Appia Announces Excellent Desorption Results From Target IV Ionic Adsorption Clay Rare Earth Mineralization in Brazil

written by Raj Shah | July 17, 2024

July 17, 2024 (Source) – Appia Rare Earths & Uranium Corp. **(CSE: API) (OTCQX: APAAF) (FSE: A0I0) (MUN: A0I0) (BER: A0I0)** (the "**Company**" or **"Appia"**) announced today the latest desorption test results for rare earth elements (REE) from the Target IV Ionic Adsorption Clay (IAC) deposit at the PCH project in Goias, Brazil. A total of 182 samples from 17 Reverse Circulation (RC) drillholes were sent to ALS Laboratories in Lima, Peru (ALS) and the results consistently confirmed the REE IAC mineralization style on the majority of Target IV developed over the Ipora Granite and representing improved recoveries of Magnet Rare Earth Oxides (MREO) and Heavy Rare Earth Oxides (HREO) as expected.

Stephen Burega, President, stated, "The combination of the significant size of mineralized area, high grades, good recoveries and rapid desorption, confirm the attractiveness of the deposit as an eventual world-class project. With each batch of desorption tests, we further our overall understanding of the nature of the IAC mineralization found at the PCH project, and we are very excited by the increase in recovery rates."

Highlights

- Discrete desorption interval samples from RC drillholes located on Ipora Granite lithology (see Map 1) returned

recoveries up to:

- **47.72%** TREO on drillhole PCH-RC-029 from 5 to 6 metres.
- **67.18%** HREO on drillhole PCH-RC-045 from 6 to 7 metres.
- **58.85%** Dy+Tb on drillhole PCH-RC-049 from 3 to 4 metres.
- **81.67%** Nd+Pr on drillhole PCH-RC-034 from 3 to 4 metres.

- The most significant recovered desorption intercepts for the main mineralized zone were:
    - PCH-RC-034 8m@32.92% TREO; 49.18% HREO; 57.29% NdPr; 46.22% TbDy from 3m.
    - PCH-RC-049 4m@29.92% TREO; 51.87% HREO; 49.46% NdPr; 46.74% TbDy from 3m.
    - PCH-RC-045 4m@23.09% TREO; 53.77% HREO; 32.47% NdPr; 43.32% TbDy from 4m.
    - PCH-RC-048 5m@25.89% TREO; 39.80% HREO; 48.13% NdPr; 36.58% TbDy from 0m.
    - PCH-RC-076 5m@27.97% TREO; 51.74% HREO; 46.49% NdPr; 45.14% TbDy from 3m.
    - PCH-RC-014 5m@24.91% TREO; 45.64% HREO; 48.36% NdPr; 38.53% TbDy from 0m.

- The results of the main mineralized zone and from the full drillhole length from all tested drillholes are presented in Table 1 below. The full set of results are available through this LINK.
- Desorbability results were conducted by ALS using an Ammonium Sulfate solution at 0.5M, pH2, for 20 minutes at room temperature.
- A comparison of 11 ALS and previously reported results from AGS Laboratories in La Serena, Chile (AGS) using Ammonium Sulfate 0.5M, pH4, 20 minutes, and room

temperature (See May 6th 2024 press release) from the same drillhole intervals has been completed which shows a high correlation and consistency between the results (Table 2).

Stephen Burega, continued, “Our work programs for the upcoming quarter include ongoing auger drilling and desorption testing on the 4 newly identified targets (See press releases May 14th, 2024 and May 22nd, 2024) which combine for a total area of over 2,500 hectares as well as planning for the development of a Preliminary Economic Assessment (PEA) of Target IV and the Buriti Zones.”

Andre Costa, VP Exploration for Brazil, commented, “We have achieved a more comprehensive desorption testing method which covers the full length of drillholes situated on Ipora Granite. These results give us more confidence and a clear ‘signature’ for the IAC mineralization, and we have every expectation based on this signature that similar mineralization can be expected on the newly discovered PCH project targets – Maia, Electra, Taygeta and Merope.”

HOLEID	FROM	TO	TREO	HREO	PrNd	TbDy	TREO D	HREO D	PrNd D	TbDy D	TREO REC	HREO REC	PrNd REC	TbDy REC
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
PCH-RC-014	0.00	12.00	857.62	118.36	158.58	14.72	151.27	35.75	52.75	3.67	12.28	22.87	22.82	19.00
PCH-RC-014	0.00	5.00	1362.53	161.21	244.38	20.26	341.30	77.88	120.52	8.06	**24.91**	**45.64**	**48.36**	**38.53**
PCH-RC-019	0.00	7.00	1205.01	145.32	245.24	19.11	115.58	29.40	38.94	3.17	10.95	21.23	17.95	17.72
PCH-RC-019	1.00	3.00	757.15	103.58	160.45	13.43	170.21	34.82	61.63	4.00	**22.67**	**33.85**	**38.93**	**30.09**
PCH-RC-029	0.00	16.00	755.24	150.18	151.32	17.81	174.01	54.80	55.01	6.01	20.80	33.37	30.74	30.80
PCH-RC-029	0.00	9.00	932.90	168.80	183.12	20.56	264.09	76.83	85.39	8.58	**29.38**	**43.89**	**45.12**	**40.99**
PCH-RC-034	0.00	13.00	1281.79	218.99	250.52	26.69	266.78	90.90	92.97	10.04	26.64	43.79	47.78	40.69
PCH-RC-034	3.00	11.00	1461.31	261.55	296.54	31.67	339.72	114.41	121.56	12.68	**32.94**	**49.18**	**57.29**	**46.22**
PCH-RC-036	0.00	5.00	1341.38	177.20	242.14	21.39	198.98	43.46	72.14	5.35	19.05	24.76	35.25	25.84
PCH-RC-036	1.00	4.00	1077.44	165.20	190.51	18.80	207.61	44.56	77.10	5.40	**22.27**	**26.96**	**41.97**	**28.78**
PCH-RC-037	0.00	9.00	1494.76	164.56	273.83	19.22	204.75	55.00	72.07	6.08	12.54	29.93	22.78	28.79
PCH-RC-037	1.00	5.00	2040.81	212.33	373.46	24.41	371.33	97.89	132.71	10.70	**20.48**	**46.26**	**37.63**	**44.46**
PCH-RC-040	0.00	15.00	3933.60	273.98	760.80	38.81	224.86	70.74	77.90	8.60	9.26	29.00	18.48	26.26

PCH-RC-040	5.00	12.00	2362.08	256.08	484.68	32.96	236.03	86.11	76.27	9.64	**11.88**	**33.83**	**18.20**	**29.89**
PCH-RC-042	0.00	11.00	737.02	117.34	140.21	14.01	109.22	29.83	38.33	3.40	14.50	24.59	26.45	23.91
PCH-RC-042	1.00	5.00	791.41	121.86	156.57	14.35	201.63	45.50	74.61	5.24	**24.63**	**36.15**	**46.09**	**35.68**
PCH-RC-043	0.00	12.00	1992.65	151.59	348.49	19.00	292.78	61.06	106.60	6.55	14.20	37.59	29.01	32.37
PCH-RC-043	1.00	8.00	2218.37	175.15	418.05	21.68	382.00	79.10	140.05	8.37	**17.40**	**44.45**	**33.73**	**38.20**
PCH-RC-044	0.00	11.00	1432.77	131.39	251.61	16.37	177.07	44.78	60.52	4.57	12.74	29.94	22.99	25.01
PCH-RC-044	2.00	8.00	1424.13	147.33	287.15	18.03	234.08	58.73	80.97	5.81	**16.64**	**34.14**	**28.07**	**28.13**
PCH-RC-045	0.00	12.00	1333.04	204.77	244.66	27.56	214.32	92.65	61.29	9.74	14.24	36.33	22.10	28.91
PCH-RC-045	4.00	8.00	1578.77	300.87	331.44	39.35	383.41	174.98	109.68	18.35	**23.09**	**53.77**	**32.47**	**43.32**
PCH-RC-047	0.00	10.00	1364.18	211.15	265.64	25.76	282.46	83.61	103.67	8.73	18.12	33.72	34.40	29.18
PCH-RC-047	3.00	9.00	1650.59	269.69	334.35	32.66	376.54	112.17	138.91	11.62	**22.00**	**38.69**	**40.76**	**33.26**
PCH-RC-048	0.00	7.00	792.58	133.50	150.53	16.49	175.33	53.07	59.95	5.68	22.03	38.24	39.03	33.65
PCH-RC-048	0.00	5.00	798.86	134.65	143.37	16.23	205.77	55.95	72.67	6.12	**25.89**	**39.80**	**48.13**	**36.58**
PCH-RC-049	0.00	9.00	910.76	177.63	174.75	20.59	227.44	81.56	77.59	8.60	22.86	41.57	38.97	37.96
PCH-RC-049	3.00	7.00	1014.89	210.94	208.00	24.15	322.83	115.91	111.49	12.03	**29.92**	**51.87**	**49.46**	**46.74**
PCH-RC-076	0.00	10.00	1278.40	170.45	243.34	21.40	251.95	69.52	85.20	7.50	20.27	38.05	35.81	33.49
PCH-RC-076	3.00	8.00	1336.27	204.89	273.64	24.98	374.44	106.46	128.27	11.31	**27.97**	**51.74**	**46.49**	**45.14**
PCH-RC-077	0.00	18.00	1058.82	134.81	189.89	15.88	142.34	42.49	47.86	4.16	11.22	27.55	19.88	22.59
PCH-RC-077	2.00	8.00	1373.45	187.05	275.25	22.64	327.72	87.08	117.49	8.68	**23.29**	**45.50**	**41.64**	**37.63**
PCH-RC-146	0.00	7.00	1932.86	265.62	396.18	33.77	271.27	99.69	96.21	10.26	13.16	34.98	22.47	28.64
PCH-RC-146	3.00	6.00	2206.46	338.78	504.89	42.22	411.81	163.22	144.35	16.13	**17.80**	**47.17**	**27.18**	**37.44**

*Total Rare Earth Oxides: TREO = Y2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + La2O3 + Ce2O3 + Pr2O3 + Nd2O3 + Sm2O3

*Heavy Rare Earth Oxides: HREO = Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3

*NdPr = Nd2O3+Pr2O3

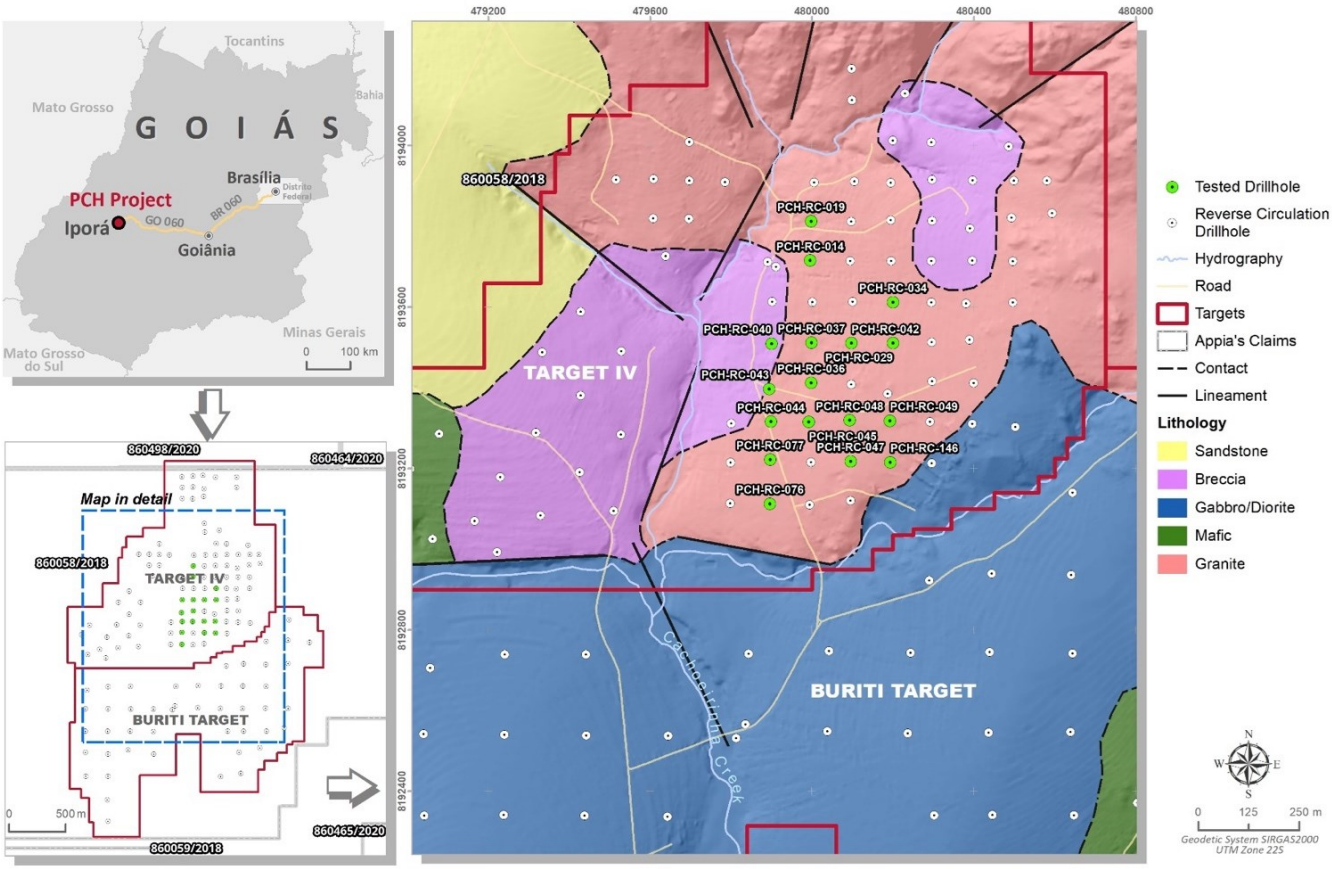
*DyTb = Dy2O3+Tb4O7

*Element to Oxide Conversion Factor – Cerium Ce2O3 1.1713,, Dysprosium Dy2O3 1.1477, Erbium Er2O3 1.1435, Europium Eu2O3 1.1579, Gadolinium Gd2O3 1.1526, Holmium Ho2O3 1.1455, Lanthanum La2O3 1.1728, Lutetium Lu2O3 1.1371, Neodymium Nd2O3 1.1664, Praseodymium Pr2O3 1.1703, Samarium Sm2O3 1.1596, Terbium Tb2O3 1.1510, Terbium Tb4O7 1.1762, Thulium Tm2O3 1.1421, Yttrium Y2O3 1.2699, Ytterbium Yb2O3 1.1387

* Desorbability results were conducted using Ammonium Sulfate at 0.5M, pH2, for 20 minutes.

Table 1 – Full length and main desorption zone (bold) recovery

results of all drillholes tested. To view the full list of results, please [click here](#).



Map 1 – Listing of RC drillholes entirely tested for REE desorption from Target IV.

To view an enhanced version of this graphic, please visit: https://images.newsfilecorp.com/files/5416/216810_689dbf0c7448b920_001full.jpg

HOLEID	FROM	TO	La2O3	Ce2O3	Pr2O3	Nd2O3	Sm2O3	Eu2O3	Gd2O3	Tb4O7	Dy2O3	Ho2O3	Er2O3	Tm2O3	Yb2O3	Lu2O3	Y2O3	U	Th	LAB
PCH-RC-047	6	7	71.38	6.16	20.96	88.87	19.29	4.21	13.06	2.1	11	2.14	6	0.83	5.94	0.9	80.97	0.26	0	AGS
PCH-RC-047	6	7	85.73	7.98	26.69	118.97	22.21	4.39	16.71	2.32	12.85	2.51	7.11	1.05	6.39	0.95	98.29	0.57	0.5	ALS
PCH-RC-047	7	8	40.06	9.19	12.18	54.54	12	2.75	8.26	1.28	6.81	1.33	3.87	0.55	3.88	0.59	55.46	0.03	0	AGS
PCH-RC-047	7	8	51.37	16.11	17.44	82.35	15.54	3.11	11.35	1.54	8.58	1.75	5.1	0.76	4.62	0.71	73.53	0.62	0.94	ALS
PCH-RC-014	3	4	94.94	0.61	14.71	55.11	8.2	1.79	5.99	0.81	4.04	0.76	1.91	0.23	1.37	0.2	40.76	0.04	0	AGS
PCH-RC-014	3	4	223.42	5.61	42.26	177.29	23.89	4.74	19.02	2.53	12.68	2.54	7.38	0.82	4.92	0.72	108.83	1.02	1.15	ALS
PCH-RC-014	4	5	66.62	0.57	11.21	42.55	6.44	1.38	4.59	0.63	3.05	0.58	1.5	0.18	1.08	0.16	30.05	0.06	0	AGS
PCH-RC-014	4	5	90.77	2.2	17.97	78.5	10.58	2.09	8.34	1.09	5.49	1.11	3.21	0.36	2.19	0.32	48.38	0.54	0.43	ALS
PCH-RC-029	3	4	107.76	0.71	17.61	64.17	10.57	2.32	7.04	1.01	4.81	0.87	2.22	0.27	1.65	0.23	35.07	0.44	0	AGS
PCH-RC-029	3	4	155.4	2.06	28.09	115.12	16.93	3.5	12.74	1.75	8.63	1.61	4.59	0.53	3.19	0.44	53.97	2.72	1.58	ALS
PCH-RC-037	4	5	53.43	6.02	10.07	38.52	7.39	1.71	5.83	0.98	5.26	1.02	2.69	0.34	2.23	0.34	43.07	0.05	0	AGS
PCH-RC-037	4	5	52.54	7.73	13.93	52.37	9.27	1.93	8.46	1.23	7.02	1.38	3.81	0.52	3.02	0.46	53.84	0.32	0.32	ALS
PCH-RC-040	4	5	34.07	1.01	6.09	24.55	4.04	1.01	2.84	0.4	1.88	0.34	0.81	0.1	0.6	0.09	14.9	0.08	0	AGS

PCH-RC-040	4	5	62.16	2.94	17.97	78.5	12.93	3.11	10.18	1.41	7.52	1.23	3.28	0.41	2.47	0.34	35.56	2.41	0.92	ALS
PCH-RC-040	14	15	19.67	1.04	4.65	23.89	6.04	2.15	6.85	1.08	5.61	1.02	2.44	0.27	1.6	0.24	42.91	0.03	0	AGS
PCH-RC-040	14	15	28.03	8.23	11.57	67.77	15.71	5.19	17.75	2.53	13.49	2.22	5.61	0.64	3.66	0.5	70.35	0.99	0.48	ALS
PCH-RC-045	1	2	13.22	0.78	1.96	6.87	1.09	0.22	0.76	0.1	0.51	0.09	0.24	0.03	0.2	0.03	4.36	0.04	0	AGS
PCH-RC-045	1	2	18.94	3.05	3.94	15.63	2.73	0.49	1.94	0.27	1.39	0.25	0.72	0.09	0.6	0.09	7.44	0.63	0.69	ALS
PCH-RC-047	6	7	71.38	6.16	20.96	88.87	19.29	4.21	13.06	2.1	11	2.14	6	0.83	5.94	0.9	80.97	0.26	0	AGS
PCH-RC-047	6	7	85.73	7.98	26.69	118.97	22.21	4.39	16.71	2.32	12.85	2.51	7.11	1.05	6.39	0.95	98.29	0.57	0.5	ALS
PCH-RC-047	7	8	40.06	9.19	12.18	54.54	12	2.75	8.26	1.28	6.81	1.33	3.87	0.55	3.88	0.59	55.46	0.03	0	AGS
PCH-RC-047	7	8	51.37	16.11	17.44	82.35	15.54	3.11	11.35	1.54	8.58	1.75	5.1	0.76	4.62	0.71	73.53	0.62	0.94	ALS

Table 2 – Comparison between 11 interval samples assayed from ALS and the previously announced AGS desorption testing.

On March 1st, 2024, the Company announced its maiden Mineral Resource Estimate (MRE) on Target IV and the Buriti Zone (Click here for the Press Release), and the companion NI 43-101 technical report on the PCH Project was filed on April 16th, 2024. (Click here for the Press Release)

QAQC

Reverse Circulation (RC) drillholes are vertical and reported intervals are true thickness. The material produced from drill holes are sampled at one metre intervals, resulting in average sample sizes of 10-25 kg. Quartering of the material was performed at Appia's logging facility using a riffle splitter and continued splitting until a representative sample weighing approximately 500g each was obtained, bagged in a resistant plastic bag, labeled, photographed, and stored for shipment.

The bagged samples are sent to the ALS laboratory in Goiânia, Goias for initial preparation and sent to Lima Peru for final analysis. In addition to the internal QA/QC of the ALS Lab, Appia includes its own control samples in each batch of samples sent to the laboratory.

Quality control samples, such as blanks, duplicates, and standards (CRM) were inserted into each analytical run. For all analysis methods, the minimum number of QA/QC samples is two

standard, one duplicate and one blank, introduced in each batch which comprises full-length hole(s). The rigorous procedures are implemented during the sample collection, preparation, and analytical stages to insure the robustness and reliability of the analytical results.

All analytical results reported herein have passed internal QA/QC review and compilation. All assay results of RC samples were provided by ALS, a Certified Laboratory, which performed their measure of the concentration of rare earth elements (REE) with the ME-MS81 analytical method that uses lithium borate fusion prior acid dissolution and Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Major Element Oxides were done using ME_ICP06 analytical method using lithium borate fusion and inductively coupled plasma atomic emission spectroscopy (ICP-AES). Desorption analysis with ME-MS19 analytical method with samples being leached with a solution of Ammonium Sulphate at 0.5 molar, pH 2, room temperature for 20 minutes. The leached solution content was analysed using ICP-AES/ICP-MS.

The technical information in this news release, including the information related to geology, drilling, and mineralization, has been reviewed and approved by Andre L. L. Costa, current Appia's VP Exploration for Brazil, with more than 29 years of relevant experience. Mr. Costa is a APEGS Professional Geoscientist (P.Geo.) and a Fellow of Australian Institute of Geoscientists (FAIG), a Qualified Person (QP) as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects.

About Appia Rare Earths & Uranium Corp. (Appia)

Appia is a publicly traded Canadian company in the rare earth element and uranium sectors. The Company holds the right to acquire up to a 70% interest in the PCH Ionic Adsorption Clay

Project (See June 9th, 2023 Press Release – Click HERE) which is 40,963.18 ha. in size and located within the Goiás State of Brazil. (See January 11th, 2024 Press Release – Click HERE) The Company is also focusing on delineating high-grade critical rare earth elements and gallium on the Alces Lake property, and 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 94,982.39 hectares (234,706.59 acres) in Saskatchewan. The Company also has a 100% interest in 13,008 hectares (32,143 acres), with rare earth elements and uranium deposits over five mineralized zones in the Elliot Lake Camp, Ontario.

Appia has 136.8 million common shares outstanding, 145.5 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.

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parties and stakeholders updated, we have several communication portals. If you have any questions online (X, 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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