

Nuinsco Evaluates Starter Pit MRE Sensitivity at Prairie Lake Critical Minerals Project with Significant Tonnage and Substantially Higher Grade P₂O₅ and REE

Highlights:

- High-grade phosphate mineralization identified and quantified, as announced June 25, 2024.
- 5% P₂O₅ cut-off grade leads to 74% higher phosphate (“P₂O₅”) grade and corresponding increase in grade of high-value neodymium (“Nd”) and praseodymium (“Pr”) rare earth elements (“REE”) than previously reported.
- P₂O₅ cut-off of 5% selected as a potential starter pit option for future engineering study.

Toronto, August 13, 2024 – Nuinsco Resources Limited (“Nuinsco” or the “Company”) (CSE: NWI, FRA: NJX) today announced that recent review and sensitivity analysis of high grade P₂O₅ and REE mineralization at the Prairie Lake Critical Minerals Project (“Prairie Lake” or the “Project”) has established substantially higher P₂O₅ and REE grades than previously reported, which may have great significance to the development of the Project.

“The ongoing evaluation of Critical Minerals mineralization at Prairie Lake, using a 5% P₂O₅ cut-off grade, has led to a 65 million tonne Inferred Mineral Resource sensitivity grading 5.9% P₂O₅ and a 1.2 million tonne Indicated Mineral Resource sensitivity grading 5.8% P₂O₅ within the existing, nearly 900 million tonne Mineral Resource Estimate (“MRE”),” said Paul Jones, Nuinsco’s CEO. “This represents a near 74% increase in P₂O₅ grade, 41% increase in neodymium grade and a 6% increase in Praseodymium grade over the 2022 MRE, all other parameters remaining equal. The delineation of these higher-grade phosphate and REE mineralization will allow greater leeway in planning and development – for instance development of a starter pit. The higher-grade Mineral Resource sensitivity is defined by existing drill hole configuration and, while already substantial, we are confident that additional work can expand the size of the MRE further. The Prairie Lake Project is a large and vitally significant Critical Minerals asset located in the heart of North America, readily accessible to existing transportation and logistics networks making it strategically significant to a secure supply chain.”

The P₂O₅ % cut-off in the 2022 MRE was 2% for Indicated and Inferred Mineral Resources; the 5% P₂O₅ cut-off sensitivity was chosen as a potential starter pit option for a future engineering study.

The Identification of high-grade apatite/phosphate mineralization in diamond drill holes (news release - June 25, 2024), with intersections tens of metres wide in a mineralized domain at least 1,200m long, has resulted in an MRE sensitivity, using a 5% P₂O₅ cut-off grade, of an Inferred Mineral Resource sensitivity of 65 million tonnes grading 5.9% P₂O₅ and an Indicated Mineral Resource sensitivity of 1.2 million tonnes grading 5.8% P₂O₅. Ample room exists to expand the mineralization to other parts of the Project with similar geology.

Inferred													
Cut-Off	VOLUME	DENSITY	TONNAGE	P2O5	Nd	Pr	Ce	La	Sm	Y	Sc	Nb2O5	U3O8
P2O5 %	m3	t/m3	Tonnes	%	g/t	g/t	g/t	g/t	g/t	g/t	g/t	%	%
8	504,915	3.04	1,534,940	8.505	568.51	83.07	1225.703	548.093	100.084	191.929	5.166	0.096	0.008
7.5	992,286	3.04	3,016,549	8.125	561.97	81.202	1225.164	548.435	99.738	184.698	5.234	0.099	0.009
7	1,962,092	3.04	5,964,760	7.681	567.22	77.629	1248.891	560.954	103.001	179.777	5.164	0.096	0.009
6.5	4,021,444	3.04	12,225,190	7.194	555.78	71.636	1227.641	552.677	102.683	174.591	5.106	0.088	0.009
6	7,347,125	3.04	22,335,260	6.757	537.18	70.731	1181.957	532.46	100.152	166.359	5.45	0.082	0.008
5.5	12,910,762	3.04	39,248,718	6.317	517.49	71.378	1130.814	507.828	97.108	159.54	6.18	0.078	0.008
5	21,367,378	3.04	64,956,827	5.887	489.16	72.124	1059.889	472.928	92.462	151.337	6.588	0.076	0.008
4.5	36,045,194	3.04	109,577,389	5.414	457.61	72.046	984.07	436.254	86.9	142.344	6.982	0.078	0.008
4	63,958,527	3.04	194,433,921	4.89	426.16	71.754	914.221	402.655	81.377	131.175	8.211	0.084	0.007
3.5	121,041,477	3.04	367,966,086	4.347	385.97	70.24	828.994	366.209	73.388	117.241	9.904	0.088	0.006
3	189,697,544	3.04	576,680,526	3.946	365.05	69.219	779.25	345.851	69.69	108.055	11.457	0.096	0.006
2.5	246,315,332	3.04	748,798,599	3.678	352.42	68.609	750.083	333.62	67.161	102.583	12.098	0.101	0.006
2	277,491,483	3.04	843,574,097	3.522	347.16	67.791	735.852	328.308	66.412	100.682	12.104	0.101	0.005

Indicated													
Cut-Off	VOLUME	DENSITY	TONNAGE	P2O5	Nd	Pr	Ce	La	Sm	Y	Sc	Nb2O5	U3O8
P2O5 %	m3	t/m3	Tonnes	%	g/t	g/t	g/t	g/t	g/t	g/t	g/t	%	%
8	20,451	3.04	62,172	8.532	398.43	80.23	877.815	431.521	60.998	115.843	6.637	0.184	0.085
7.5	35,689	3.04	108,496	8.203	362.59	76.522	794.318	391.321	56.755	106.703	6.175	0.179	0.079
7	51,689	3.04	157,136	7.912	355.52	75.119	776.601	379.881	56.26	106.15	5.993	0.179	0.074
6.5	74,459	3.04	226,354	7.537	340.18	73.974	740	349.115	54.617	105.567	5.785	0.165	0.066
6	116,211	3.04	353,281	7.066	335.44	75.164	725.92	338.726	54.015	103.579	5.816	0.155	0.058
5.5	186,185	3.04	566,001	6.564	334.84	74.846	723.412	337.923	54.398	100.818	5.762	0.149	0.049
5	393,210	3.04	1,195,359	5.848	331.43	76.968	713.92	317.792	55.031	98.431	5.646	0.138	0.037
4.5	847,770	3.04	2,577,222	5.236	333.39	78.631	714.97	308.965	55.702	95.4	6.037	0.141	0.028
4	1,702,372	3.04	5,175,212	4.732	329.31	80.473	699.991	297.52	55.454	90.752	7.899	0.167	0.021
3.5	3,017,992	3.04	9,174,697	4.3	318.73	81.49	671.377	282.521	54.039	85.066	9.637	0.172	0.017
3	4,074,867	3.04	12,387,594	4.031	309.38	81.216	648.264	269.479	52.541	81.863	9.77	0.171	0.016
2.5	4,695,307	3.04	14,273,733	3.868	302.97	80.819	632.648	262.148	51.519	80.106	9.839	0.169	0.016
2	4,963,404	3.04	15,088,749	3.782	299.51	80.609	624.366	257.639	51.012	79.558	9.922	0.165	0.015

*TREO = Total Rare Earth Oxides: neodymium, Nd₂O₃; praseodymium, Pr₆O₁₁; scandium, Sc₂O₃; Cerium, CeO₂; lanthanum, La₂O₃; samarium, Sm₂O₃; tantalum, Ta₂O₅; yttrium, Y₂O₃.

A full description of methodology used to estimate the Prairie Lake project Mineral Resource Estimate is contained in the NI 43-101 compliant Technical Report, effective date 31 May 2022 prepared by P&E Mining Consultants Inc. that is filed on SEDAR.

1. *Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.*
3. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.*
4. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
5. *US\$ Metal prices used were \$80/Kg Nd₂O₃, \$80/Kg Pr₆O₁₁, \$1,500/Kg Sc₂O₃, \$50/Kg Nb₂O₅, \$250/t P₂O₅, \$1.35/Kg CeO₂, \$1.35/Kg La₂O₃, \$3.50/Kg Sm₂O₃, Nil\$/t Ta₂O₅ and \$13/kg Y₂O₃, 0.78 FX all with combined process recoveries and payables of 50%, except P₂O₅ at 75%.*
6. *The constraining pit optimization parameters were C\$2.50/t mining cost for all material, C\$25/t process cost, C\$5/t G&A cost and 45-degree pit slopes.*

Prairie Lake is located near Terrace Bay, Ontario. It is a very substantial Mineral Resource of phosphate mineralization, has amongst the **world's highest known light rare earth element content in apatite** and contains a host of other REE bearing minerals, as well as niobium-bearing pyrochlore. Metallurgical studies to date demonstrate that a clean phosphate concentrate, grading 26% P₂O₅ at 76% process recovery with ample room for improvement, and with valuable rare earth element co-concentrate, can be reliably produced from Prairie Lake feed.

Prairie Lake contains a large, well-located Mineral Resource of Critical Minerals in North America. It is a potential source of elements needed for applications in transportation, power distribution, green technologies and a host of other applications, including agriculture. It is of immense value to a secure Critical Minerals supply chain; a strategic concern identified by numerous governments in the recent past and addressed with incentives and programs to encourage development of the Critical Minerals sector. The Project is located near the north shore of Lake Superior, putting it in close or easily accessible reach of:

- The Towns of Marathon, Terrace Bay and other affected communities - all able to supply a local, skilled workforce.
- All weather forest access road crossing the project and deposit.
- Paved Highways 17 and 11 to the south and north.
- Canadian Pacific Railway and Canadian National Railway networks.
- High capacity (230kV) electrical power transmission line.
- 50km from the Marathon deep water port project. Deep-water ports are also located at Thunder Bay and Sault Ste. Marie, able to handle ocean going ships.
- The Marathon airport.

Laura Giroux, P.Geo, Chief Geologist, acts as Nuinsco's Qualified Person under National Instrument 43-101. Ms. Giroux has reviewed and approved the technical content of this news release. Eugene Puritch, P.Eng., FEC, CET, president of P&E Mining Consultants Inc. and an independent Qualified Person has reviewed and approved the technical content of his news release.

About Nuinsco Resources Limited

Nuinsco Resources has over 50 years of exploration success and is a growth-oriented, multi-commodity mineral exploration and development company focused on prospective opportunities in Canada and internationally. Currently the Company has the large multi-commodity (phosphate, rare earth element, niobium, tantalum) Prairie Lake Project near Marathon-Terrace Bay, the Zig Zag Lake Property (lithium, tantalum) near Armstrong optioned to First Class Metals PLC and retains a NSR royalty on the Sunbeam Gold Property near Atikokan.

Prairie Lake Project 2022 Pit-Constrained MRE⁽¹⁻⁶⁾

Class	Cut-Off	Tonnes	Rare Earth Oxides									Niobium	Phosphate
			Nd ₂ O ₃	Pr ₆ O ₁₁	Sc ₂ O ₃	CeO ₂	La ₂ O ₃	Sm ₂ O ₃	Ta ₂ O ₅	Y ₂ O ₃	TREO	Nb ₂ O ₅	P ₂ O ₅
			g/t	g/t	g/t	g/t	g/t	g/t	g/t	g/t	g/t	kg/t	%
	NSR C\$/t	M										%	%
Indicated	30	15.6	344	96	15	754	300	58	28	100	1.67	0.16	3.71
Inferred	30	871.8	409	82	18	905	388	79	17	127	2.01	0.10	3.39

*TREO = Total Rare Earth Oxides: neodymium, Nd₂O₃; praseodymium, Pr₆O₁₁; scandium, Sc₂O₃; Cerium, CeO₂; lanthanum, La₂O₃; samarium, Sm₂O₃; yttrium, Y₂O₃.

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5. *US\$ Metal prices used were \$80/Kg Nd₂O₃, \$80/Kg Pr₆O₁₁, \$1,500/Kg Sc₂O₃, \$50/Kg Nb₂O₅, \$250/t P₂O₅, \$1.35/Kg CeO₂, \$1.35/Kg La₂O₃, \$3.50/Kg Sm₂O₃, Nil\$/t Ta₂O₅ and \$13.00/kg Y₂O₃, 0.78 FX all with combined process recoveries and payables of 50%, except P₂O₅ at 75%.*
6. *The constraining pit optimization parameters were C\$2.50/t mining cost for all material, C\$25/t process cost, C\$5/t G&A cost and 45-degree pit slopes with a C\$30/t NSR cut-off.*

Forward-Looking Statements

This news release contains certain "forward-looking statements." All statements, other than statements of historic fact, that address activities, events or developments that Nuinsco believes, expects or anticipates will or may occur in the future are forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek," "anticipate," "believe," "plan," "estimate," "expect," and "intend" and statements that an event or result "may," "will," "can," "should," "could," or "might" occur or be achieved and other similar expressions. These forward-looking statements reflect the current expectations or beliefs of Nuinsco based on information currently available to Nuinsco. Forward-looking statements are subject to a number of risks and uncertainties that may cause the actual results of Nuinsco to differ materially from those discussed in the forward-looking statements, and even if such actual results are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on Nuinsco. Factors that could cause actual results or events to differ materially from current expectations include, among other things, failure to successfully complete financings, capital and other costs varying significantly from estimates, production rates varying from estimates, changes in world copper and/or gold markets, changes in equity markets, uncertainties relating to the availability and costs of financing needed in the future, equipment failure, unexpected geological conditions, imprecision in Mineral Resource Estimates, success of future development initiatives, competition, operating performance of facilities, environmental and safety risks, delays in obtaining or failure to obtain tenure to properties and/or necessary permits and approvals, and other development and operating risks. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, Nuinsco disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Although Nuinsco believes that the assumptions inherent in the forward-looking statements are reasonable, forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.

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