## THE 2019 MANFRED LACHS SPACE LAW MOOT COURT COMPETITION

TEAM No. 1



### IN THE INTERNATIONAL COURT OF JUSTICE

## AT THE

### PEACE PALACE, THE HAGUE

Case Concerning Military Uses of Space Resources

### THE STATE OF SUNIZA

(Applicant)

v.

### THE REPUBLIC OF AZASI

(Respondent)

### ON SUBMISSION TO THE INTERNATIONAL COURT OF JUSTICE

## MEMORIAL FOR APPLICANT

THE STATE OF SUNIZA

TABLE OF AUTHORITIESII	Π
QUESTIONS PRESENTED V	7 <b>I</b>
STATEMENT OF FACTSV	П
SUMMARY OF ARGUMENTXII	Π
ARGUMENT	.1
I. THE REPUBLIC OF AZASI, RESPONDENT, VIOLATED INTERNATIONAL LAV BY OCCUPYING AND USING THE LUNAR FACILITY, EZULWINI 1	N .1
<ul> <li>A. Respondent's occupation of eZ1 violated international law</li></ul>	2 2 2 4 .5 .7 .7 .8 .9 .0 .1
II. RESPONDENT DID VIOLATE INTERNATIONAL LAW BY REFUSING TO TRANSPORT THE CREW AND TOURISTS FROM EZ1 TO EARTH1	0
<ul> <li>A. Respondent violated international law by not transporting crew and tourists from eZ1 to Earth</li></ul>	0 2 2 3 5 6 it 6 77 7 9920
III. APPLICANT IS NOT LIABLE UNDER INTERNATIONAL LAW FOR DAMAGE FOR THE LOSS OF AZASI 7 AND LAUNCH PAD2	:S 21

# **Table of Contents**

A. Applicant is not liable for damages to Azasi 7 and launch pad under international law 2	1
1. Applicant is not liable under the Liability Convention	2
i. The damage was not caused by a space object2	2
ii. The damage was not due to the fault of Applicant, nor the fault of persons for	
whom it is responsible2	3
a. Respondent could not reasonably foresee that the infused sefarite could cause	
damage to another space object	4
2. Applicant is not liable under the OST2	25
i. Applicant had no duty to consult Respondent under the OST	5
3. Applicant is not liable under customary international law2	6
i. Applicant had no duty to inform or consult Respondent on the nature of the cargo	
it was carrying2	6
ii. It is Respondent's responsibility to manage the safety of its assets	7
4. Applicant is not liable under principles of law2	27
B. As such, Applicant is not liable for damages for the loss of Azasi 7 and launch pad2	8
SUBMISSIONS TO THE COURT XV	<b>I</b>

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## **QUESTIONS PRESENTED**

- 1. Is Respondent liable for occupying and using eZ1, contrary to international law?
- 2. Is Respondent liable for costs charged by ISpS for the transportation of the crew and tourists from eZ1 to Earth?
- 3. Is Applicant liable for damages for the loss of Azasi 7 and the launch pad?

#### STATEMENT OF FACTS

- The State of Suniza ("Suniza" or "Applicant") is a coastal country with an extensive history
  of commercial mining activity. Approximately twenty years ago, Applicant harnessed its
  mining expertise to explore celestial bodies for space resources, adopting a national space
  policy focused on establishing mining operations on the Moon.<sup>1</sup>
- 2. The Republic of Azasi ("Azasi" or "Respondent") is a State neighboring Applicant. In addition to sharing historical roots, Applicant and Respondent have long cooperated for economic, scientific, and cultural purposes, and collaborated on research and development in joint space exploration activities. Respondent has developed space capabilities that include human and robotic missions to the Moon and other celestial bodies. Applicant has not developed its own spacefaring technology, instead choosing to concentrate on research and development efforts while depending on Respondent to provide such services in exchange for money.<sup>2</sup>
- 3. Applicant entered into a Launch Services Agreement ("LS Agreement") with Respondent for requisite services for its lunar mining activities. These services included launch and transportation services from Earth to the Moon and from the Moon to Earth for personnel, equipment and other resources belonging to Applicant.<sup>3</sup>
- 4. Applicant has been engaged in a centuries-long armed conflict with its western neighbors, the St. Neo Islands ("St. Neo"). This conflict has resulted in several land and sea battles in the last half of the 20<sup>th</sup> century, with a concomitant military arms race with each seeking a strategic advantage over the other. St. Neo is also one of the few States with the technological capability to launch crewed missions to the Moon. <sup>4</sup>

<sup>&</sup>lt;sup>1</sup> Compromis, ¶1.

 $<sup>^{2}</sup>$  Id., ¶1 & 2.

<sup>&</sup>lt;sup>3</sup> *Id.*, ¶1.

<sup>&</sup>lt;sup>4</sup> *Id.*, ¶2.

- 5. In line with its national space policies, Applicant conducted its own lunar research missions, eventually resulting in the establishment of a permanent lunar facility, eZulwini 1 ("eZ1"). Pursuant to the LS Agreement, Respondent provided the spacecraft to transport the crew, engineers, and equipment required to conduct Applicant's lunar research activities.<sup>5</sup> The construction of eZ1 was entirely funded by Applicant.<sup>6</sup> Furthermore, all space objects launched for the purposes of eZ1 were registered on Applicant's national registry.<sup>7</sup>
- 6. Duma Artificial Intelligence Corporation ("DAIC"), a commercial entity incorporated in Respondent State, provided artificial intelligence robots that performed the lunar mining activities. The said DAIC robots were created and powered by Applicant.<sup>8</sup>
- 7. eZ1 consisted of eight modules which were utilized for research and processing, habitation, and the processing of food and water. While the vast majority of these modules were made available to the tourists and other visitors to eZ1, Module 5 was operated by personnel from Advanced Composite System Ltd ("ACS"), a private Suniza defense contractor and consumer product conglomerate, utilizing confidential and proprietary information, and thus confidentiality was required. To protect the sensitive and classified information, access to Module 5 operations was limited to Applicant's crew and engineers.<sup>9</sup>
- 8. The DAIC robots were programmed to extract sefarite, a mineral resource found only in the innermost core of certain lunar rocks.<sup>10</sup> Applicant's research and development efforts at eZ1 revealed that sefarite possessed commercial value as a bonding and hardening material for both plastic and steel products. Applicant paid Respondent to transport the

<sup>&</sup>lt;sup>5</sup> *Id.*, ¶3.

<sup>&</sup>lt;sup>6</sup> Clarifications, ¶1.

 $<sup>^{7}</sup>$  Id., 5.

<sup>&</sup>lt;sup>8</sup> Id., 20.

<sup>&</sup>lt;sup>9</sup> Compromis, ¶4.

<sup>&</sup>lt;sup>10</sup> *Id.*, ¶5.

processed sefarite to a facility operated by ACS. ACS contracted with Applicant to incorporate small amounts of the sefarite in various commercial and industrial products.<sup>11</sup>

- 9. In light of the ongoing armed conflict with St. Neo, the Suniza Defense Department ("SDD") separately conducted a classified program to examine potential military uses of sefarite. Upon finding that small quantities of sefarite could be used to provide vastly increased strength and hardening to materials, the SDD incorporated sefarite in their Strategic Offensive Weapons ("SOW") program, which used sefarite to strengthen the casings for missiles and armored vehicles.
- 10. Applicant encouraged full production of all sefarite products<sup>12</sup> and increased funding to expand research and development of sefarite-based products on eZ1.<sup>13</sup> Applicant found that the hardening properties of sefarite were enhanced when the purified ore was infused with oxygen in a low-gravity process. While the hardening characteristics of the sefarite were altered through this process, the infused sefarite was virtually indistinguishable from the non-infused sefarite, with such changes only being detectable with special equipment. To strengthen its SOW program, Applicant infused a small quantity of sefarite with oxygen in Module 5 on eZ1 to be transported to the ACS facility,<sup>14</sup> in line with the terms of the LS agreement.<sup>15</sup>
- 11. In the spring of 2030, the infused sefarite was loaded aboard the Azasi 7 spacecraft along with approximately 450kg of non-infused ore. ACS personnel voluntarily informed Respondent that the contents of the cargo consisted of "sefarite ore". Respondent's pre-launch inspection of the cargo did not detect or identify any unusual or potentially harmful

<sup>&</sup>lt;sup>11</sup> *Id.*, ¶6.

<sup>&</sup>lt;sup>12</sup> Clarifications, ¶1.

<sup>&</sup>lt;sup>13</sup> *Compromis*,  $\P7 \& 8$ .

<sup>&</sup>lt;sup>14</sup> *Id.*, ¶9.

<sup>&</sup>lt;sup>15</sup> Clarifications, ¶9.

aspects of the cargo. Unfortunately, and for unknown reasons, the spacecraft exploded shortly after take-off. Respondent's crew, as well as tourists from various countries perished, while the Azasi 7 spacecraft and Azasi launch pad were completely destroyed.<sup>16</sup> 12. Respondent requested an investigation on the probable cause of the crash, seeking consultations with Applicant to secure the site of the crash. Respondent additionally requested permission to visit eZ1 to conduct further investigations. Applicant responded that it would review the matter. However, three months into this period of review, Respondent unilaterally and without any notice or consultation with Applicant, assembled a team of investigators to be transported to the Moon. At that point, Applicant issued an official response to Respondent regarding its proposed investigation. While Applicant did not allow Respondent access to the confidential Module 5 and declined to devote habitation quarters of eZ1 to Respondent's investigators for temporary housing, Applicant did not restrict access to the crash site, nor restrict access to any other area in eZ1. Respondent, without seeking further consultation, unreasonably responded by recalling its crew on eZ1 and terminating all space missions with Applicant. Respondent further announced that it would no longer provide any further human or robotic missions and support to eZ1. Other space-faring countries, viewing Applicant's response as a refusal to allow the inspection, also ceased co-operation with Applicant in space-related matters.<sup>17</sup>

13. Unable to provide support for its crew, Applicant announced that it would no longer continue activities on eZ1 and sought to evacuate the facility and transport all personnel back to Earth. Respondent, however, refused to rescue any non-Azasi crew and personnel. Additionally, Respondent refused to facilitate the rescue of tourists aboard eZ1 who were taken to the Moon by a tourism company incorporated in Respondent State.<sup>18</sup> Respondent's

<sup>&</sup>lt;sup>16</sup> *Compromis*, ¶9 & 10.

<sup>&</sup>lt;sup>17</sup> *Id.*,  $\hat{\P}11 \& 12$ .

<sup>&</sup>lt;sup>18</sup> Clarifications, ¶57.

actions thus left Applicant's crew, along with space tourists of other nations, stranded on eZ1 with no prospect of rescue. Innovative Space Solutions (ISpS), a launch services company incorporated in St. Neo, agreed to transport the stranded crew and tourists in spite of the ongoing armed conflict. ISpS demanded and received three times its customary price for transportation, banned transport of any sefarite in its spacecraft, and strictly limited the amount of personal effects that could be carried by the passengers.<sup>19</sup>

- 14. Six months after ISpS transported the last personnel from eZ1, Respondent launched its own mission to the Moon and, with no permission from Applicant, gained access to Applicant's entire eZ1 facility, including Module 5. Respondent's scientists conducted inspections of eZ1 and accessed the remaining space objects left behind by Applicant. Respondent found a computer hard drive which was the property of ACS personnel, and which contained the blue prints for the extraction of sefarite as well as the process for the oxygen infusion of the ore. Respondent subsequently found traces of infused sefarite in Applicant's facility. Respondent's panel of scientists then issued a report stating that the enhanced sefarite was potentially unstable until bonded with other substances. Applicant finds, however, that Respondent's methodology is questionable, as Applicant has also conducted tests of the infused sefarite which conclude that it is as safe as the unenhanced purified ore.<sup>20</sup>
- 15. Respondent occupied eZ1 and began its own operations to exploit sefarite, incorporating it in various commercial products utilizing Module 5 of eZ1. Applicant sought consultations with Respondent regarding the use of its facility, though these requests were refused outright by Respondent. Respondent further alleged that Applicant had used eZ1 for unlawful purposes.<sup>21</sup>

<sup>&</sup>lt;sup>19</sup> Compromis, ¶13.

 $<sup>^{20}</sup>$  Id., ¶14.

<sup>&</sup>lt;sup>21</sup> Id., ¶15.

- 16. Following this occupation, Applicant initiated proceedings by Application to the International Court of Justice. Respondent accepted the jurisdiction of the Court and the parties submitted this Agreed Statement of Facts. At the time of the submission of Agreed Statement of Facts, Respondent was in sole control of eZ1 and was processing the sefarite for use in civilian commercial products.<sup>22</sup> Furthermore, Respondent was continuing to utilize the infused sefarite,<sup>23</sup> despite its allegation that this is what caused the incident aboard Azasi 7. Respondent proceeded to restrict access of eZ1 to all tourists and representatives of other countries.<sup>24</sup>
- 17. Both Applicant and Respondent are parties to the United Nations Charter and the four space treaties.<sup>25</sup> Applicant has signed the Moon Agreement.<sup>26</sup> Respondent has signed but not ratified the Moon Agreement. Within the timeframe of the case, no international exploitation regime has been established pursuant to Article 11 of the Moon Agreement.<sup>27</sup>

<sup>&</sup>lt;sup>22</sup> *Id.*, ¶16.

<sup>&</sup>lt;sup>23</sup> *Clarifications*, ¶3.

<sup>&</sup>lt;sup>24</sup> *Clarifications*, ¶42.

<sup>&</sup>lt;sup>25</sup> Compromis, ¶19.

<sup>&</sup>lt;sup>26</sup> Clarifications, ¶55.

<sup>&</sup>lt;sup>27</sup> Compromis, ¶19.

#### SUMMARY OF ARGUMENT

Respondent violated international law in its occupation and use of eZ1, a space object over which Applicant maintained continuous jurisdiction and control in accordance with Article VIII of the Outer Space Treaty ("OST"), in addition to acting contrary to the principles underlying the Moon Agreement and those existing in customary international law. Not only does Respondent's occupation of eZ1 amount to a violation of the OST, but its use of eZ1 and failure to return the component parts of this space object constitutes a breach of Article V of the Rescue and Return Agreement ("ARRA").

Respondent's refusal to transport non-Azasi crew or tourists from eZ1 to Earth, despite having the knowledge that Applicant was unable to support them, constitutes a violation of Article 4 of the ARRA in addition to humanitarian principles found in customary international law. The stranded crew and tourists were 'personnel of a spacecraft' and required rescuing owing to distress and emergency. Thus the rescue and return of these personnel is governed by both Article 4 of the ARRA and Article V of the OST. Respondent was best placed to provide assistance and its refusal to do so resulted in the delay of the return of those personnel and the incurrence of greater costs than it would have otherwise sustained. Furthermore, by applying humanitarian principles which fall under general international law, it is evident that Respondent committed a wrongful act by failing to rescue the stranded personnel. Respondent has an obligation to compensate Applicant for the costs incurred as a direct result of Respondent's breaches of international law.

Applicant is not liable for the damage caused to Respondent's spacecraft and launch pad, as there is no direct causal link or proximity between Applicant's act of loading the enhanced mineral as cargo onto said spacecraft and the subsequent explosion. Not only does the infused mineral fail to qualify as a space object, thus negating any argument advanced on the basis of Article III of the Liability Convention, but the speculative nature of the investigation further renders the suggested causal link invalid. This precludes Respondent from relying on Article VII of the OST. Due to the lack of evidence indicating that the enhanced sefarite might be volatile, not only is there no causal link, but further, Applicant did not have a duty to consult with Respondent on the nature of the substance.

#### ARGUMENT

### I. THE REPUBLIC OF AZASI, RESPONDENT, VIOLATED INTERNATIONAL LAW BY OCCUPYING AND USING THE LUNAR FACILITY, EZULWINI 1

Respondent violated international law when it occupied and then proceeded to use eZulwini 1 ("eZ1"). Respondent's occupation is a violation of Article VIII of the Outer Space Treaty<sup>1</sup> ("OST") as said occupation took place without the express consent of Applicant, who had exclusive ownership, and jurisdiction and control, over eZ1, a space object. Similarly, Respondent has violated its obligations as signatory<sup>2</sup> of the Moon Agreement,<sup>3</sup> and of customary international law. Further, Respondent's use of eZ1 also qualifies as a breach of Article VIII of the OST, and Article 5 of the Rescue and Return Agreement ("ARRA"),<sup>4</sup> owing to Respondent's failure to return Applicant's space objects.

According to Article 38 of this Court's Statute ("ICJ Statute"), treaty obligations and custom are a primary source of international law.<sup>5</sup> While treaties are legally binding upon the parties to the treaty,<sup>6</sup> customary international law is binding upon all States.<sup>7</sup> As a State Party to the OST and the ARRA,<sup>8</sup> Respondent is required under Article 26 of the Vienna Convention on the Law of Treaties ("VCLT") <sup>9</sup> to adhere to their provisions in good faith, as per the

<sup>&</sup>lt;sup>1</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, Jan. 27, 1967, 610 U.N.T.S. 205, art. VIII [OST].

<sup>&</sup>lt;sup>2</sup> Compromis, ¶19.

<sup>&</sup>lt;sup>3</sup> Agreement Covering the Activities of States on the Moon and Other Celestial Bodies, Dec. 5, 1979, 1363 U.N.T.S. 21 [Moon Agreement].

<sup>&</sup>lt;sup>4</sup> Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched Into Outer Space, Apr. 22, 1968, 672 U.N.T.S. 119 [ARRA].

<sup>&</sup>lt;sup>5</sup> Statute of the International Court of Justice, Jun. 26, 1945, 33 U.N.T.S. 993, art. 38(1) [ICJ Statute].

<sup>&</sup>lt;sup>6</sup> Nuclear Tests (Aust. v. Fr.), Judgment, 1974, I.C.J. Rep. 253, 268 (Dec. 20) [Nuclear Tests]. <sup>7</sup> Legality of the Threat of Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶64

<sup>(</sup>Jul. 8) [Nuclear Weapons Advisory Opinion].

<sup>&</sup>lt;sup>8</sup> Compromis, ¶19.

<sup>&</sup>lt;sup>9</sup> Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 311 [VCLT].

principle of *pacta sunt servanda*.<sup>10</sup> Further, as signatory to the Moon Agreement,<sup>11</sup> Respondent is required under the VCLT to refrain from acts which would defeat the object and purpose of the treaty.<sup>12</sup>

#### A. Respondent's occupation of eZ1 violated international law

Respondent's occupation of eZ1 violated Article VIII of the OST. Additionally, said occupation was in direct contravention of the object and purpose of the Moon Agreement, and customary international law.

#### 1. Respondent's actions were in violation of Article VIII of the OST

Article VIII of the OST asserts that "a State Party to the Treaty on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object... while in outer space or on a celestial body. Ownership of objects launched into outer space, including objects landed or constructed on a celestial body, and of their component parts, is not affected by their presence in outer space or on a celestial body."<sup>13</sup>

In order to determine if a breach of ownership, or jurisdiction and control, has occurred, this Court must consider whether: (i) eZ1 qualifies as an 'object launched into outer space' for the purposes of the OST; (ii) Applicant exercised ownership over eZ1; (iii) Applicant has exercised jurisdiction and control over eZ1; and (iv) Respondent's occupation of eZ1 qualifies as a breach of these principles of ownership, and jurisdiction and control, for the purposes of Article VIII of the OST.

# i. The lunar facility eZ1 is "an object launched into outer space" under the OST

There is no comprehensive definition provided in either the OST or international space law for what constitutes an 'object launched into outer space' or 'space object'. Given the lack

<sup>&</sup>lt;sup>10</sup> Nuclear Tests, 253, 268; VCLT, art. 26.

<sup>&</sup>lt;sup>11</sup> Compromis, ¶19.

<sup>&</sup>lt;sup>12</sup> VCLT, art 18(a).

<sup>&</sup>lt;sup>13</sup> OST, art. VIII.

of definition, it is useful to refer to the teachings of the most highly qualified publicists of the various nations' as a subsidiary means of determining such definitions.<sup>14</sup>

The term 'object' as it relates to space activities has been interpreted by Professor Bin Cheng to include satellites, spacecraft, space vehicles, equipment, facilities, stations, installations and other constructions including their components.<sup>15</sup> Thus, eZ1 can be considered to be an 'object launched into outer space' for the purposes of Article VIII.

#### ii. Applicant exercised ownership over eZ1

Ownership of objects launched into outer space is not affected by their presence in outer space or on a celestial body.<sup>16</sup> This ownership refers either to the ownership established on Earth according to the relevant legal regime or ownership as established or transferred in outer space.<sup>17</sup> Said ownership is reinforced in international space law via the registration of that object as per Article II of the Registration Convention.<sup>18</sup>

State practice has demonstrated that the transfer of ownership from one party to another is represented by a change in registration, demonstrating an explicit and intentional change in ownership (and associated transfer of liability) from one party to another.<sup>19</sup> This is evidenced by the transfer of the BSB-1 satellite from the United Kingdom to Sweden in 1993.<sup>20</sup> If this

<sup>&</sup>lt;sup>14</sup> ICJ Statute, art. 38(1)(d).

<sup>&</sup>lt;sup>15</sup> Bin Cheng, *Studies in International Space Law*, 464 (1997) (Oxford Scholarship Online, 2012), http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780198257301.001.000 1/acprof-9780198257301 [Cheng, Space Law]

<sup>&</sup>lt;sup>16</sup> OST, art. VIII.

<sup>&</sup>lt;sup>17</sup> COLOGNE COMMENTARY ON SPACE LAW, VOL. 1 164 (Stephen Hobe, Bernhard Schmidt-Tedd & Kai-Uwe Schrogl et al. eds., 2009) [COCOSL].

<sup>&</sup>lt;sup>18</sup> Registration Convention, art. II.

<sup>&</sup>lt;sup>19</sup> CoCoSL, 164.

<sup>&</sup>lt;sup>20</sup> United Kingdom, Note verbale from the Permanent Mission of the United Kingdom of Great Britain and Northern Ireland addressed to the Secretary-General, U.N. Doc. ST/SG/SER.E/219 (Apr. 24, 1990); Sweden, Note verbale from the Permanent Mission of Sweden to the United Nations (Vienna) addressed to the Secretary-General, U.N. Doc. ST/SG/SER.E/352 (Feb. 19, 1999).

explicit transfer of registration has not taken place, the legal regime as established on Earth remains the decisive factor in determining the status of ownership.<sup>21</sup>

As Applicant provided all funding<sup>22</sup> and equipment to construct eZ1,<sup>23</sup> it clearly exercised ownership over eZ1 and its component parts on Earth. As there has been no explicit transfer of registration, it retains ownership as per Article VIII of the OST.

Flowing from this concept of ownership is a series of rights, including, *inter alia*, the right to enforce rules in relation to an object, and the rights to supervise the activities taking place aboard that object.<sup>24</sup> As they relate to international space law, these rights are referred to respectively as 'jurisdiction' and 'control'.<sup>25</sup>

### iii. Applicant exercised continuous jurisdiction and control over eZ1

While neither 'jurisdiction' nor 'control' under Article VIII have been defined in the OST or other international space law treaties, highly qualified publicists have provided a comprehensive definition: exercise of 'jurisdiction' relates to the enforcement of legislation and rules in relation to persons and objects, whereas exercise of 'control' means having the exclusive right and actual possibility to supervise the activities of an object in space and, if possible, the personnel thereof, and allows the 'appropriate State party' to exercise 'international responsibility for national activities' and 'continuing supervision' under Article VI.<sup>26</sup> The two terms must be read in tandem to be applied.<sup>27</sup>

<sup>&</sup>lt;sup>21</sup> CoCoSL, 164.

<sup>&</sup>lt;sup>22</sup> Clarifications, ¶1.

<sup>&</sup>lt;sup>23</sup> *Compromis*,  $\P1 \& 3$ .

<sup>&</sup>lt;sup>24</sup> Peter Tzeng, The State's Right to Property Under International Law, 125 YALE L.J. 1805 (2016): See also, John G. Sprankling, The Global Rights to Property, 52 COLUM. J. TRANSNAT'L L. 464, 498 (2014).
<sup>25</sup> CoCoSL, 156.

<sup>&</sup>lt;sup>26</sup> *Id.*, 157.

 $<sup>^{27}</sup>$  Id.

Furthermore, while Article VIII of the OST places obligations on a launching State to register its space object, fulfilling that obligation gives that State the specific rights of jurisdiction and control over that space object.<sup>28</sup>

Applicant enforced rules regarding access to particular areas of eZ1, and in fulfilling a role as the supervising authority over the entire eZ1 facility,<sup>29</sup> Applicant was exercising both jurisdiction and control. In adhering to said rules and restrictions,<sup>30</sup> Respondent demonstrated tacit acceptance of the established rules of Applicant, which further demonstrates Applicant's effective jurisdiction and control.

Furthermore, as eZ1 is registered to Applicant, <sup>31</sup> Article VIII of the OST clearly asserts that it shall retain jurisdiction and control over its object. As such, even after its evacuation of the facility, Applicant maintained jurisdiction and control over eZ1.

# a. Applicant retains jurisdiction over eZ1 even if it cannot demonstrate effective registration

While Article VIII of the OST attributes jurisdiction to the State of registry, registration is not the sole connecting factor to jurisdiction.<sup>32</sup> This can be demonstrated by reference to customary international law.

This Court can apply customary international law when addressing international disputes,<sup>33</sup> and has done so on a number of occasions.<sup>34</sup> Customary international law consists

<sup>&</sup>lt;sup>28</sup> MANFRED LACHS, THE LAW OF OUTER SPACE: AN EXPERIENCE IN CONTEMPORARY LAW-MAKING 66 (Nijhoff Publishers, 2010) (1972) [LACHS, LAW OF OUTER SPACE].

<sup>&</sup>lt;sup>29</sup> *Compromis*, ¶4 & 12.

<sup>&</sup>lt;sup>30</sup> *Id*, ¶12.

<sup>&</sup>lt;sup>31</sup> Clarifications, ¶5.

<sup>&</sup>lt;sup>32</sup> Bin Cheng, Article VI of the 1967 Space Treaty Revisited: "International Responsibility", "National Activities" and "the Appropriate State", 26 J. SPACE L. 7, 21 (1998). <sup>33</sup> ICI Statute, art. 28(1)(b)

<sup>&</sup>lt;sup>33</sup> ICJ Statute, art. 38(1)(b).

<sup>&</sup>lt;sup>34</sup> Military and Paramilitary Activities in and against Nicaragua (Nicar. v. U.S.), Judgment, 1986 I.C.J. Rep. 14 (Jun. 27); Corfu Channel (U.K. v. Alb.), Judgment, 1949 I.C.J. Rep. 4 (Apr. 9) [Corfu Channel]; Case of the S.S. "Lotus," (Fr. V. Turk.) Judgment, 1927 P.C.I.J. Series A. No. 10 (Sep. 7).

of State practice (the objective component) and a sense of legal obligation (*opinio juris*).<sup>35</sup> Regarding the former, while the degree of State practice required to qualify as customary law is not explicitly stated, this Court held that it must be both "extensive and virtually uniform."<sup>36</sup> The latter relies on the State engaging in that practice believing that it is "rendered obligatory by the existence of a rule of law requiring it."<sup>37</sup>

State practice on registration demonstrates that omission or delayed registration of space objects does not absolve States of its rights and obligations over a space object. For example, on 30 January 2017, Austria notified the UN that it had established its national registry regarding specific space objects on 25 August 2015,<sup>38</sup> notwithstanding Austria had already sent notification regarding specific space objects in accordance with Article IV of the Registration Convention, such as its registration of BRITE-A TUGSAT-1 on 13 May 2013, which was previously launched on 25 February 2013.<sup>39</sup> Further, the United Kingdom started sending information referring to its registry and to Article II in 1985<sup>40</sup> but only sent a formal Article II notification of the registry itself in 2015.<sup>41</sup> In each of the above cases, the State's delayed registration did not affect its jurisdiction and control; indeed, that these States maintained jurisdiction and control over its space objects remained undisputed.

<sup>&</sup>lt;sup>35</sup> Nuclear Weapons Advisory Opinion, 253.

<sup>&</sup>lt;sup>36</sup> North Sea Continental Shelf (Federal Republic of Germany/Denmark; Federal Republic of Germany/Netherlands), Judgment, 1969 I.C.J. Rep. 3, 74 (Feb. 20).

<sup>&</sup>lt;sup>37</sup> *Id.*, 77.

<sup>&</sup>lt;sup>38</sup> Austria, Note verbale from the Permanent Mission of Austria to the United Nations (Vienna) addressed to the Secretary-General, U.N. Doc. ST/SG/SER.E/INF/37 (Jan. 30, 2017).

<sup>&</sup>lt;sup>39</sup> Austria, Note verbale from the Permanent Mission of Austria to the United Nations (Vienna) addressed to the Secretary-General, U.N. Doc. ST/SG/SER.E/676 (May 13, 2013).

<sup>&</sup>lt;sup>40</sup> United Kingdom, Note verbale from the Permanent Representative of the United Kingdom of Great Britain and Northern Ireland to the United Nations addressed to the Secretary-General, U.N. Doc. ST/SG/SER.E/129 (Dec. 8, 1989).

<sup>&</sup>lt;sup>41</sup> United Kingdom, Note verbale from the Permanent Representative of the United Kingdom of Great Britain and Northern Ireland to the United Nations addressed to the Secretary-General, U.N. Doc. ST/SG.SER.E/INF/32 (June 24, 2015).

As demonstrated by the aforementioned State practice, even if Applicant failed to register eZ1 as per Article II of the Registration Convention,<sup>42</sup> it would still maintain jurisdiction and control over eZ1.

# iv. Respondent's occupation of eZ1 is a violation of the principles of jurisdiction, control, and ownership

All space objects become non-functional at a certain point. This non-functionality does not impact registration, jurisdiction and control, or ownership of the object in question.<sup>43</sup> Space objects cannot be legally abandoned due to the continuing obligation to supervise activities under Article VI and the retention of jurisdiction under Article VIII of the OST. In exercising both jurisdiction and control over a space object, a State is provided an array of rights and responsibilities. These necessarily require other States to refrain from interfering with said space object.<sup>44</sup>

Applicant demonstrated effective jurisdiction and control over eZ1, both by registering eZ1 as a space object as per Article VIII of the OST, and by its actions in enforcing rules and exercising supervision aboard eZ1. As the ownership of objects launched into outer space, including objects landed or constructed on a celestial body is not affected by their presence in outer space or on a celestial body, Applicant could not forego jurisdiction and control (regardless of the functionality of eZ1). Thus, Respondent's occupation of eZ1 is a violation of Article VIII of the OST.

# 2. By occupying eZ1, Respondent has acted in a way which defeats the object and purpose of the Moon Agreement

Article 18(a) of the VCLT obliges signatory States to a treaty to refrain from acts which would defeat the object and purpose of that treaty.<sup>45</sup> The VCLT stipulates that the preamble of

 <sup>&</sup>lt;sup>42</sup> Convention on Registration of Objects Launched into Outer Space, Sept. 15, 1976, 28 U.S.T.
 695, 1023 U.N.T.S. 15, arts. II and III [Registration Convention].

<sup>&</sup>lt;sup>43</sup> CoCoSL 154.

<sup>&</sup>lt;sup>44</sup> LACHS, LAW OF OUTER SPACE, 66.

<sup>&</sup>lt;sup>45</sup> VCLT, art 18(a).

a treaty ought to be considered when determining a treaty's object and purpose.<sup>46</sup> The Preamble of the Moon Agreement provides clear evidence of its object and purpose, as it emphasises developing cooperation among States in the use of the Moon, in adhering to the principles of ownership outlined in the OST, and those more general principles of international law which facilitate international cooperation between States.<sup>47</sup> These basic principles of cooperation and adherence with international law, both general and space-specific, can be considered synonymous with the object and purposes of the act.<sup>48</sup>

As signatory to the Moon Agreement,<sup>49</sup> Respondent is obligated to refrain from acting in contravention of the Agreement's basic principles, as this would defeat the object and purpose of that Agreement.<sup>50</sup> As demonstrated above, Applicant has exhibited continuous exercise of jurisdiction and control, and ownership over eZ1. By occupying eZ1 with no express permission from Applicant, Respondent has acted in a manner which defeats the object and purpose of the Moon Agreement, that is, to develop the rules in the OST, ARRA and Liability Convention and to further develop cooperation among States in the use of the Moon.<sup>51</sup>

# *3. Therefore, Applicant has breached international space law by occupying eZ1*

The space treaties form *lex specialis derogate legi generali*, meaning a more specific law governing a particular legal issue takes precedence over a more general law. On the legal status of space objects,<sup>52</sup> the terms outlined in the OST, the ARRA, and the Moon Agreement

<sup>&</sup>lt;sup>46</sup> VCLT, art. 31(2); *Report of the International Law Commission to the General Assembly*, 21 U.N. GAOR Supp. No. 9, at 221, U.N. Doc. A/CN.4/185 (1966) [ILC Report 1966].

<sup>&</sup>lt;sup>47</sup> Moon Agreement, Preamble, arts. 2 &12.

<sup>&</sup>lt;sup>48</sup> COLOGNE COMMENTARY ON SPACE LAW, VOL. 2 337 (Stephen Hobe, Bernhard Schmidt-Tedd & Kai-Uwe Schrogl et al. eds., 2013) [COCOSL2].

<sup>&</sup>lt;sup>49</sup> *Compromis*, ¶19.

<sup>&</sup>lt;sup>50</sup> VCLT, art. 18(a).

<sup>&</sup>lt;sup>51</sup> Moon Agreement, Preamble.

<sup>&</sup>lt;sup>52</sup> LACHS, LAW OF OUTER SPACE, 114; see also HUGO GROTIUS, DE JURE BELLI AC PACIS. LIBRI TRES, BOOK II (1625) ¶XXIX which asserts, "What rules ought to be observed in such cases [i.e. where parts of a document are in conflict]. Among agreements which are equal...that

are clear and unambiguous on the status of jurisdiction and control, and ownership, in addition to the rights and responsibilities which accompany these concepts.

The space treaties do not bestow any entity with the right to collect, occupy, or utilize space objects, including debris, belonging to other States. Even defunct space objects and its component parts remain under the control of the owner, unless specifically renounced.<sup>53</sup>

As demonstrated above, Applicant has violated the principles outlined in the OST, the ARRA, and the Moon Agreement. There can be no excusable reason for Respondent to have occupied eZ1, thus it has breached international law.

### 4. Respondent's occupation of eZ1 is a violation of general principles of law

Even if this honourable Court determines that the space treaties do not form *lex specialis* and wish to look beyond them for the purposes of determining the applicable law, general principles of maritime law demonstrate that Respondent's actions in occupying eZ1 were a violation of international law.

# i. Respondent has violated general principles of law, as they exist in maritime law

As mentioned, this Court may apply general international law when addressing international disputes.<sup>54</sup> Where issues of jurisdiction are considered, principles of maritime law have been utilized to identify rules of international law.<sup>55</sup>

In maritime law, it has been demonstrated that actual possession of a vessel or object does not confer constructive possession, nor disentitle Applicant's ownership of that vessel or object. The VCLT identifies that in interpreting a treaty, one may consider "any subsequent practice in the application of the treaty" thus establishing both context and agreement for that

should be given preference which is most specific and approaches most nearly to the subject in hand, for special provisions are ordinarily more effective than those that are general."

<sup>&</sup>lt;sup>53</sup> Ram Jakhu, *Iridium-Cosmos Collision and Its Implications for Space Operations*, in YEARBOOK ON SPACE POLICY 268-269 (Kai-Uwe Schrogl et al. eds., 2009).

<sup>&</sup>lt;sup>54</sup> ICJ Statute, art. 38(1)(b).

<sup>&</sup>lt;sup>55</sup> Cheng, Space Law, 71.

particular interpretation.<sup>56</sup> Utilizing the landmark US ruling in *Zych v. Unidentified, Wrecked and Abandoned Vessel, Believed to be the SB "Lady Elgin*"<sup>57</sup>, the Court found that intent to abandon could not be inferred from the conduct of the insurers of the ship. The court held that the insurer's failure to take affirmative action to recover the vessel for the 130 years following the sinking did not amount to abandonment as the technology to locate and salvage the vessel did not exist at the time.<sup>58</sup>

While Applicant did make a public announcement regarding its discontinuation of activities on eZ1, that did not constitute a renouncement of ownership. Applicant was compelled to leave eZ1 due to Respondent's withdrawal of support and could reasonably have returned to eZ1 in the near future. Therefore, Applicant's conduct does not indicate abandonment. Furthermore, the very allegation that Applicant abandoned eZ1<sup>59</sup> implies that Respondent acknowledges that Applicant is the original owner. As stated earlier, the space treaties provide for retention of jurisdiction and control as well as ownership in perpetuity. In acknowledging Applicant's authority over eZ1, Respondent has publicly acknowledged that ownership of eZ1 rightfully lies with Applicant alone.

#### B. Respondent's use of eZ1 violated international law

It is a fundamental principle of international space law that, if a space object is found beyond the limits of a State party to the Treaty, the party who finds that object will notify the launching authority and help facilitate the return of that object to the State of registry. These principles are outlined in the ARRA, which is an elaboration of Article VIII of the OST.<sup>60</sup>

<sup>&</sup>lt;sup>56</sup> VCLT, art 31(3)(b).

<sup>&</sup>lt;sup>57</sup> Zych v. Unidentified, Wrecked and Abandoned Vessel, Believed to be the SB "Lady Elgin", 755 F. Supp. 213 (N.D.III.1990).

<sup>&</sup>lt;sup>58</sup> *Id*, 216.

<sup>&</sup>lt;sup>59</sup> Compromis, ¶15.

<sup>&</sup>lt;sup>60</sup> ARRA, Preamble.

In failing to return any component parts of eZ1 to Applicant (for instance, the hard drive) and instead accessing and utilizing them,<sup>61</sup> Respondent has violated these principles.

### 1. Respondent's actions were in violation of Article V of the ARRA

Elaborating on Article VIII of the OST, which states that "...objects or component parts found beyond the limits of the State Party to the Treaty on whose registry they are carried shall be returned to that State Party,"<sup>62</sup> Article V of the ARRA establishes that, "[e]ach Contracting Party which receives information or discovers that a space object or its component parts has returned to... any other place not under the jurisdiction of any State, shall notify the launching authority and the Secretary-General of the United Nations." Article V goes on to state that, "[u]pon request of the launching authority, objects... found beyond the territorial limits of the launching authority shall be returned to or held at the disposal of representatives of the launching authority."<sup>63</sup>

The term 'launching authority' has been construed as a more expansive and comprehensive term in comparison to State of Registry.<sup>64</sup> Though the ARRA does specify that a request for the object to be returned must be made by the launching authority, this has not occurred in State practice, as demonstrated by Japan's discovery of a space object in 1999, when it notified the UN Secretary General and the US (as the perceived launching authority). In this case, Japan recovered said object without the request of the launching authority and then returned it to the US.<sup>65</sup>

As Applicant has registered eZ1<sup>66</sup> and clearly procured the launch of eZ1,<sup>67</sup> Applicant can be identified as the 'launching authority' of eZ1 for the purposes of the ARRA. In using

<sup>&</sup>lt;sup>61</sup> Compromis, ¶14.

<sup>&</sup>lt;sup>62</sup> OST, art. VIII.

<sup>&</sup>lt;sup>63</sup> ARRA, art. 5.

<sup>&</sup>lt;sup>64</sup> LACHS, LAW OF OUTER SPACE, 80.

<sup>&</sup>lt;sup>65</sup> Frans G. von der Dunk, *A Sleeping Beauty Awakens: The 1968 Rescue Agreement after Forty Years*, 34 J. SPACE L. 428, 427-31 (2008).

<sup>&</sup>lt;sup>66</sup> Clarifications, ¶5.

<sup>&</sup>lt;sup>67</sup> Compromis, ¶1.

eZ1 and its component parts, including the hard drive, instead of helping to facilitate the return of the objects it found to Applicant as launching authority, Respondent has violated Article V of the ARRA.

### II. RESPONDENT DID VIOLATE INTERNATIONAL LAW BY REFUSING TO TRANSPORT THE CREW AND TOURISTS FROM EZ1 TO EARTH

Under international law, there is an obligation that States provide assistance to members of other States who are stranded and in distress. This obligation is outlined clearly in the ARRA, the Moon Agreement, and customary international law.

As Applicant incurred costs as a direct result of Respondent's breaches of international law, Respondent is required to compensate Applicant for its losses under customary international law. According to Article 38 of this Court's statute, customary international law is a primary source of international law<sup>68</sup> and hence legally binding upon all States.

# A. Respondent violated international law by not transporting crew and tourists from eZ1 to Earth

Respondent's refusal to transport any non-Azasi crew or tourists from eZ1 to Earth despite having explicit knowledge that Applicant was unable to provide support for them is a direct violation of Article 4 of the ARRA as well as humanitarian principles that have crystalized into customary international law.

### 1. Respondent violated Article 4 of the ARRA

As per Article 31 of the VCLT, a treaty must be interpreted in light of its object and purpose. As such, it is important to note that in the Preamble of the ARRA, the agreement's purpose is to further develop and solidify the legal obligations set forth in the OST regarding the launch of astronauts and space objects into outer space.<sup>69</sup> This development is "prompted by sentiments of humanity" and calls for the "rendering of all possible assistance to astronauts

<sup>&</sup>lt;sup>68</sup> ICJ Statute, art. 38(1)(b).

<sup>&</sup>lt;sup>69</sup> ARRA, preamble; VCLT, art. 31.2.

in the event of accident, distress or emergency landing" and "the prompt and safe return of astronauts."<sup>70</sup>

Article 4 of the ARRA states "if owing to accident, distress, emergency or unintended landing, the personnel of a spacecraft... have been found on the high seas or in any other place not under the jurisdiction of any State, they shall be safely and promptly returned to representatives of the launching authority."<sup>71</sup> Accordingly, the application of this provision requires that: (i) the persons requiring rescuing are considered 'personnel of a spacecraft'; (ii) those personnel are there owing to accident, distress, emergency or unintended landing; and (iii) the entity seeking return of the personnel is the launching authority. When these conditions are met, the State party to the treaty has an unequivocal obligation to promptly return the personnel to the launching authority.<sup>72</sup> Accordingly, Respondent violated Article 4 and acted in breach of its obligations under the ARRA by failing to promptly return the crew and tourists.

i. The non-Azasi crew and tourists are 'personnel of a spacecraft'

Although 'astronauts' and 'personnel of a spacecraft' are both used in the ARRA, neither term is defined in the various international space treaties.<sup>73</sup> To help determine this definition, we must utilize subsidiary means of determining the law, including the teachings of highly respected publicists and judicial decisions.<sup>74</sup>

Professor Bin Cheng asserted that the term 'astronaut' is "descriptive rather than technical, and refers to any person who ventures into outer space or who travels on board a spacecraft."<sup>75</sup> He further states that although 'personnel of a spacecraft' in its ordinary meaning likely excludes passengers, it was intended to include "all persons on board or attached to a

<sup>&</sup>lt;sup>70</sup> Id.

<sup>&</sup>lt;sup>71</sup> ARRA, art. 4.

<sup>&</sup>lt;sup>72</sup> LACHS, LAW OF OUTER SPACE, 78.

<sup>&</sup>lt;sup>73</sup> Cheng, Space Law, 457.

<sup>&</sup>lt;sup>74</sup> ICJ Statute, art. 38(1)(d).

<sup>&</sup>lt;sup>75</sup> Cheng, Space Law, 457.

space object, whether or not forming part of its personnel."<sup>76</sup> This thinking was re-emphasised by Judge Manfred Lachs, who stated that all members of the crew "aboard a space vehicle should share a common legal status," and it would be logical to accord passengers the same status.<sup>77</sup> Furthermore, the humanitarian nature of the ARRA "imposes an extensive interpretation, whereby all persons aboard a space vehicle should be" included.<sup>78</sup>

Applying State practice as evidence of custom, it is also clear that States do afford the status of 'astronaut' to non-mission critical personnel. This was demonstrated by the United States in the case of civilian high school teacher Christa McAuliffe, who was posthumously awarded the Congressional Space Medal of Honour in 2004 – an award specifically reserved for any "astronaut who in the performance of his duties has distinguished himself by exceptionally meritorious efforts and contributions to the welfare of the Nation and of mankind."<sup>79</sup>

As members critical to the overall mission of sefarite production,<sup>80</sup> the crew working on eZ1 would be considered astronauts or space personnel within Article 4 of the ARRA. While the tourists on eZ1 were not members of the crew, they were on board the spacecraft when it travelled into outer space. The interpretations of these terms provided by the most highly respected publicists, in addition to the humanitarian sentiments prompting the ARRA, as well as prior State practice, demonstrate that the tourists are also 'space personnel' under Article 4.

<sup>&</sup>lt;sup>76</sup> *Id.*, 507-509.

<sup>&</sup>lt;sup>77</sup> LACHS, LAW OF OUTER SPACE, 67.

<sup>&</sup>lt;sup>78</sup> *Id.*, 75.

<sup>79</sup> Congressional Space Medal Honour of (2010)51 U.S.C. 30901, § https://www.govinfo.gov/content/pkg/USCODE-2011-title51/html/USCODE-2011-CONGRESSIONAL title51.htm; NASA, **S**PACE MEDAL OF HONOUR, https://history.nasa.gov/spacemedal.htm; <sup>80</sup> Compromis,  $\P8$ .

# ii. The personnel of a spacecraft require rescuing owing to distress and emergency

While Article 4 of the ARRA does not define 'distress' or 'emergency', Article 31 of the VCLT provides that when interpreting treaties, the interpretation must be done "in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose."<sup>81</sup>

Considering the importance placed on the humanitarian values of the ARRA, as articulated in the Preamble,<sup>82</sup> 'distress' has been defined as a situation "where no accident has occurred (yet), but nevertheless the persons involved are 'in trouble', in that an accident may threaten, or at least cannot be excluded." <sup>83</sup> Further, an 'emergency' has been considered as "a serious situation or state of things unexpectedly arising and demanding immediate action."<sup>84</sup>

It is generally agreed by all astronauts that outer space, including the Moon, is a perilous and unforgiving place that does not permit any mistakes to be made.<sup>85</sup> In the outer space environment, NASA has outlined that space-farers are constantly at risk of exposure to extreme heat and cold cycling, ultra-vacuum, atomic oxygen, and high energy radiation.<sup>86</sup> Even with the infrastructure of eZ1, the crew and tourists were at risk of being in a dangerous and life-threatening position.

The crew and the tourists were stranded on eZ1 as a result of Respondent refusing to transport non-Azasi space personnel back to earth. Respondent intentionally terminated

<sup>&</sup>lt;sup>81</sup> VCLT, art. 31(1).

<sup>&</sup>lt;sup>82</sup> Concerning the priority of the preamble as a guide for treaty interpretation, see ILC Report 1966, at 221 (stating that "[t]he preamble forms part of a treaty for purposes of interpretation is too well settled to require comment.")

<sup>&</sup>lt;sup>83</sup> CoCoSL2, 45.

<sup>&</sup>lt;sup>84</sup> Id.

<sup>&</sup>lt;sup>85</sup> Paul Larsen, *Application of the Precautionary Principle to the Moon*, 71 J. AIR L. & CoM. 295, 298 (2006).

<sup>&</sup>lt;sup>86</sup> NASA ISS Program Science Office, *The International Space Station (ISS) Researcher's Guide to Space Environmental Effects* (Mar. 15, 2015), https://www.nasa.gov/sites/default/files/files/NP-2015-03-015-JSC\_Space\_Environment-ISS-Mini-Book-2015-508.pdf.

transportation services with the intent of abandoning the crew and tourists in the ultrahazardous environment of outer space. The crew and tourists were thus clearly stranded on eZ1 in a situation of distress and emergency with no conceivable transportation back to Earth. As such, Respondent's refusal to transport the spacecraft personnel from eZ1 to Earth qualifies as 'distress' or 'emergency' for the purposes of triggering the obligation to rescue under Article 4 of the ARRA.

#### iii. Applicant is the launching authority of the spacecraft

Article 6 of the ARRA asserts that the term 'launching authority' shall refer to the State responsible for launching.<sup>87</sup> While this is different from the term 'launching State' as utilized in other space treaties,<sup>88</sup> it has been asserted that these concepts are similar, and 'launching authority' can be attributed to the State which exercises jurisdiction and control.<sup>89</sup>

As Applicant contracted with Respondent to utilize its spacecraft for the purposes of transporting personnel, equipment, and other resources to the Moon, it exercised jurisdiction over those items while it was there. As such, it was responsible for the launch, and is considered the launching authority for the purposes of the ARRA.

### iv. The requirement to act 'promptly' under the ARRA necessitated that Respondent be the State to assist the space personnel aboard eZ1

Though the meaning of 'prompt' is not provided in the ARRA, the context of the object and purpose of the agreement<sup>90</sup> make it clear that the term does not allow State parties to delay the return of personnel. As the term 'promptly' is not utilized in the corresponding article regarding the return of space objects or its component parts under Article 5 of ARRA,<sup>91</sup> it can

<sup>&</sup>lt;sup>87</sup> ARRA, art. 6.

<sup>&</sup>lt;sup>88</sup> For example, Convention on International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 24 U.S.T. 2389, 961 U.N.T.S. 187, art. I(c) [Liability Convention]. <sup>89</sup> Cheng, Space Law, 799-800.

<sup>&</sup>lt;sup>90</sup> VCLT, art. 31.

<sup>&</sup>lt;sup>91</sup> ARRA, art. 5.

be inferred that there is a heightened degree of urgency when rescuing and returning spacecraft personnel.

Respondent had the facilities and infrastructure in place to rescue the crew and tourists, as demonstrated by the fact that it had transported all of its own crew and personnel back to Earth around the same time<sup>92</sup> By refusing to transport spacecraft personnel on eZ1 back to Earth when it was best placed to provide assistance, Respondent forced Applicant to negotiate with other States to organize the return of the crew and tourists at eZ1, thereby delaying the return of those personnel, in violation of the ARRA.

# v. Respondent violated Article 4 of the ARRA by not promptly returning the stranded eZ1 spacecraft personnel back to Earth

Since the conditions in Article 4 of the ARRA were satisfied, Respondent had a clear obligation to promptly return the space personnel aboard eZ1 back to Earth .<sup>93</sup> In refusing to transport said personnel and subsequently endangering their lives, Respondent violated both the explicit requirements set forth under Article 4, as well as the overall object and purpose of the ARRA.

#### 2. Respondent violated customary international law

According to the principles of customary international law, there is a longstanding and historical requrement that States render assistance to others in situations of distress. Such principles of customary international law, once shown to exist, are binding upon all States.<sup>94</sup>

# i. There are principles of customary international law requiring States to render assistance in the event of distress or emergency

As stated earlier, this Court can apply customary international law when addressing international disputes,<sup>95</sup> and such principles of customary international law are demonstrated to exist when one can show consistent State practice (the objective component) and a sense of

<sup>&</sup>lt;sup>92</sup> *Compromis*, ¶12.

<sup>&</sup>lt;sup>93</sup> FRANCIS LYALL & PAUL LARSEN, SPACE LAW: A TREATISE 140-141 (2d Ed., 2009).

<sup>&</sup>lt;sup>94</sup> Cheng, Space law, 464.

<sup>&</sup>lt;sup>95</sup> ICJ Statute, art. 38(1)(b).

legal obligation (*opinio juris*).<sup>96</sup> Such consistent State practice and legal obligation can be demonstrated in the range of international instruments which have been created to govern such situations.

The humanitarian concept of rendering assistance in situations of distress can be seen in its current form as early as the Geneva Red Cross Convention, 1864,<sup>97</sup> wherein participating States accepted the obligation to take care of the wounded, the sick and the shipwrecked in war at sea. This was subsequently included in the Red Cross Convention, 1906,<sup>98</sup> and again in the still operating Geneva Red Cross Convention (II), 1949.<sup>99</sup>

This principle also transferred over to the maritime and aviation environments. Article 98(1) of the United Nations Convention on the Law of the Sea, 1982,<sup>100</sup> requires masters of vessels sailing under the flag of signatory States to render assistance to those in distress while at sea, whereas Article 25 of the Chicago Convention on International Civil Aviation, 1944<sup>101</sup> asserts that States must "provide such measures of assistance" as may be practicable to any aircraft in distress.

The International Law Commission ("ILC"), a group of the most highly qualified publicists and whose work has been referred to by this Court in past decisions,<sup>102</sup> asserted in

<sup>&</sup>lt;sup>96</sup> Nuclear Weapons Advisory Opinion, 253.

<sup>&</sup>lt;sup>97</sup> Convention for the Amelioration of the Condition of the Wounded in Armies in the Field, Aug. 22, 1864, 75 U.N.T.S. 31, art. 6.

<sup>&</sup>lt;sup>98</sup> *Id.*, art. 2(1)

<sup>&</sup>lt;sup>99</sup> Geneva Convention Relative to the Treatment of Prisoners of War, Aug. 12, 1949, 75 U.N.T.S. 135; V. S. Mani, The Agreement on the Rescue of Astronauts, the return of Astronauts and the return of objects launched into outer space 1968, 2 (25 September 2003)

<sup>&</sup>lt;sup>100</sup> United Nations Convention on the Law of the Sea, Dec. 10 1982, 21 U.N.T.S. 1833, art. 98(1).

<sup>&</sup>lt;sup>101</sup> Convention on International Civil Aviation, Dec. 7 1944, 15 U.N.T.S. 295, art. 25.

<sup>&</sup>lt;sup>102</sup> For example, the ILC draft Articles on State Responsibility were expressly cited in the case of Gabčíkovo-Nagyamaros Project (Hun. v. Slov.), Judgment, 1997, I.C.J. Rep. 7 ¶47 (Sep. 25).

1956 that these principles of rendering assistance to those in distress qualified as customary international law.<sup>103</sup>

Given that the crew and tourists were clearly stranded on eZ1 in an emergency situation, and that Respondent was made aware of this fact by Applicant's public announcement that it was evacuating the facility,<sup>104</sup> a responsibility under customary international law lay with Respondent to assist those crew and tourists. Respondent's explicit refusal to transport them from eZ1 to Earth<sup>105</sup> was in direct contravention of clearly established principles of customary international law of rendering assistance to persons stranded and in 'distress' or 'emergency'.

# **B.** Respondent is obligated to compensate Applicant for the costs it incurred due to the above mentioned breaches of international law.

According to the ILC's Articles on State Responsibility ("ASR"),<sup>106</sup> where it is demonstrated that a State has committed an act in breach of its international obligations, it is required to compensate States who suffered a loss as a result of that breach. The ASR apply to the current case, and necessitate that Respondent compensates Applicant for the costs which it incurred to Innovative Space Solutions ("ISpS").<sup>107</sup>

### 1. The ASR are a codification of customary international law

The ILC began work on the issue of State responsibility in 1949.<sup>108</sup> In 2001, the ILC completed the Draft ASR with commentary.<sup>109</sup> On 12 December 2001, the United Nations General Assembly accepted the text in Resolution 56/83.<sup>110</sup> In addition to the ILC being

<sup>&</sup>lt;sup>103</sup> ILC *Articles concerning the Law of the Sea with Commentaries*, 11 U.N. GAOR Supp. No. 9 at 281, U.N. Doc. A/CN.4/104.

<sup>&</sup>lt;sup>104</sup> Compromis, ¶12.

<sup>&</sup>lt;sup>105</sup> *Id.*, ¶13.

<sup>&</sup>lt;sup>106</sup> ILC Articles on Responsibility of States for Internationally Wrongful Acts with commentaries, 53 U.N. GAOR Supp. No. 10, U.N. Doc. A/56/10 (2001) [ASR]. <sup>107</sup> Compromis, ¶13.

<sup>&</sup>lt;sup>108</sup> Draft Articles on State Responsibility for International Wrongful Acts, United Nations Audiovisual Library Collection, 2012.

 $<sup>^{109}</sup>$  *Id*.

<sup>&</sup>lt;sup>110</sup> G.A. Res. 56/83, Responsibilities of States for Internationally Wrongful Acts (Dec. 12, 2001).

regarded as a group of the most highly qualified experts regarding international law, both this Court and national courts have specifically relied upon the ASR.<sup>111</sup> Consistent and detailed comments from individual States satisfy the *opinio juris* component and demonstrate their widespread acceptability as a rule of customary international law.<sup>112</sup>

### 2. The ASR necessitate the compensation of Applicant by Respondent

Under the ASR, should a State commit a wrongful act, it "is under obligation to make full reparation for the injury caused by the [internationally wrongful] act."<sup>113</sup> In order for an act to constitute an 'internationally wrongful act' that triggers reparation, two elements must be satisfied:<sup>114</sup> first, the act must be attributable to the State,<sup>115</sup> and second, the act must "constitute a breach of an international obligation of the State."<sup>116</sup> As described in the Commentary of the ASR, every internationally wrongful act of a State entails the responsibility of that State<sup>117</sup> and, should that internationally wrongful act be attributed to that State, reparation in the form of both restitution and compensation<sup>118</sup> is applicable.

<sup>&</sup>lt;sup>111</sup> See Case Concerning Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Cro. v. Ser), 2015 I.C.J. 3 (Feb. 6) [Genocide]; Obligations Concerning Negotiations Relating to Cessation of the Nuclear Arms Race and to Nuclear Disarmament (Marshall Islands v. U.K.) 2016 I.C.J. 833 (Oct. 5). See also national cases that discuss the ASRs including *Compagnie Noga D'Importation Et D'exp, S.A. v. Russian Federation*, 361 F3d 676 (2d Cir. 2004); *Villeda Aldana v. Fresh Del Monte Produce, Inc.*, 305 F. Supp. 2d 1285 (S.D. Fla 2003); *La Générale des Carrières et des Mines v FG Hemisphere Associates LLC*, 1 All England Law Reports 409 (2013); *R. v. Tan*, [2014] B.C.J. No. 26 (British Columbia Court of Appeals).

<sup>&</sup>lt;sup>112</sup> G.A. Res. 65/96, Responsibility of States for internationally wrongful acts: Comments and Information received from Governments (May 14 2010).

<sup>&</sup>lt;sup>113</sup> *Id.*, ¶31. See also Case Concerning the Factory at Chorzów (F.R.G. v. Pol.), Judgment, 1928 P.C.I.J., Ser. A, No. 17 (Sept. 13) [Factory at Chorzów]; Armed Activities on the Territory of the Congo (Dem. Rep. Congo v. Uganda), Judgment, 2005 I.C.J. 168, (Dec. 19), ¶259 [Congo]. <sup>114</sup> ASR, art. 2. G.A. Res. 56/83, Responsibilities of States for Internationally Wrongful Acts (Dec. 12, 2001).

<sup>&</sup>lt;sup>115</sup> *Id.*, art. 2(a).

<sup>&</sup>lt;sup>116</sup> *Id.*, art. 2(b).

<sup>&</sup>lt;sup>117</sup> *Id.*, art. 1.

<sup>&</sup>lt;sup>118</sup> *Id.*, art. 31.

Regarding the first of these elements, Respondent's explicit refusal to assist in transporting back the crew and the passengers qualifies as an act which can be attributable to the State. Regarding the second element, the act of refusing assistance when it was in the best position to facilitate the prompt return of the crew and passengers constitutes a breach of Respondent's international obligation under both the ARRA and customary international law. In order to rectify this breach in a prompt manner, Applicant was required to reach out to the only other provider capable and willing to carry out said rescue,<sup>119</sup> and pay whatever fee it demanded.

As a result, Respondent is obligated to reimburse Applicant for the costs which it incurred as a result of Respondent's breach of international law – namely, those costs paid to ISpS to transport the crew and tourists from eZ1 to Earth.

### III. APPLICANT IS NOT LIABLE UNDER INTERNATIONAL LAW FOR DAMAGES FOR THE LOSS OF AZASI 7 AND LAUNCH PAD

Applicant is not liable for damages caused by the loss of Azasi 7 and the launch pad as there is no evidence that it caused this event, nor any applicable law which could potentially attribute liability to them.

# A. Applicant is not liable for damages to Azasi 7 and launch pad under international law

The claim brought by Respondent against Applicant for liability under international law for damages for the loss of Azasi 7 has no basis. Neither the Liability Convention, the OST, nor customary international law impose liability upon Applicant. In addition to these treaties not covering the damage, the damage is not attributable to Applicant, and Applicant had no duty to inform Respondent of the nature of the cargo as it had no reason to believe the cargo was dangerous. While it is an uncontested fact that Applicant loaded infused sefarite as cargo

<sup>&</sup>lt;sup>119</sup> Clarifications, ¶13.

onto the spacecraft, there is no conclusive evidence to indicate that this caused the aforementioned damage.

#### 1. Applicant is not liable under the Liability Convention

The Liability Convention deals specifically with issues of liability, developing the principles outlined in Article VII of the OST.<sup>120</sup> Article III of the Liability Convention asserts that "[i]n the event of damage being caused elsewhere than on the surface of the earth to a space object of one launching State... by a space object of another launching State, the latter shall be liable only if the damage is due to its fault or the fault of persons for whom it is responsible."<sup>121</sup> In order for liability to attach: (i) there must be damage; (ii) the damage must be caused by a space object; and (iii) the damage must be due to the fault of the space object's launching State. While damage can be demonstrated, the other pre-requisites to trigger liability have not been met.

As stated above, the legal maxim *lex specialis derogate legi generali* stipulates that a more specific law governing a particular legal issue takes precedence over a more general law. Both Applicant and Respondent are bound to adhere to the Liability Convention for this matter.

#### i. The damage was not caused by a space object

For the Liability Convention to apply, the damage being alleged must have been caused by a space object.<sup>122</sup> While the term 'space object' is defined in the Liability Convention as, "includ[ing] component parts of space object[s] as well as its launch vehicles and parts thereof," <sup>123</sup> there is no comprehensive definition of the term itself. Accordingly, this Court ought to refer to subsidiary means of determining of the term. Professor Bin Cheng asserts that the term space object "encompasses spacecraft, satellites, and anything that human beings

<sup>&</sup>lt;sup>120</sup> Liability Convention, Preamble.

<sup>&</sup>lt;sup>121</sup> *Id.*, art. III.

<sup>&</sup>lt;sup>122</sup> Liability Convention, art. III.

<sup>&</sup>lt;sup>123</sup> *Id.*, art. I(d)

launch or attempt to launch into space."<sup>35</sup> Therefore, a space object must be a man-made object which is launched or intended to be launched into outer space.<sup>124</sup>

As the oxygen-infused sefarite was both a natural mineral and an item which did not originate on Earth, it would not fit within this definition of space object. To provide items originating in space with the definition of 'space object' as per the Liability Convention would be to stretch the meaning of this word beyond that which was envisioned by the drafters of the convention. As such, a distinction must be made between 'space object' as per the Liability Convention and 'object in space.' Because the term 'space object' cannot be attached to the sefarite, Article III of the Liability Convention cannot be triggered to attribute liability to Applicant.

# ii. The damage was not due to the fault of Applicant, nor the fault of persons for whom it is responsible

Any claim made by Respondent towards Applicant under Article III of the Liability Convention is untenable, as Applicant was not at fault for the damage caused to Azasi 7 or the launchpad.

When attributing fault under international space law,<sup>125</sup> one must consider not only the direct impact or action of an activity but also "the context of causality, which means that there must be proximate causation between the damage and the activity from which the damage resulted."<sup>126</sup> According to Judge Lachs, "[t]o produce legal effect, the 'damage' thus defined

<sup>&</sup>lt;sup>124</sup> Bin Cheng, *International Responsibility and Liability for Launching Activities*, XX Annals of Air and Space Law 297 (1995), 297.

<sup>&</sup>lt;sup>125</sup> Includes the relevant provisions of both the Liability Convention and the OST (art. VII).

<sup>&</sup>lt;sup>126</sup> Carl Christol, *International Liability for Damage Caused by Space Objects*, (1980) 74 AM. J. INT'L L. 346, at 362 (quoting Gorove, Cosmos 954: Issues of Law and Policy, 6 J. SPACE L. 141 (1978)) [Christol]. Christol further notes that "clearly the term 'cause' should only require a causal connection between the accident [or action] and the damage." See also VALERIE KAYSER LAUNCHING SPACE OBJECTS: ISSUES OF LIABILITY AND FUTURE PROSPECTS 48 (Kluwer Academic Pubs. 2001) stating that "[d]amage which finds its cause in the space object concerned, whether it is primary or secondary, would in principle be covered by the Convention."

must be caused by the space object or component parts of it, or by the launch vehicle or parts thereof."<sup>127</sup> The causal link includes both cause-in-fact and proximate cause.

In the separate opinion of Judge de Castro in *Western Sahara*<sup>128</sup> and thereafter affirmed in the *Genocide* case,<sup>129</sup> this Court has made clear that it is the duties of the parties to put forward facts and submit the evidence that it considers favourable to its claims, thus allowing the Court to take these into consideration. The burden to provide evidence to substantiate a claim is on the party bringing that claim.

In this instance, it must therefore be established that the activity, the loading of the infused sefarite, was the cause of the damage. While a "panel of Azasi scientists... concluded that the enhanced sefarite was potentially unstable until bonded with other substances,"<sup>130</sup> there is no direct indication, or even a positive assertion by the Azasi scientists, that the infused sefarite was the cause of the explosion. There is no evidence that the panel of scientists explored other potential causes of the accident and, if they did, whether they identified any potential alternate causes. Respondent has failed to satisfy its evidentiary burden as to the cause of the accident, and thus no causation and by proxy, no fault, can be attributed to Applicant.

# a. Respondent could not reasonably foresee that the infused sefarite could cause damage to another space object

Under both international law and Article III of the Liability Convention, a determination of proximate cause requires an inquiry into the foreseeability of the harm<sup>131</sup> and exists when the consequences of a breach of an obligation are natural and foreseeable.<sup>132</sup> The

<sup>&</sup>lt;sup>127</sup> LACHS, LAW OF OUTER SPACE, 115.

<sup>&</sup>lt;sup>128</sup> Western Sahara, Advisory Opinion, 1975 I.C.J. Rep. 12, 138 (Oct. 16) (separate opinion by de Castro, J.).

<sup>&</sup>lt;sup>129</sup> Genocide, ¶172.

<sup>&</sup>lt;sup>130</sup> Compromis, ¶14.

<sup>&</sup>lt;sup>131</sup> Stephan Wittich, *Compensation*, MAX PLANCK ENCYCLOPAEDIA OF PUBLIC INTERNATIONAL LAW, http://opil.ouplaw.com/home/EPIL, ¶17 [Wittich]; Christol, 362.

<sup>&</sup>lt;sup>132</sup> BIN CHENG, GENERAL PRINCIPLES OF LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS, 225 (1953), 250-51 [Cheng, General Principles].

foreseeability of an act is based on the standard of the reasonable person; therefore it only requires general harm, rather than specific harm.<sup>133</sup> Strict foreseeability is not the criterion for liability in space law, given the difficulty, if not impossibility, of foreseeing all forms of damage that may be caused.<sup>134</sup>

Applicant had carried out extensive testing which demonstrated that enhanced sefarite was as safe as the unenhanced purified ore.<sup>135</sup> Given this lack of foreseeability of volatility, in addition to the lack of evidence that volatility of enhanced sefarite actually exists or caused the damage, Applicant cannot be held liable for the damage.

#### 2. Applicant is not liable under the OST

Article VII of the OST asserts that a launching State is internationally liable for damage to another State party. Internationally liable means liability under international law and is therefore fault-based liability, which requires an act or omission to cause the damage.<sup>136</sup>

As outlined above, to determine liability, there must be a clear causal link between an activity and the resulting damage.<sup>137</sup> There is no conclusive evidence to show any causative link between the infused sefarite and the damage caused to Azasi 7 or the launch pad. Without said causal link, Applicant cannot be held liable for the resulting damage.

#### i. Applicant had no duty to consult Respondent under the OST

While Article IX of the OST provides that "...if a State Party to the Treaty has reason to believe that an activity... including the Moon and other celestial bodies, would cause potentially harmful interference with activities of other States Parties in the peaceful exploration and use of outer space... it shall undertake appropriate international consultations

<sup>&</sup>lt;sup>133</sup> *Id.*; See also Corfu Channel.

<sup>&</sup>lt;sup>134</sup> Christol, 362.

<sup>&</sup>lt;sup>135</sup> Compromis, ¶14.

<sup>&</sup>lt;sup>136</sup> IAN BROWNLIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW 503 (7<sup>th</sup> ed., 2008).

<sup>&</sup>lt;sup>137</sup> LACHS, LAW OF OUTER SPACE, 115.

before proceeding with any such activity or experiment,"<sup>138</sup> this provision requires that the activity has the potential to cause harmful interference in order for the duty to consult to arise. Without conclusive evidence that a State has failed to act with due diligence, there can be no assertion that a duty has been breached.<sup>139</sup>

At no point and under no circumstances did Applicant determine that there was a legitimate expectation that the sefarite was volatile.<sup>140</sup> Consultation ceased to be an obligation of Applicant as soon it deemed that it was unlikely that any harm would arise from its actions.

#### 3. Applicant is not liable under customary international law

Although this Court may apply customary international law when resolving international disputes,<sup>141</sup> only in instances where custom exists and a party has breached its international obligation can they be found liable for damages. In this case, they did not breach any such obligations under international law.

# i. Applicant had no duty to inform or consult Respondent on the nature of the cargo it was carrying

As mentioned, under the ASR, should a State commit a wrongful act, it "is under obligation to make full reparation for the injury caused by [that] act"<sup>142</sup> and said wrongful act must include a breach of an international obligation.<sup>143</sup>

However, given the lack of foreseeability of harm discussed previously, Applicant had no cause to provide Respondent with confidential matters of State security.<sup>144</sup> There was neither an action nor omission that would constitute a breach of an international obligation, as no duty exists to inform a State of something unlikely to impact or affect them.

<sup>&</sup>lt;sup>138</sup> OST, art. IX.

<sup>&</sup>lt;sup>139</sup> Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, 2010 I.C.J. Rep. 425 (Apr. 20).

<sup>&</sup>lt;sup>140</sup> Compromis, ¶14.

<sup>&</sup>lt;sup>141</sup> ICJ Statute, art. 38(1)(b).

<sup>&</sup>lt;sup>142</sup> ASR, art. 31. See also Congo, ¶257 & 259.

<sup>&</sup>lt;sup>143</sup> *Id.*, art. 2(b).

<sup>&</sup>lt;sup>144</sup> *Compromis*,  $\P7$ .

#### ii. It is Respondent's responsibility to manage the safety of its assets

It is the responsibility of the party facilitating the transport of cargo and passengers to ensure the safety of that transport. For example, a standard measure implemented is a definitive list of what can and can not be provided. Such lists can be seen in the United State's Federal Aviation Administration (FAA) 'packsafe' checklist,<sup>145</sup> the Transportation Security Administrations list on items which pose a security threat,<sup>146</sup> FedEx's list of accepted and prohibited materials,<sup>147</sup> and UPS' guide to shipping hazardous materials.<sup>148</sup>

Respondent was under an obligation to expressly declare what items were permitted or prohibited from the spacecraft. This duty is made significantly more prevalent, given that the entity providing the tourism services to eZ1 was incorporated and launched from Respondent's territory.<sup>149</sup> Respondent has provided no evidence whatsoever that any such list of permitted or prohibited substances was specified. As such, Respondent has failed to satisfy its duty of responsibility and can be shown to be solely, or at the very least contributorily, negligent for the damage caused.

#### 4. Applicant is not liable under principles of law

Respondent has failed to show that Applicant committed any internationally wrongful act. An internationally wrongful act is fundamental for liability under general principles of law as the Permanent Court of International Justice (PCIJ), the predecessor to this Court, stated in

<sup>146</sup> UNITED STATES DEPARTMENT OF HOMELAND SECURITY, TRANSPORTATION SECURITY ADMINISTRATION, SECURITY SCREENING: WHAT CAN I BRING, https://www.tsa.gov/travel/security-screening/whatcanibring/all

<sup>&</sup>lt;sup>145</sup> UNITED STATES DEPARTMENT OF TRANSPORTATION, FEDERAL AVIATION ADMINISTRATION, PACKSAFE FOR PASSENGERS (Nov. 19, 2018), https://www.faa.gov/hazmat/packsafe/

<sup>&</sup>lt;sup>147</sup> FEDEX, SERVICE GUIDE: HAZARDOUS MATERIALS, https://www.fedex.com/en-us/service-guide/hazardous-materials/how-to-ship.html

<sup>&</sup>lt;sup>148</sup> UPS, GUIDE FOR TRANSPORTING HAZARDOUS MATERIALS, https://www.ups.com/us/en/help-center/packaging-and-supplies/special-careshipments/hazardous-materials.page
<sup>149</sup> Clarifications, ¶57

the *Factory at Chorzów* case.<sup>150</sup> Simply put, there is no liability under general international law absent a wrongful act.

# **B.** As such, Applicant is not liable for damages for the loss of Azasi 7 and launch pad

Given that there was no foreseeability that loading infused sefarite aboard Azasi 7 would cause harm, that there is no proof that loading infused sefarite aboard Azasi 7 did cause harm, no indication that any alternative cause for the explosion aboard Azasi 7 was explored, and no duty breached by Applicant, Applicant cannot be liable for the damages associated with the loss of Azasi 7 and the launch pad.

<sup>&</sup>lt;sup>150</sup> Factory at Chorzów.

## **SUBMISSIONS TO THE COURT**

For the foregoing reasons, the State of Suniza respectfully requests the Court to adjudge and declare that:

- a) Respondent is liable for occupying and using eZ1 contrary to international law.
- b) Respondent is liable for the costs charged by ISpS for the transportation of the crew and tourists from eZ1 to Earth.
- c) Applicant is not liable for damages for the loss of Azasi 7 and the launchpad.