



# Onshore Oil and Gas in the East Midlands-The Regulatory Role of the Environment Agency

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- ➔ Conventional and Unconventional Onshore Gas
- ➔ Environmental Concerns
- ➔ Role of the Environment Agency and other regulators
- ➔ What could this look like in the East Midlands
- ➔ Where we are now?

# What is meant by unconventional and conventional gas?

## ➔ Unconventional

➔ Coal Bed Methane

➔ Shale Gas

➔ Mine gas

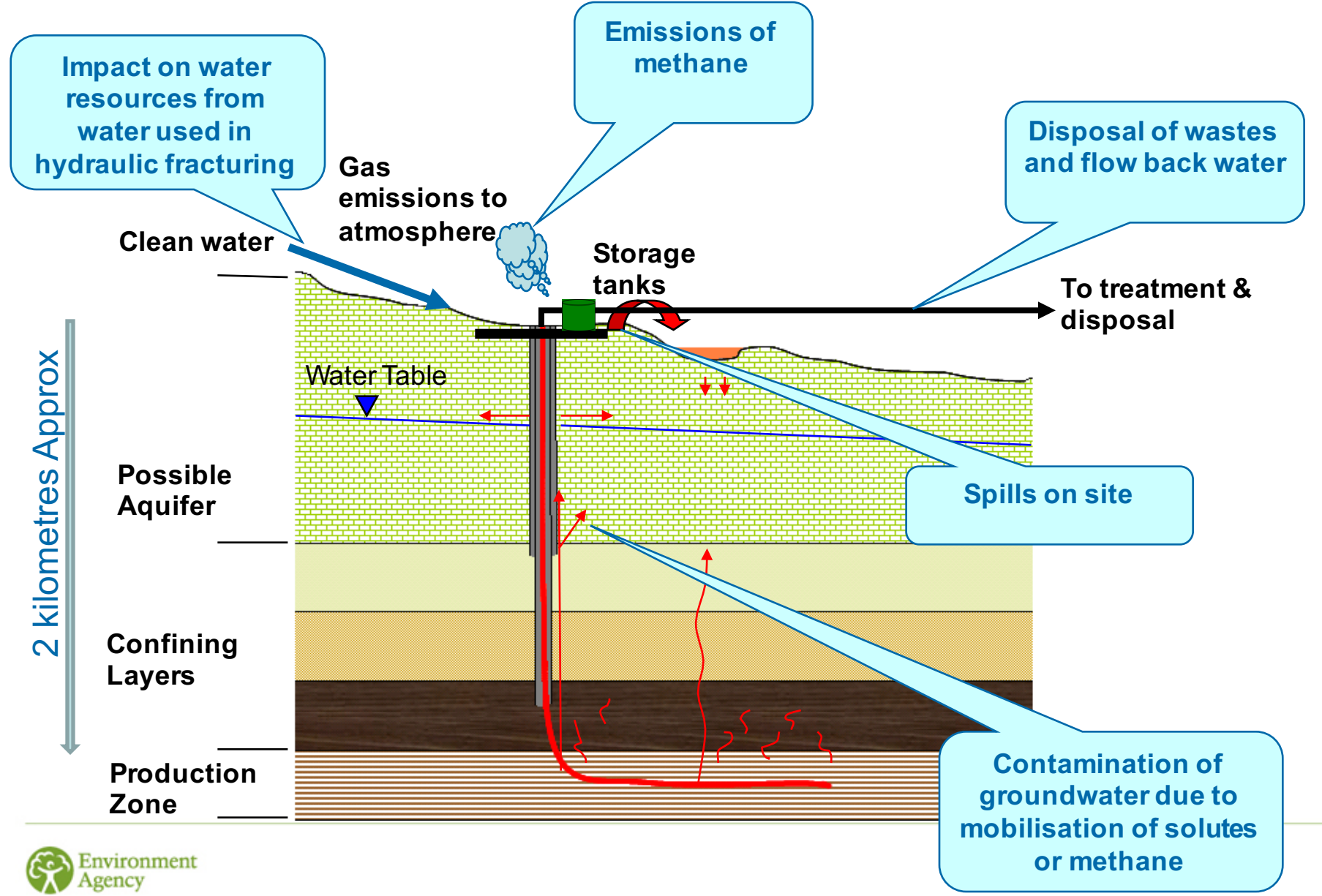
## ➔ Conventional

➔ Oil/Gas wells such as the Gainsborough and Notts field.

# Issues of Concern

- ➔ Content of Fracking Fluid
- ➔ Pollution of groundwater
- ➔ Methane Leaky Wells
- ➔ Lagoons
- ➔ Health effects
- ➔ Amenity/Location/Planning Issues
- ➔ Earthquakes

# Environmental risks from shale gas extraction



# Regulating Environmental Risk

- ➔ We are the environmental regulator for onshore oil and gas in England
- ➔ Ensure operations are managed to protect public health and environment
- ➔ Environmental permits are needed before drilling
- ➔ These will be risk based & site specific
- ➔ Permits are open for consultation and public can comment
- ➔ We will undertake public engagement events about this issue

# What Permits do they need from us?

- ➔ Section 199 WRA
- ➔ Mining Waste Permit
- ➔ Groundwater Activity Permit
- ➔ Abstraction Licence (GW Investigation)
- ➔ Discharge consent
- ➔ RSR Permit
- ➔ Flood Defence Consent
- ➔ Installation-Industrial Emissions Directive

# Controlling Risk to the Environment

- ➔ We issue permits to control onsite operations that fall under our remit.
- ➔ We will not allow companies to start work unless they can demonstrate how they will provide a high level of protection to people and the environment.



# Controlling Risk to the Environment

- ➔ Permits control the use of water, the protection of ground and surface water and the management of wastes such as drilling muds, flow back fluid, gases and any naturally occurring radioactive materials (NORM).
- ➔ Permits can also control emissions to air.
- ➔ We have the authority to stop the operation if a significant risk or actual risk becomes apparent.

# What Other Organisations are involved?

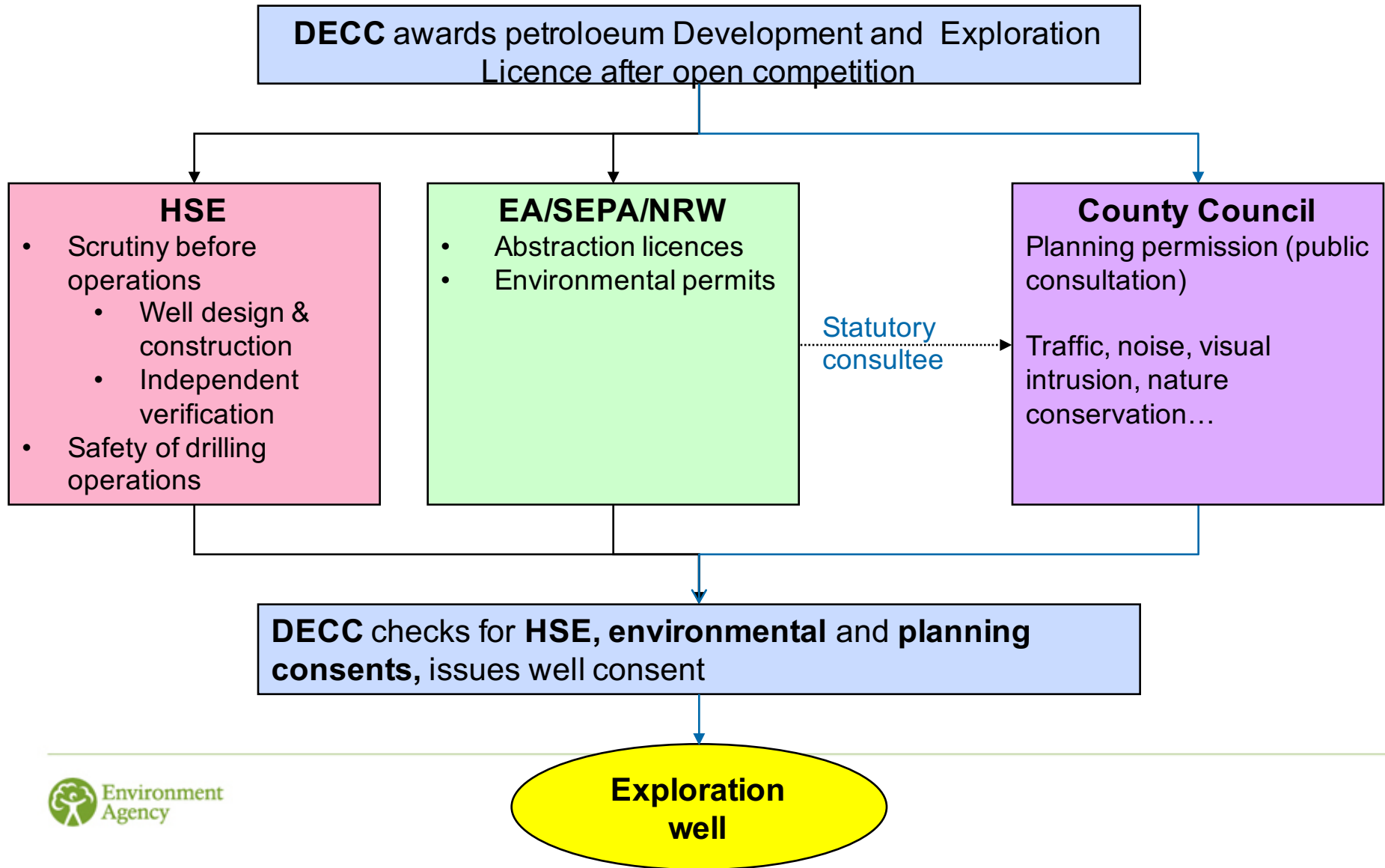
The Health and Safety Executive lead on matters related to safety at the site and borehole construction.

County Council lead on planning and amenity issues.

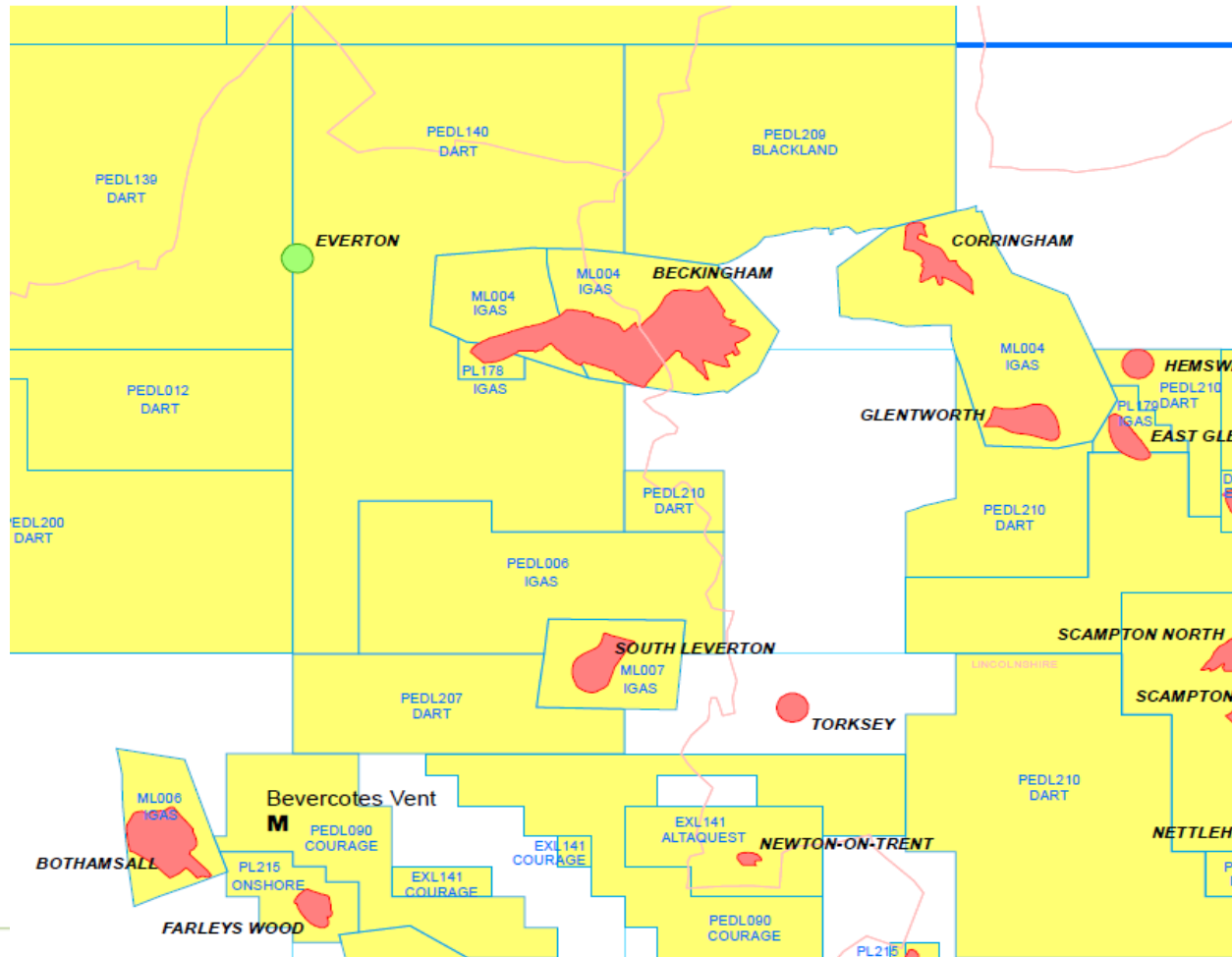
The Coal Authority is the lead organisation for dealing with discharges from old coal mines.

DECC/Oil and Gas Authority is the lead organisation for seismic activity.

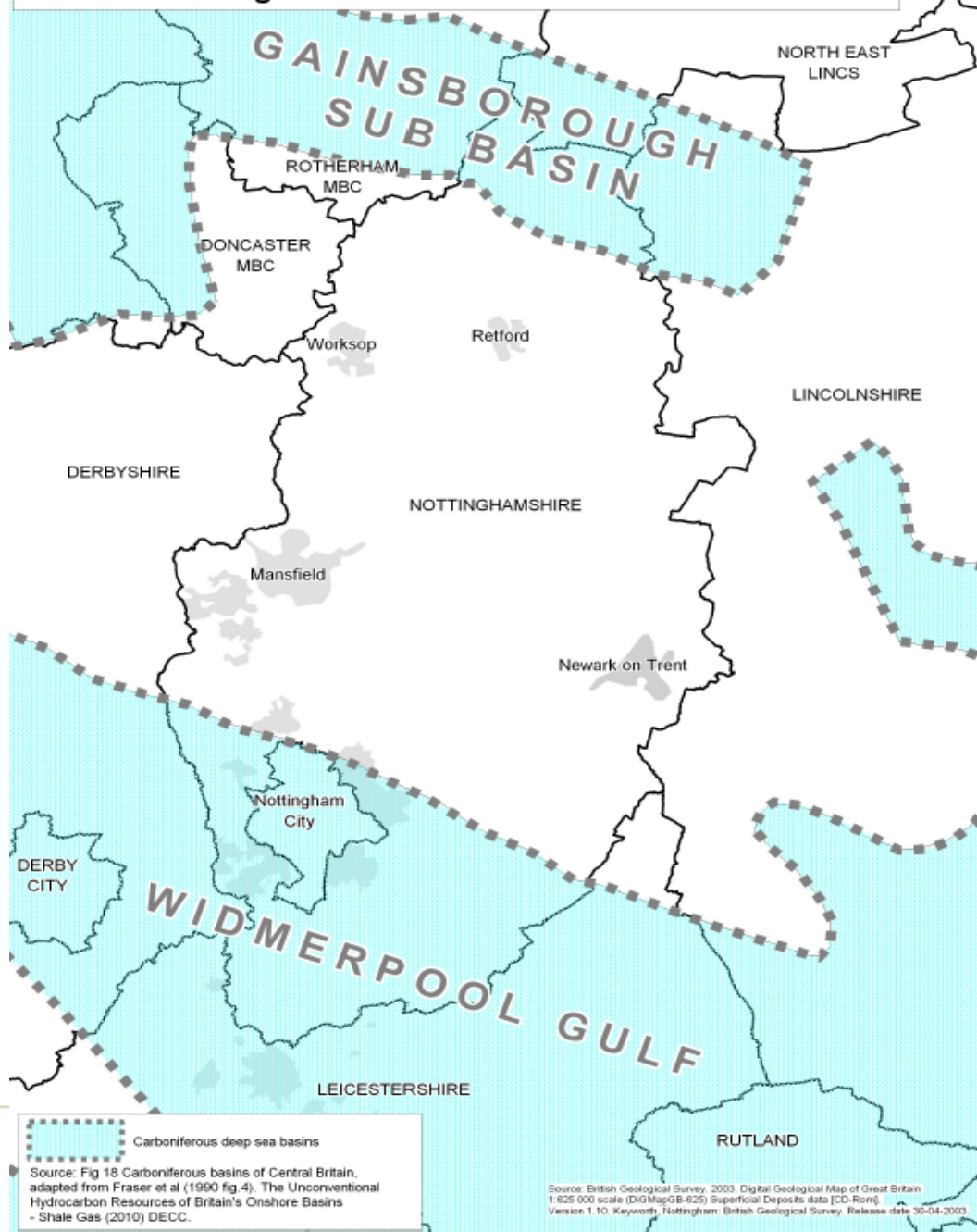
# Regulatory process - exploration



# East Midlands PEDL Licences



# Plan 5 - Nottinghamshire Potential Shale Gas Resources



# Environment Agency Position

- ➔ Unconventional gas in the UK is at the early stage of development.
- ➔ The environmental risks are taken seriously and will be managed effectively.
- ➔ All shale/coal bed methane/oil and gas operations will require environmental permits.

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