4.1 Certificate definition of $\mathcal{NL}$: Read-once certificates

4.2 $\mathcal{NL} = \mathbf{co}\mathcal{NL}$

See

📄 Sanjeev Arora, Boaz Barak:
Computational Complexity — A Modern Approach,
p. 82–88, Cambridge University Press: Cambridge-New York-Melbourne, 2009

Further references:

📄 Larry J. Stockmeyer, Albert R. Meyer:
Word problems requiring exponential time,
Proceedings of the 5th Symposium on Theory of Computing, p. 1–9 (1973)
This paper contains some important PSPACE-completeness results.

📄 Albert R. Meyer, Larry J. Stockmeyer:
The equivalence problem for regular expressions with squaring requires exponential space,
Proceedings of the 13th Annual Symposium on Switching and Automata Theory, p. 125–129 (1972)
This paper contains an EXPSPACE-completeness result.

And here an $\mathcal{NL}$-machine based proof for $\mathcal{NL} = \text{co}\mathcal{NL}$:

📄 Holenstein, Thomas
Complexity Theory,
p. 13–14, Script, ETH Zürich, 2010