



Water Licence Inspection Report

☒ Original
☐ Follow-Up Report

Authorization	Representative
Environment and Climate Change Canada	Asif Mohammed
Authorization No. / Expiry	Representative's Title
8BC-EUR2131, April 29,2025	Chief Administrative Officer
Other Authorization/s	
Activities Inspected	
<input type="checkbox"/> Camp, Commercial <input type="checkbox"/> Drilling <input type="checkbox"/> Mining <input type="checkbox"/> Construction <input type="checkbox"/> Reclamation <input type="checkbox"/> Fuel Storage <input type="checkbox"/> Roads/Hauling <input type="checkbox"/> Winter Hauling <input type="checkbox"/> Camp, Private <input checked="" type="checkbox"/> Other ,Potable Water source, Solid Waste facility, hazardous waste facility, Domestic waste/sewage	

Conditions: A- Acceptable U-Unacceptable C-Concern NI-Not Inspected NA- Not applicable

PART:	Condition	Observation No.*
A: SCOPE, DEFINITIONS AND ENFORCEMENT	A	
B: GENERAL CONDITIONS	A	1
C: CONDITIONS APPLYING TO SECURITY	NI	
D: CONDITIONS APPLYING TO WATER USE	A	4,5,6,7,23,24-27,31,32
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT	C	3,8-19,21,22,27-30,33
F: CONDITIONS APPLYING TO MODIFICATIONS	A	
G: CONDITIONS APPLYING TO CONSTRUCTION	A	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING	NI	
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING	NI	
J: CONDITIONS APPLYING TO MONITORING	A	
SCHEDULES	NI	
*The licence and the observation number corresponds with specific comments provided below.		
Samples taken by Inspector:	Location(s): Latitude: •	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

*refers to specific terms and conditions found in the permit/lease in question.

Section 1 Comments

Background

The Eureka High Arctic Weather Station (HAWS) was established in 1947. The Eureka HAWS is located on the northern shore of Slidre Fiord, at the northwestern tip of Fosheim Peninsula, Ellesmere Island, approximately 425 km northwest of the Hamlet of Grise Fiord. The Eureka HAWS is sited on crown land. The Station is operated by Environment and Climate Change Canada (ECCC) since April 7th 1947. The primary purpose of the Eureka station is to collect weather information in order to produce public weather forecasts. The station also serves as a staging location for other science based activities in the High Arctic and provides support to the Arctic aviation community. Facilities at Eureka include operations, shops, accommodations and other buildings, maintenance garage, warehouses, pump-house, power-house, fuel storage facility, electrical plumbing-carpentry facilities, water reservoir, incinerator, and sewage lagoon. ECCC sought to construct and operate a new water storage reservoir, with an expected completion date of August 2024, a wastewater treatment plant that is to be commissioned in 2023, and a greywater exfiltration trench. The Applicant also indicated that it plans to convert the existing sewage lagoon into a wastewater retention pond.

Inspector Statement

On July 09, 2023, I, Isaiah James Bolt, Inspector with the Crown Indigenous Relations and Northern Affairs Canada, (CIRNAC and for the purpose of this report hereafter referred as the "Inspector"), Along with Fellow Inspector Joseph Monteith, completed an on site inspection of 8BC-EUR2131.

General Condition

1. The Nunavut Water Board acknowledges receipt March 24, 2023 of 2022 annual report, attached, for water licence 8BC-EUR2131

Inspection

2. Inspectors Bolt and Monteith arrived at the airport on site at around 1:30pm on July 09.
3. 2:45pm The Inspectors arrived at Blacktop Creek bridge. On the bridge, there is no mesh to catch the sediment build up from falling off of the edge. Sediments and rocks have built up on the centre of the bridge (Photo #1). (Part C-Subsection 7 of the water license: *"Sediment and erosion control measures shall be implemented prior to and maintained during the undertaking to prevent entry of sediment into Water."*)
4. At Blacktop creek bridge, inspectors observed installed dozer tracks up stream of the bridge to help mitigate erosion (Photo #2).
5. 3:00pm The Inspectors arrived at West Remus Creek. no concerns with the culverts or erosion mitigation at the time of arrival. (photo #3).
6. 3:08pm The Inspectors arrive at Remus Creek. Inspector BOLT noted that the walls on the down stream side of the culverts were very steep and show signs of erosion at the high water mark (Photo #4). large rocks have been placed at the bottom of the walls to help mitigate erosion. Part C-Subsection 6 of the issued water license states: *"The Licensee shall not cause erosion to the banks of any water body and shall provide necessary controls to prevent such erosion."*
7. Inspector BOLT at Remus Creek observed the erosion control measures on the upstream side of the culverts are very well designed. (photo #5)
8. 3:34pm At the Nuna Logistics storage laydown area: an articulating rock truck was observed with a spill tray underneath. (Photo #6). Upon closer inspection, it was apparent there was staining on the ground. (Photo #7)
9. Nuna Logistics has many tanks of fuel stored in their storage laydown area. All of the fuel tanks are large square tanks with a capacity of 4995 Litres (photo #8) A close up photo was taken showing the information placard of one of the tanks. (Photo #9)
10. In the Nuna storage laydown area near the stack of truck tires, 6 Acetylene tanks, a barrel and an ash barrel are stored. (photo #10)
11. A large 200lbs propane tank was observed in the Nuna Storage Laydown (Photo #11).
12. 3:49pm Battery disposal facility (ERK-04): (Photo #12). Inspector BOLT walked to the berm and took more photos, (Photo #13) shows the mound of dirt, no other loose debris other than a standing barrel half buried in the mound was observed.
13. Solid Waste Facility: (EUR-02/ERK-03) (Photo #14), wind blown litter observed. No concerns (Photo #15)
14. 3:57pm At the landfill, EUR-02, the open burn facility (metal dumpster) contained plastics and plastic bags filled with domestic wastes. (Photo #16) Domestic wastes appear to have been burned there before. (Part D-Item 5 of the issued water license states: *"The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of Waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding Waters, unless otherwise approved by the Board in writing."*)
15. 4:04pm arrival at EUR-06. Temporary contaminated soil storage. No concerns with EUR-06 (Photo #17)
16. In the same area as EUR-06, a new contaminated soil storage berm is being built. At the time of inspection the berm walls had been constructed and the rubber liner had been placed on top and weighted down to ensure the wind doesn't blow it away. Completion of the berm will enable Nuna-logistics to store more contaminated soils on site. (Photo #18)
17. Inspectors BOLT and MONTEITH arrived at the Nuna logistics waste fuel laydown. This area is for storage of drums. Approx 112 drums were placed on this storage pad at the time of inspection. All barrels observed were placed on pallets and not secondary containment. No spills observed (Photo #19).
18. 4:09pm Arrival at the Barrel Crushing site that is also in the same area as the Land farm Facility (Photo #20).
19. A contaminated soil berm (Photo #21) in the land farm facility appears to have compromised berm walls. (Photo #22 and #23).
20. In the Barrel crushing facility, there are 2 separate stockpiles of empty barrels. 1 stockpile is close to the entrance (Photo #24). The other stockpile is directly beside the washer/crusher for convince while operating the machine. There is a spill kit on site (Photo #25).
21. 4:25pm At the Nuna mechanic Laydown area. Both Inspectors noted there were many, varying in size, oil spills. (Photos #26,27,28), Inspector MONTEITH mentioned that he did not see enough spill reports to correspond with the amount of spills observed, Inspector MONTEITH requested that spills be reported to the Spills line.

22. On the way to the water reservoir, inspectors observed a large secondary containment pad with many barrels of various hazardous materials such as waste oils, AV gas, 5W-30, used batteries. The containment pad did have some water in it. But no significant concerns were noted.
23. Inspectors BOLT and MONTEITH arrive at the new water reservoir that is under construction. Inspectors were shown a cross section. (Photo #29). The new reservoir is located right beside the old one, but it is raised up higher with large berm walls. (Photo #30)
24. Inspectors also observed the old water reservoir. (Photo #31) Water is pumped from Station Creek bridge to the reservoir. It is estimated that the reservoir holds approximately 12,000 cubic metres of water. An amendment to the water license has been issued to increase its capacity by building the new water reservoir. The free board of the old reservoir is very low, but there is a drain pipe that helps regulate the proper water level to prevent overflow. The end of the pipe flows away from the reservoir into the ocean. The end of the drain pipe is over 31 metres from the high water mark and has erosion mitigation in place.
25. The inner walls of the old water reservoir have been slumping inwards over time and may eventually cause the structure to fail. (Photo #32) The new water reservoir is scheduled to be completed in August 2024 according to the amended water license.
26. Eureka obtains its water for domestic purposes from a bridge at Station Creek. The water is pumped from Station Creek into the water reservoir using a submersible pump placed inside a milk crate covered with fine mesh in order to reduce the transfer of silt and potentially fish from the creek to the reservoir. (Photo #39 and #40)
27. Close by the new water reservoir is a site that has been staked and labelled as contaminated soil. This contaminated soil is considered a waste and will be brought to the new temporary contaminated soil berms for treatment. Contamination is very old and may come from leaks from the fuel tank farm area. (Photo #33)
28. Inspectors BOLT and MONTEITH inspected the sewage lagoon and a small building with a sump located in side (Photo #34)
29. The sewage lagoon was observed with floating debris of wood and some sludge build up on the surface. (Photo#38)
30. The sewage lagoon decanting hose was observed to be too close to the ocean. (approx. 5 Metres) When decanting, the end of the decanting effluent line should be at least 31 metres or more from the high water mark (Photo #37)
31. The Station Creek Bridge has sedimentation issues. Trucks driving over the bridge deposit sediment onto the bridge and it builds up over time. This build up then falls into the water down below which changes the characteristics of the water and while at the same time depositing sediments. (Photo # 41 and #42)
32. Raw water is taken from the water reservoir and treated. Treatments include Reverse Osmosis, UV lights, micron filters and chlorination. (Photo # 43 and #44)
33. The fuel cache located on the apron at the airstrip is acceptable to the inspectors. Almost all barrels are in secondary containment. Sorting and signage is very well done. No Concerns noted. (Photo #45)

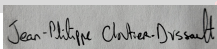
Section 2 Non-Compliance

1. Sedimentation occurring from Blacktop Bridge and Station Creek Bridge must be mitigated. Part C -Subsection 7 of the water license states: *"Sediment and erosion control measures shall be implemented prior to and maintained during the undertaking to prevent entry of sediment into Water."*
2. Erosion of the banks at West Remus creek shall be prevented and mitigated.
3. In regard to observation of plastics in the open burn dumpster, Part D-subsection #5 of the issued water license states: *"The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of Waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding Waters, unless otherwise approved by the Board in writing."*
4. Many unreported spills were observed on site. Part G, Item 4, subsection b and c of the water license states: *"If during the term of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall: b. Report the spill immediately to the NWT/NU 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site."*
5. Regarding the decanting of the sewage lagoon and the effluent line not being 31metres from the high water mark. Part D - Item 1 of the license states: *"The Licensee shall locate areas designated for Waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of Water is not impaired, unless otherwise approved by the Board in writing."*



Section 3 Action Required

1. Address sedimentation mitigations at Station Creek and Blacktop Creek.
2. Address the erosion of the downstream banks at Remus Creek.
3. Review Part D, Item 5 and Items 6, a-j. of 8BC-EUR2131 to become familiar with open burning conditions.
4. Report all spills to the NWT/NU Spill line.
5. Ensure the end of the effluent lines/decanting hoses are over 31 metres from the high water mark of any water body before pumping. Ensure all effluent parameter quality limits are not in exceedance.

Licensee or Representative	Inspector's Name
Jean-Philippe Cloutier-Dussault	Isaiah James Bolt
Signature  Signature numérique de CloutierDussault, JeanPhilippe Date : 2023.09.25 09:37:39 -04'00'	Signature <i>James Bolt</i>
Date	Date
Sept. 25, 2023	2023/09/18

Office Use Only: Follow-up report to be issued by Inspector

☐ Yes ☐ No

PHOTO LOG

Date:	Authorization Number:	Camera/Model:	Inspector
Sunday, July 9, 2023	8BC-EUR2131	DSC-HX50V Sony Cyber Shot	Isaiah James Bolt
Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)		
Photo #1	Click or tap here to enter text.		
			
Description: Image shows the BlackTop Creek Bridge. No sedimentation control of the bridge. Rocks and sediment have built up on the centre of the bridge and on either side. Sedimentation mitigations required. No mesh on the edge to stop rocks from falling in.			



Photo No.

Photo #2

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

This image shows the upstream side of blacktop creek bridge and the erosion mitigation of the banks. No mesh to stop sedimentation.

Photo No.

Photo #3

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

West Remus Creek Erosion control, upstream side of the culverts.



Photo No.

Photo #4

Lat/Long (DD.MM.SS.SS, NAD83)

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Description:

Photo showing downstream of the Remus Creek culvert and the steep walls that have eroded away.

Photo No.

Photo #5

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

Photo shows excellent erosion control on the upstream side of the culverts at Remus Creek



Photo No.

Photo #6

Lat/Long (DD.MM.SS.SS, NAD83)

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Description:

Image shows an articulating rock truck with a leak tray placed under it.

Photo No.

Photo #7

Lat/Long (DD.MM.SS.SS, NAD83)

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Description:

Up close image shows stains under the articulating rock truck.



Photo No.
Photo #8

Lat/Long (DD.MM.SS.SS, NAD83)
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Description:
Image showing the fuel tanks, there are more tanks being offloaded from the truck bed.

Photo No.
Photo #9

Lat/Long (DD.MM.SS.SS, NAD83)
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Description:
This photo shows details pertaining to the fuel storage tanks in the Nuna Logistics laydown area.



Photo No.

Photo #10

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Improper storage of Acetylene tanks at the Nuna storage laydown. Also, a fuel drum and an ash barrel is stored beside the cylinders.

Photo No.

Photo #11

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Photo shows a large propane tank stored in the same area as the acetylene tanks at the Nuna storage laydown area.



Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo #12	Click or tap here to enter text.
	
Description: Photo shows ERK-4 Signage and ERK-4 mound in the background.	

Photo No.	Lat/Long (DD.MM.SS.SS, NAD83)
Photo #13	Click or tap here to enter text.
	
Description: Image shows a close view of the Mound, might have been an old berm, nothing showing on the surface except and half buried old barrel.	



Photo No.

Photo #14

Lat/Long (DD.MM.SS.SS, NAD83)

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Description:

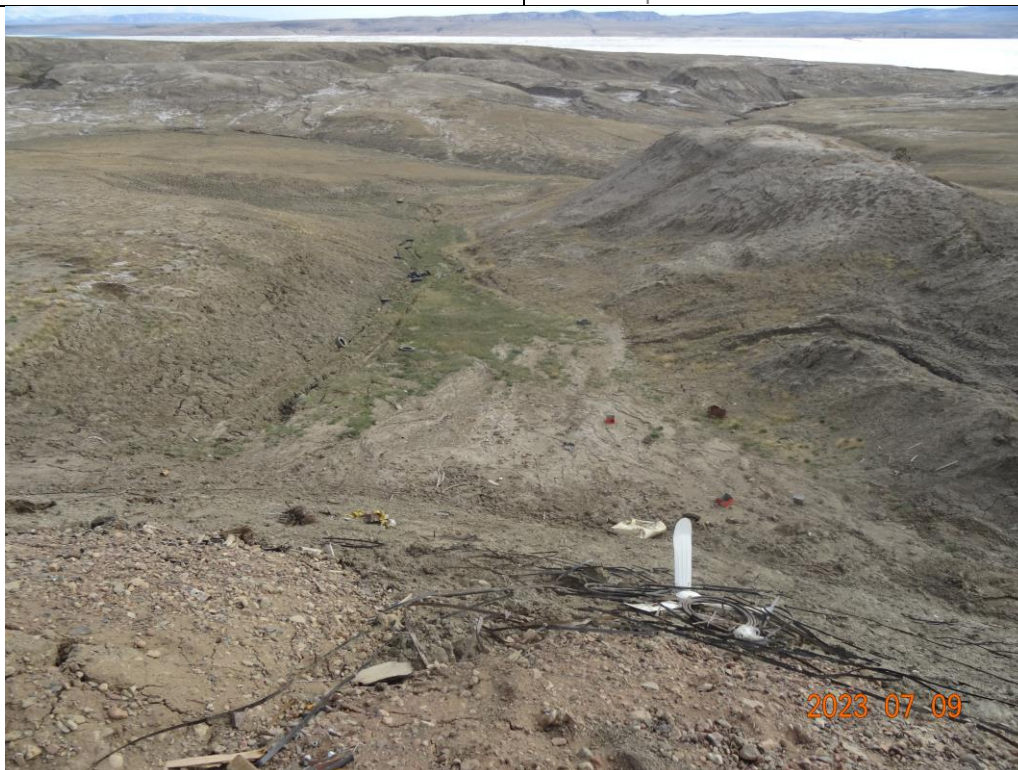
Image shows EUR-2/ERK-3 singage. Some loose debris on site.

Photo No.

Photo #15

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

Photo is taken from on top of metal dump looking over the edge to the basin below. Tires, metals, wires, plastic are all present.



Photo No.

Photo #16

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

A photo of the inside of the burn dumpster at the open burn facility. Observed Plastic bags of garbage, clear plastic from construction activities, beer cans and unknown ash in the bottom right corner of the photo.

Photo No.

Photo #17

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

Photo shows the EUR-06 facility. In the background, a lined berm stores contaminated soil. The berm has been covered and the cover weighed down.



Photo No.

Photo #18

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Contruction of a new contaminated soil berm is underway. The liner has not been secured, but is weighed down with the white bags of dirt. Adjustments of the liner will be made and then the new berm will be filled with contaminated soils that have been discovered near the new raw water containment resevoir.

Photo No.

Photo #19

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Beside the contaminated soil berms is a waste fuel storage pad. All barrels were sitting on pallets, with no secondary containment. Approx. 112 barrels.



Photo No.

Photo #20

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Photo shows the barrel crushing site. The "Landfarm Facility" is located in this area as well.

Photo No.

Photo #21

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Photo of the contaminated soil storage berm near the barrel crusher. Tires and pallets hold the plastic and rubber in place. Some cracking on the berm walls. Water does not seem to stay contained inside the berm. See next photo.



Photo No. Photo #22	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
	
Description: In this image you can see the outside of the berm is stained, which is potentially an indication of a compromised liner.	


Photo No. Photo #23	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
	
Description: This photo is taken of the entrance of the berm. Dark staining of the soil on the base of the berm wall can be an indication of a compromised berm liner.	



Photo No. Photo #24	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
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Description:
Image shows a stockpile of barrels in the barrel crusher site. This stockpile is separate from the barrels directly adjacent to the washer/crusher. Also, In the photo the path of drainage is shown.

Photo No. Photo #25	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
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Description:
Stockpile of barrels ready for washing and crushing. Crushed barrels can then be buried on site. The washer/crusher is the grey cylindrical machine on wheels to the left of the barrels. Spill kits are present on site.



Photo No.
Photo #26

Lat/Long (DD.MM.SS.SS, NAD83)
Click or tap here to enter text.



Description:

Signs of leaks and spills on the ground at Nuna Mechanic laydown area.

Photo No.
Photo #27

Lat/Long (DD.MM.SS.SS, NAD83)
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Description:

More staining at the Nuna mechanic Laydown.



Photo No.
Photo #28

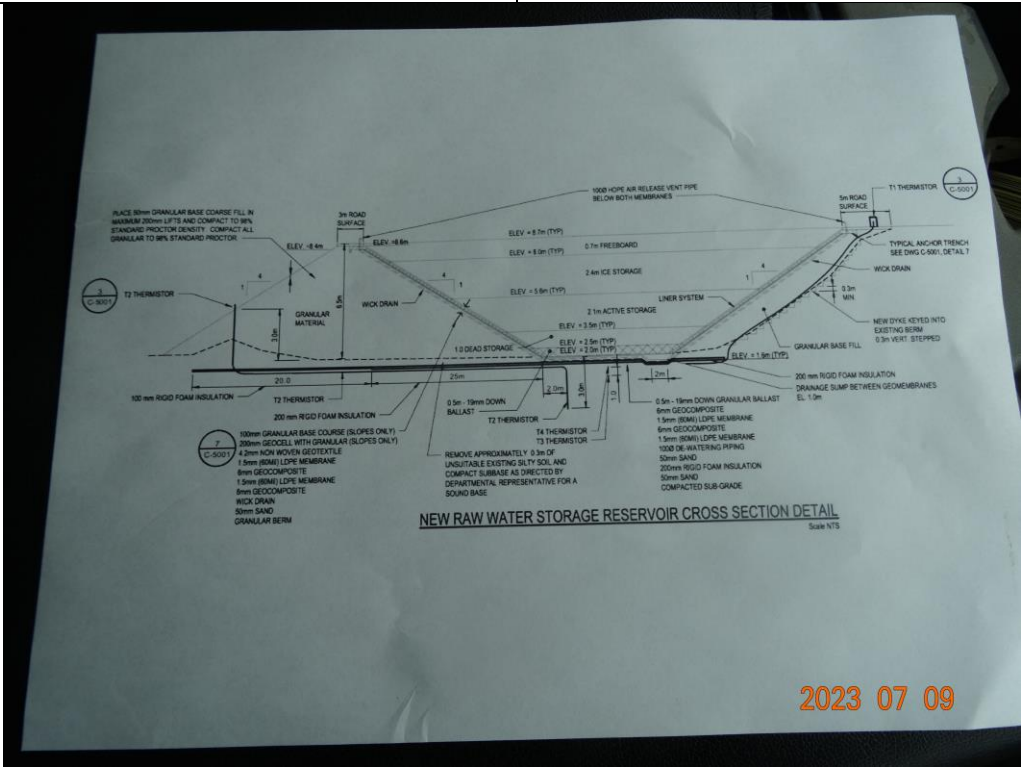
Lat/Long (DD.MM.SS.SS, NAD83)
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Description:
Third observed spill at Nunas Mechanic Laydown area.

Photo No.
Photo #29

Lat/Long (DD.MM.SS.SS, NAD83)
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Description:
Image shows the cross section of the new reservoir being built.



Photo No. Photo #30	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
	
Description: Photo shows the contruction of the new water reservoir.	

Photo No. Photo #31	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
	
Description: Image shows the old water reservoir. The walls of the reservoir have been slumping over time and material is falling into the water.	



Photo No.

Photo #32

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

Image shows the inside walls of the old water reservoir slumping inward.

Photo No.

Photo #33

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

Image shows the limits of the contaminated soils. The new water reservoir is seen on the right hand side of the image. This soil will be deposited into the new temporary contaminated soil berm, as stated by the Nuna manager.



Photo No.

Photo #34

Lat/Long (DD.MM.SS.SS, NAD83)

Click or tap here to enter text.



Description:

Photo shows a sewage sump in a small building before going to the sewage lagoon

Photo No.

Photo #35

Lat/Long (DD.MM.SS.SS, NAD83)

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Description:

This image shows the small building with the sewage sump inside of it. Sewage flows from the building through an underground pipe to the lagoon.



Photo No.

Photo #36

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

The underground pipe resurfaces on the otherside of the road and joins into another waste pipe. The end of the piping is directly over the sewage lagoon.

Photo No.

Photo #37

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

In this image, the hoses that are used to decant the sewage lagoon. The end of this hose approximately 5metres from the high water mark. The end of the hose should be above 31metres way from the high water mark.



Photo No.

Photo #38

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Loose debris and sludging observed in the sewage lagoon.

Photo No.

Photo #39

Lat/Long (DD.MM.SS.SS, NAD83)

[Click or tap here to enter text.](#)



Description:

Raw water intake at Station creek.



Photo No.
Photo #40

Lat/Long (DD.MM.SS.SS, NAD83)
Click or tap here to enter text.



Description:

Raw water pumped from station creek to the water reservoir.

Photo No.
Photo #41

Lat/Long (DD.MM.SS.SS, NAD83)
Click or tap here to enter text.



Description:

The bridge that crosses Station Creek is causing sedimentation.



Photo No.
Photo #42

Lat/Long (DD.MM.SS.SS, NAD83)
Click or tap here to enter text.



Description:

An example of the build up of sediment on the Station Creek bridge.

Photo No.
Photo #43

Lat/Long (DD.MM.SS.SS, NAD83)
Click or tap here to enter text.



Description:

Inside the accomodations building is the water treatment plant. Raw water is treated using a variety of techniques. In the photo, a reverse osmosis machine and a UV filter is shown.



Photo No. Photo #44	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
	
Description: Various size micron filters are also used to help treat the water.	

Photo No. Photo #45	Lat/Long (DD.MM.SS.SS, NAD83) Click or tap here to enter text.
	
Description: This image was taken from the apron of the airstrip. Image tries to capture the Tidiness of the fuel storage. Majority of the fuel is in secondary containment and spill kits are present in the area. All the barrels are stacked on top of a steel spill containment platform.	