

NRCA Revised Standards for Petroleum¹ in Groundwater and Soil 2015

CONTAMINANT	GROUND WATER	SOIL	NOTES
TPH	50 mg/l	1000 mg/kg	Unchanged from Interim Standard.
Lead	10 µg/l	70 mg/kg (soils for agriculture)	Values based on guidance given from the Environmental Health Unit (Ministry of Health).
		140 mg/kg (soils for residential/playgrounds)	
MTBE	5000 µg/l	4400 mg/kg (Florida - direct exposure residential)	Newly added contaminant for both groundwater and soil; value taken from Florida's jurisdictional guidelines. Although now phased out from most petroleum products, MTBE contamination from past pollution incidents are still present in the soil, as such testing for the chemical is required.
Total BTEX	91 µg/l	135mg/kg	Newly added values for groundwater; values taken from Florida's jurisdictional guidelines. Soil values unchanged from Interim Standard.
Benzene	1 µg/l	5 mg/kg	
Toluene	40 µg/l	30 mg/kg	
Ethylbenzene	30 µg/l	50 mg/kg	
Total Xylenes	20 µg/l	50 mg/kg	

A summary of the process that led to the preparation of the draft revise standard is provided below.

1) The revision of the Interim Standards for Petroleum in Groundwater and Soil was carried out by the Agency's internal Petroleum Working Group (PWG). The group consisted of members of the various technical branches within the Agency.

2) A jurisdiction review was conducted inclusive of the standards for petroleum in groundwater and soil in nine (9) jurisdictions. A draft document was prepared by the PWG based on this review. The jurisdictions researched included:

- USA: New York, Arizona, Kansas, Wyoming, Mississippi, Florida
- Canada
- The Netherlands
- New Zealand

For each of the above jurisdictions, the contaminants of concern applicable to Jamaica were reviewed and discussed by the members of the PWG.

3) The World Health Organisation's '*Guideline values for chemicals that are of health significance in drinking water*', and Petrojam's product specification for its finished petroleum products and crude oil were also reviewed. The contaminants of concern were determined by the composition of the petroleum used in Jamaica; the contaminants of concern did not include volatile organic compounds.

4) A copy of the first draft of the revised standard was sent to key government agencies for review. These are the Water Resources Authority, the Environment Health Unit (Ministry of Health), and the Rural Physical Planning Division (Ministry of Agriculture). These comments were incorporated into the draft document as necessary.

5) A copy of the second draft of the revised standard was sent to private sector stakeholders. These comments were incorporated into the draft document as necessary.

¹ "Petroleum" means oil, natural gas or any other form of hydrocarbon substance but does not include coal or bituminous shale or any other stratified deposit from which oil can be extracted by destructive distillation. (Petroleum Act, 1979)