Appia Re-Evaluates Potential of Its Elliot Lake Uranium Deposits in View of Increased Uranium Prices, Confirmation of Significant Rare Earth Mineralization and Bulk Mining Potential

written by Raj Shah | November 16, 2023

November 16, 2023 (Source) – Appia Rare Earths & Uranium Corp. (CSE: API) (OTCQX: APAAF) (FSE: A0I0.F) (FSE: A0I0.MU) (FSE: A0I0.BE) (the "**Company**" or "**Appia**") is pleased to announce that the Company is revisiting its large uranium-rare earths deposits located at Elliot Lake, Ontario to examine the impact of increased uranium prices and confirmation of significant rare element **("REE")** mineralization. The Company will also evaluate the cost-saving potential of bulk mining the Teasdale Lake and Banana Lake Zones.

In 2007-08 and 2012, Appia completed drill programs to confirm mineralization detailed in historical resource estimates for the Teasdale Lake and Banana Lake Zones. Following the drill program, Appia engaged consulting firm Watts, Griffis and McOuat Limited (**WGM**) to provide an updated NI 43-101 Resource Estimate for the two zones.

The technical report was prepared in accordance with the provisions of National Instrument 43-101 and entitled "UPDATE REPORT ON THE APPIA ENERGY CORP. URANIUM-RARE EARTH PROPERTY,

ELLIOT LAKE DISTRICT, NORTH-CENTRAL ONTARIO, CANADA" by Watts, Griffis and McOuat, dated July 30, 2013 (the "2013 Updated Resource Estimate Report") and filed on SEDARplus at www.sedarplus.com on August 14, 2013.

The NI 43-101 Indicated Mineral Resource for the Teasdale Lake Zone was 14,435,000 tons grading 0.554 lbs U_3O_8/ton and 3.30 lbs. TREE/ton for a total of 7,995,000 lbs. U_3O_8 and 47,689,000 lbs. TREE. The Inferred Mineral Resource was 42,447,000 tons grading 0.474 lbs. U_3O_8/ton and 3.14 lbs. TREE/ton totalling 20,115,000 lbs. U_3O_8 and 133,175,000 lbs. TREE – see Table 1.

The Inferred Mineral Resource for the Banana Lake Zone was 30,315,000 tons grading 0.912 lbs. U_3O_8/ton for a total of 27,638,000 lbs. U_3O_8 – see Table 2.

The historical resource for the five separate zones comprising Appia's Elliot Lake Property is summarized in Table 3.

Table 1

Summary of Teasdale Lake Zone Uranium and Rare Earth Mineral Resource Estimate

Zone	Tons ('000)	TREE (lbs./ton)	U3O8 (lbs./ton)	Average Thickness (m)	Contained TREE ('000 lbs.)	Contained U3O8 ('000 lbs.)
Indicated Resources						
UR	7,422	4.20	0.484	4.61	31,199	3,593
IQ	3,314	1.98	0.259	2.27	6.578	0.857
LR	3,699	2.68	0.958	2.60	9,912	3,544
Total	**14,435**	**3.30**	**0.554**	**9.48**	**47,689**	**7,995**
Inferred Resource						

UR	20,201	3.87	0.421	4.33	78,080	8,498
IQ	11,254	1.64	0.184	2.78	18,464	2,070
LR	10,992	3.33	0.869	2.71	36,631	9,564
Total	**42,447**	**3.14**	**0.474**	**9.82**	**133,175**	**20,115**

Notes

1.Mineral Resources effective 30 July 2013 1. Mineral Resources are estimated at a cut-off value of $100 per tonne, using a uranium price of US$70/lb U3O8, a TREE price of $78/kg, and a C$:US$ exchange rate of 1:0.9.
2. Mineral Resources which 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 quantity and grade of reported Inferred Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Resources as an Indicated or Measured Mineral Resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured Mineral Resource category.

Table 2

Summary of Banana Lake Uranium Mineral Resource Estimate
April 1, 2011
(using 0.6 lb U_3O_8 / ton Cut-Off Grade)

Category	Tons (‘000)	S.G. (tons/m^3)	lbs. U3O8/ton	Total lbs. U3O8 (‘000)
Inferred Resources	30,315	3.14	0.912	27,638

Notes

1. Effective April 1, 2011
2. Mineral Resources which 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 quantity and grade of reported Inferred Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Resources as an Indicated or Measured Mineral Resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured Mineral Resource category.
4. The Mineral Resources were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council November 27, 2010.
5. S.G. of 2.85 tonnes/m3 (or 3.14 tons/m3) was used.
6. All tonnage and total lbs. U3O8 amounts rounded to nearest thousand or thousandth. Totals may not add up due to rounding.

Table 3

Historical Resource Appia's Elliot Lake Property

Zone	Quantity (tons)	Grade (lbs. U3O8/ton)	Contained U3O8 (lbs.)
Teasdale Lake	17,458,200	1.206	20,787,200
Gemico Block #3	42,800,000	0.38	16,264,000
Gemico Block #10	20,700,000	0.75	15,525,000
Banana Lake Zone	175,800,000	0.76	133,608,000
Canuc Zone	7,000,000	1.86	13,020,000
Total	**263,758,200**	**0.76**	**199,204,200**

Notes

1.The historical resource was not estimated in accordance with definitions and practices established for the estimation of Mineral Resources and Mineral Reserves by the Canadian Institute of Mining and Metallurgy (“CIM”), is not compliant with Canada’s security rule National Instrument 43-101 (“NI 43-101”), and unreliable for investment decisions.
2.Neither Appia nor its Qualified Persons have done sufficient work to classify the historical resource as a current mineral resource under current mineral resource terminology and are not treating the historical resources as current mineral resources

Increasing Uranium Prices and Strong Rare Earth Interest

The Spot Market price for uranium has moved significantly higher in 2023 YTD and is up threefold from its bear market bottom in 2019. Favourable supply and demand fundaments are expected to strongly influence uranium prices going forward. REEs have also attracted strong interest due to supply chain issues and concerns about China’s dominance of REEs processing.

“Appia’s uranium portfolio of both past producing and earlier-stage projects positions the Company well to participate in the long-term uranium market appreciation,” stated Tom Drivas, CEO. “The Company holds a large ground position in Elliot Lake with a historical resource (non-compliant) totalling approximately 199 million lbs. of uranium at a grade of 0.76 lbs. U3O8/ton. Additionally, the Company holds four high potential early-stage uranium projects in the prolific Athabasca Basin – Loranger, North Wollaston, Eastside and Otherside.”

“Many analysts are predicting higher uranium prices going forward due to a uranium deficit,” stated Stephen Burega, Appia’s President, “and the uranium market is currently in a production deficit that is expected to significantly increase

with the build-out of nuclear reactors as the global demand for reliable clean base load energy increases. The increased interest in uranium and REEs, plus the cost-savings potential of bulk mining bode well for Appia's Elliot Lake Project."

Drilling Programs Confirm REEs and Outlines Larger Resource in Teasdale Lake Deposit

The 2007-08 and 2012 drill programs were also carried out to determine the REEs content in the various mineralized beds that comprised the Teasdale Lake deposit. B**ased on historical yttrium production and the presence of monazite, which is commonly enriched with REEs, it was recognized by Appia that the Elliot Lake uranium deposits could contain significant REE mineralization.**

The drilling programs totalled 10,780 metres and indicated that additional drilling would continue to enlarge the zones.

The drilling confirmed the presence of three mineralized units, namely the Upper Reef, Intermediate Quartzite, and the Lower Reef:

- The 3.2 metre-thick Lower Reef horizon, which was mined extensively when the Elliot Lake camp IN was in production, contained significant REE mineralization and the highest uranium values.
- The Intermediate Quartzite averaged 2.65m in thickness and was weakly mineralized with lower uranium and REE mineralization.
- The Upper Reef, measuring 3.95m in thickness, contained the highest concentration of REE mineralization but lower uranium values compared to the Lower Reef.

The 2013, "Updated Resource Estimate Report for the Teasdale

Zone”, incorporated the significant REE mineralization in the Upper Reef and Intermediate Quartzite units as well as the higher-grade Lower Reef. The minimum vertical thickness was increased to 5.0m to accommodate the use of larger underground equipment as a cost-reduction strategy. **The inclusion of all three mineralized units as well as the expansion of the minimum vertical thickness increased the resource tonnage for the Teasdale Zone to 14,435,000 Indicated tons plus 42,447,000 Inferred tons of uranium and REE mineralization versus 17,458,200 tons of uranium mineralization in the historical resource estimate. The total rare earth metal content was increased by approximately 6 times the uranium content.**

The individual REEs included in the TREE Mineral Resource for the zone are listed in Table 4.

Table 4

Teasdale Lake Zone Individual REEs Included in TREE Mineral Resources

ZONE	Light REE (ppm)						Heavy REE (ppm)									
	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Y
Indicated Resources																
UR	540	951	93.9	313	51.7	1.9	32.8	3.9	17.2	2.7	7.0	0.9	5.5	0.8	6.8	72.9
IQ	256	452	44.9	148	24.4	1.0	14.7	1.8	7.7	1.2	3.1	0.4	2.5	0.4	3.6	30.6
LR	332	596	59.4	201	35.1	1.7	23.2	3.0	14.2	2.3	5.9	0.8	4.5	0.6	3.3	58.1
Total	**422**	**745**	**73.8**	**247**	**41.1**	**1.7**	**26.2**	**3.2**	**14.3**	**2.3**	**5.8**	**0.8**	**4.6**	**0.7**	**5.2**	**59.4**
Inferred Resources																
UR	498	876	85.9	285	47.2	1.8	29.3	3.5	15.9	2.5	6.5	0.9	5.3	0.8	6.8	67.9
IQ	213	374	37.0	122	20.0	0.8	12.3	1.4	6.4	1.0	2.6	0.4	2.2	0.3	3.3	26.5
LR	417	747	73.9	249	43.4	1.9	28.5	3.6	16.4	2.6	6.6	0.9	5.2	0.7	4.5	66.4
Total	**401**	**709**	**69.9**	**2332**	**39.0**	**1.6**	**24.6**	**3.0**	**13.5**	**2.1**	**5.5**	**0.7**	**4.4**	**0.6**	**5.3**	**56.5**

Qualifying notes for Mineral Resources are contained in Table 1

Optimizing Mining Based on Grade Distribution, Metal Prices and Mechanization

The significant rare earth mineralization in the Upper Reef provides several possible mining scenarios. The uranium-rich Lower Reef could be mined selectively to optimize revenue during periods of high uranium prices but lower REEs prices. Alternatively, the REEs enriched Upper Reef could be mined, followed by the removal of the Intermediate Quartzite to be used as backfill, and then mining the Lower Reef containing higher-grade uranium. A third alternative is to mine all three units simultaneously using larger mining equipment to increase production rates and lower mining costs. It is Appia's intention to evaluate all three mining scenarios under varying metal prices for uranium and REEs.

Qualified Person

The technical content in this news release was reviewed and approved by Brian Robertson, P.Eng., Director, and a Qualified Person as defined by National Instrument 43-101.

About Appia Rare Earths & Uranium Corp. (Appia)

Appia is a publicly traded Canadian company in the rare earth element and uranium sectors. The Company is currently focusing on delineating high-grade critical rare earth elements and gallium on the Alces Lake property, as well as exploring for high-grade uranium in the prolific Athabasca Basin on its Otherside, Loranger, North Wollaston, and Eastside properties. The Company holds the surface rights to exploration for 113,837.15 hectares (281,297.72 acres) in Saskatchewan. The Company also has a 100% interest in 12,545 hectares (31,000 acres), with rare earth element and uranium deposits over five mineralized zones in the Elliot Lake Camp, Ontario. Lastly, the Company holds the right to acquire up to a 70% interest in the

PCH Ionic Adsorption Clay Project which is 17,551.07 ha. in size and located within the Goiás State of Brazil. (See June 9th, 2023 Press Release – Click Here).

Appia has 130.5 million common shares outstanding, 143.3 million shares fully diluted.

Cautionary *Note Regarding Forward-Looking Statements: This News Release contains forward-looking statements which are typically preceded by, followed by or including the words "believes", "expects", "anticipates", "estimates", "intends", "plans" or similar expressions. Forward-looking statements are not a guarantee of future performance as they involve risks, uncertainties, and assumptions. We do not intend and do not assume any obligation to update these forward- looking statements and shareholders are cautioned not to put undue reliance on such statements.*

Neither the Canadian Securities Exchange nor its Market Regulator (as that term is defined in the policies **of the CSE) accepts responsibility for the adequacy or accuracy of this release.**

For more information, visit www.appiareu.com.

As part of our ongoing effort to keep investors, interested parties and stakeholders updated, we have several communication portals. If you have any questions online (*Twitter*, *Facebook*, *LinkedIn*) please feel free to send direct messages.

To book a one-on-one 30-minute Zoom video call, please *click here*.

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