

GUIDELINES FOR WASTE AND WASTEWATER HANDLING IN GREENLAND RELATED TO MINERAL EXPLORING AND EXPLOITATION

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10 Marts 2021

INTERACT Seminar on Arctic contaminant monitoring and waste handling at INTERACT stations

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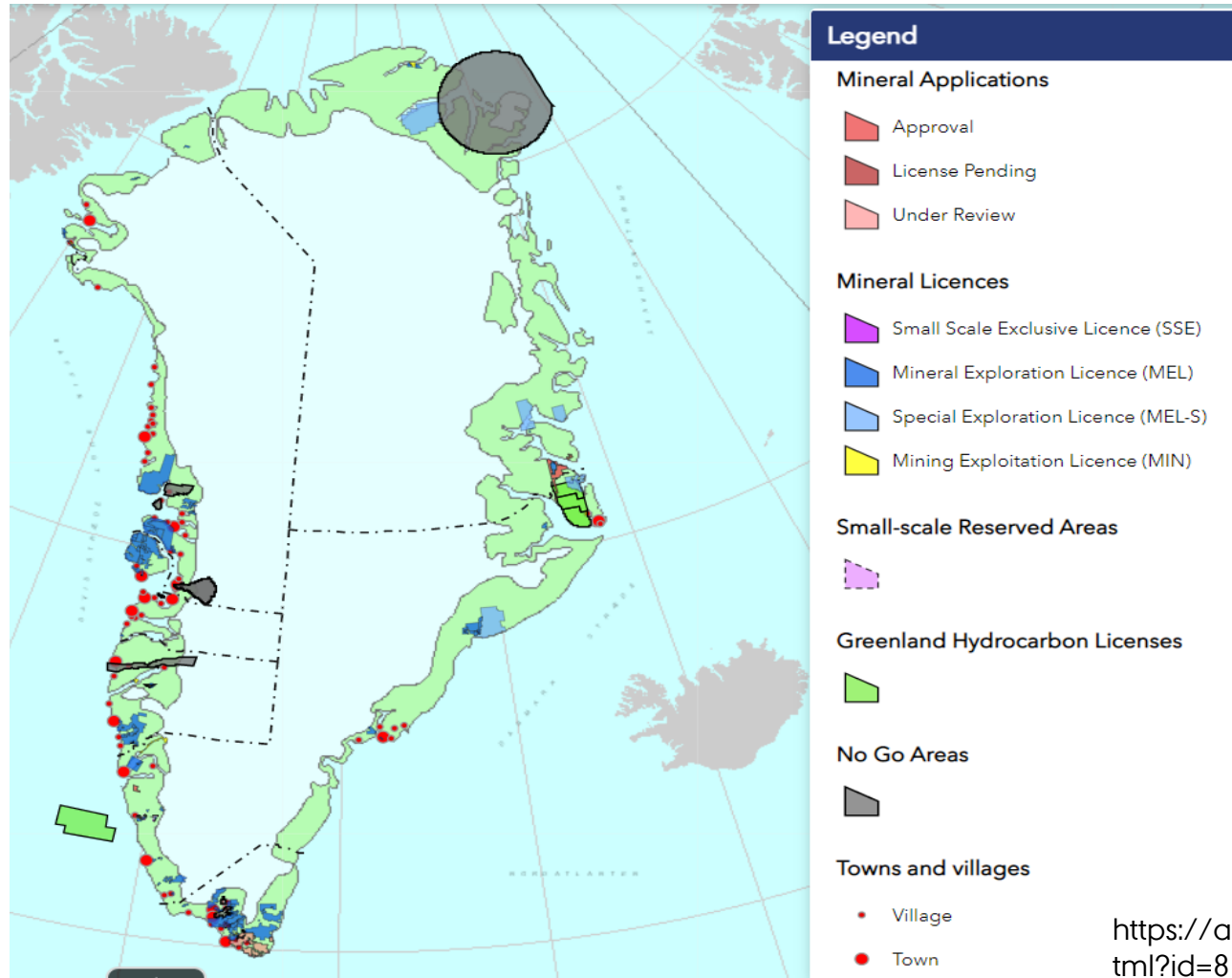
INTERACT Seminar on Arctic contaminant monitoring and waste handling at INTERACT stations

CONTENT

- Background and introduction to the guideline(s) for waste handling in temporary field camps in Greenland

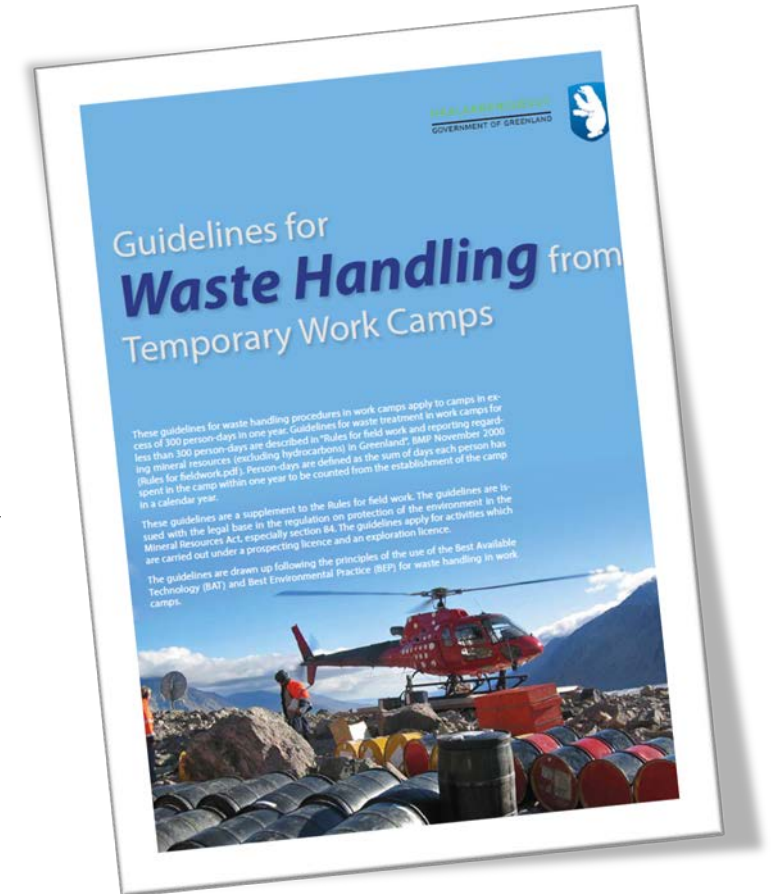


MINERAL LICENSES IN GREENLAND



GUIDELINES FOR WASTE HANDLING AT TEMPORARY FIELD CAMPS IN GREENLAND

- Greenland guidelines for waste handling at temporary field camps in Greenland
- Apply for work camps > 300 person-days in one year.
- Follows principles of the use of the Best Available Technology (BAT) and Best Environmental Practice (BEP)



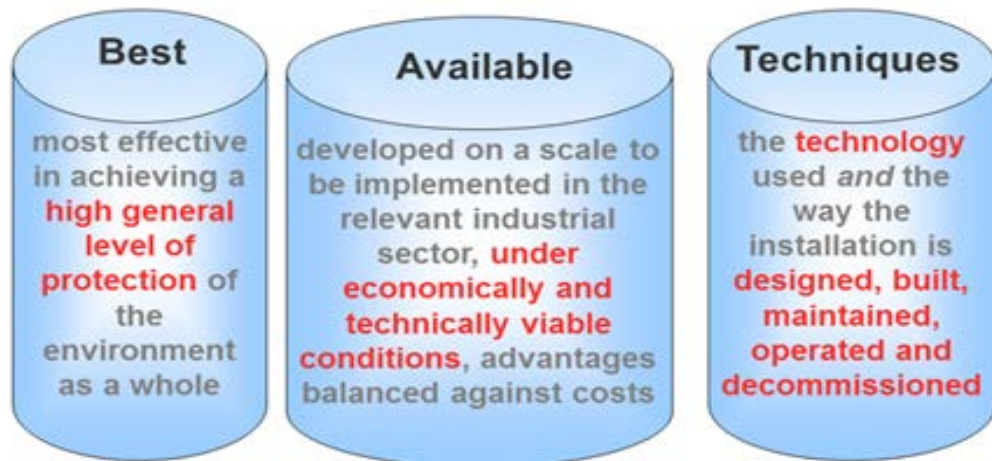
Days	Persons	Person-days
10	3	30
30	10	300
100	10	1000

BAT - BEST AVAILABLE TECHNOLOGY

BEP – BEST ENVIRONMENTAL PRACTICE

BAT

“The latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste”



BEP

“The application of the most appropriate combination of environmental control measures and strategies”

BEP/BAT for a particular source will change with time



BEST AVAILABLE TECHNIQUES (BAT)

BAT-reference documents

- Treatment of waste
- Treatment of waste water
- Incineration of waste

BREF <http://eippcb.jrc.ec.europa.eu/reference/>



GENERAL REQUIREMENTS OF WORK CAMPS

- Establishment and operation shall minimize surface disturbance and environmental impacts.
- Kept in neat and sanitary conditions.
- Products used in household, kitchen, etc. shall be env. friendly (Eco label or equivalent).
- After decommissioned, the area shall be reclaimed according to the activity permits
- **Plan for handling** of wastewater, liquid and solid waste shall be submitted to authorities



WASTEWATER HANDLING



Wastewater from food preparation, laundry, bath and latrines (sewage)

Marine discharge subsea with sufficient circulation*

Freshwater discharge* shall comply with criteria depending on person-days and sensitivity of recipient:

Monitoring water quality* if e.g. the number of person-days or the sensitivity of the environment justifies this

Wastewater treatment plants shall meet EU/US standard and be CE marked (or equivalent).

Sludge may be delivered to approved waste handling or discharged to the sea* (subsea and water circulation), or burial or seeping through the soil*

Liquids containing harmful substances e.g. heavy metals, chemicals, flammable, explosive must be collected

BOD=Biological Oxygen Demand, COD= Chemical Oxygen Demand, N=Nitrogen, P=Phosphorous.

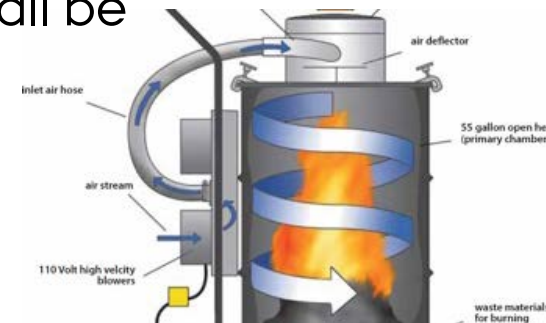
Person-days	Criteria (an assessment of the sensitivity of the recipient determines the requirements)
300-999	No requirements or BOD (15 mg/l), COD (75 mg/l).
1000-9999	BOD (15 mg/l), COD (75 mg/l) or BOD (15 mg/l), COD (75 mg/l), Total-N (8 mg/l) and Total-P (1.5 mg/l).
10 000-100 000	BOD (15 mg/l), COD (75 mg/l), Total-N (8 mg/l) and Total-P (1.5 mg/l) or requirements to cleaning and discharge are set by EAMRA depending on location for the discharge to water.
>100 000	Requirements to discharge are set by EAMRA depending on location for the discharge to water.



SOLID WASTE AND OIL PRODUCTS



- Solid waste and oil products shall not be buried, spread in the terrain or disposed to streams, lakes or the sea.
- Food wastes, clean wood and paper products and oil may be burned on site*
- Incinerators* shall meet requirements to be approved in accordance with the relevant Greenland and EU regulation. Highest possible flue gas temperatures according to the specific plant.
- Food wastes, clean wood and paper products may be stored and transported to a permanent incinerator plant*.
- Environmentally harmful substances and non combustible substances shall be delivered to an approved waste handling facility.



SUMMARY

- Specific plans and assessment of waste and wastewater handling for each project
- Focus on household chemicals, use Eco labeled products
- Environmentally harmful substances and non combustible substances shall be delivered to an approved waste handling facility.
- The technology exists for handling waste and wastewater also in remote areas:
- Small mobile unites for wastewater treatment
- Small mobile units for waste incineration at relatively high temperatures



Links

https://naalakkersuisut.gl/~media/Nanoq/Files/eamra/rules_for_fieldwork.pdf

[Affald_10 April.indd \(govmin.gl\)](#)

<https://govmin.gl/exploration-prospecting/start-exploring/field-rules/>



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