓂᖓᓂᒃ ᐊᑯᓂᐅᔪᒧᑦ ᖃᐅᔨᓴᕐᑕᐅᔾᔭᓇᐊᖃᕐᓂᖓᓂᒃ ᐊᕿᒋᐊᕈᑕᐅᓇᓱᒃᓂᐊᕈᓂ ᓂᕈᐊᕐᑕᐅᓪᓗᓂ ᐊᓯᓪᓕᕐᑕᐅᓚᐅᖏᓐᓂᖓᓂ ᐃᒪᖃᕐᕕᐅᔪᖅ ᐱᖁᑎᒋᔾᖏᓐᓄᑦ ᐊᑐᕐᑕᐅᔪᖅ. ᐱᓕᕆᐊᖑᔪᒪᔪᖅ ᐃᒃᐱᒃᓇᐅᑎᑐᐃᓐᓇᕆᐊᖃᕐᑐᖅ ᐊᓯᖏᓐᓄᑦ ᖃᓄᕐᑐᕈᑎᒃᓴᐅᔪᓄᑦ ᐅᖃᐅᓯᐅᓯᒪᔪᓄᑦ ᖃᐅᔨᓴᕐᑎᐅᔪᓄᑦ SENES/FRANZ 2013

ᐊᕿᒋᐊᕐᓯᓂᕐᒧᑦ ᓴᓗᒻᒪᕐᓴᐃᓂᕐᒧᓪᓗ ᐊᕿᒋᐊᕐᓯᓂᕐᒧᑦ ᐊᐅᓚᔾᔭᐃᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᑦ - ᐱᔾᒃᓴᐅᓂᖓᓂᒃ ᖃᐅᔨᓴᐅᑎᑦ. ᐊᑐᕐᑯᔨᓚᐅᕐᑐᑦ ᐸᕐᓇᐅᑎᑦ ᐱᔾᓇᕐᑕᐅᒃᐸᑕ ᐃᒪᖃᐅᑎᒃᓴᒧᑦ ᐊᕿᕐᑕᐅᓯᒪᓂᓕᕐᐸᑕ; ᐊᕿᒋᐊᕈᑎᒃᓴᐃᑦ ᐸᓇᐅᑎᑦ ᓄᑕᖑᕐᑎᒋᐊᕐᑕᐅᒐᔾᔭᕐᑐᑦ. ᐸᓯᕿᑦ ᐱᓕᕆᐊᖑᔪᑦ ᐃᒃᐱᒃᓂᕐᔭᕐᑐᑦ ᐊᕿᒋᐊᕈᑎᒃᓴᐃᑦ ᐸᕐᓴᐅᑕᐅᔪᑦ ᐱᖃᓯᐅᑎᓗᒍ ᓄᑕᖑᓇᐊᕐᑕᐅᓗᑎᒃ ᐃᓚᖃᓯᐅᔾᔭᐅᓗᓂ ᐃᒪᖃᐅᑎᐅᓕᕐᑐᖅ ᐊᒻᒪᓗ ᐱᔾᕐᑕᐅᓗᑎᒃ ᐃᒃᓗᐃᑦ ᐃᓚᖏᑦ ᓯᓚᓐᓂᐊᕐᕕᕕᓂᑦ.

1.3 ᖃᓄᑎᒋᕐᓂᖓ

ᖃᓄᑎᒋᕐᓂᖓ ᐱᓕᕆᐊᖑᓂᐊᕐᑐᖅ ᐱᖃᓯᐅᔾᔨᓯᒪᓂᐊᕐᑐᖅ ᐱᔾᐅᕙᓪᓕᐊᓂᖏᓐᓂᒃ ᐅᑯᓂᖓ:

1. ᐸᕐᓇᐅᑎ ᐊᑦᑕᕐᓇᕐᑐᓄᑦ ᖃᐅᔨᓴᕐᓂᖅ ᐊᑯᓂᐅᔪᒧᑦ ᖃᐅᔨᓴᕐᑕᐅᓂᖓᓄᑦ;
2. ᖃᓄᑎᒋ ᐊᑭᖃᕐᑎᒋᓂᐊᕐᒪᖓᑦ ᕿᓄᖓᓱᑕᐅᔪᑦ ᐊᑯᓂᐅᔪᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒧᑦ;
3. ᐱᓕᕆᐊᖑᓂᐊᕐᑐᑦ ᐱᖁᑎᖏᑦ ᖃᓄᐃᓕᖓᓂᐊᕐᒪᖓᑕ; ᐊᒻᒪᓗ
4. ᓇᓴᐅᑎᒃᑯᑦ ᐊᕿᒃᓱᕐᓯᒪᔪᑦ ᖃᐅᔨᓴᐅᑎᑦ