General Regulations

• Individuals or teams may be excluded from participation at the discretion of NASA for unauthorized behavior,

including but not limited to (i) impersonating a NASA official whether intentionally or in a manner that results

in confusion, (ii) misuse of the logos or identifiers of NASA, any sponsoring organization, or any infringement

of a commercial logo or trademark, (iii) failure to abide by competition rules, directives or instructions from

the competition host or organizer, and (iv) asserting or implying a NASA affiliation or sponsorship where none

exists.

• All team members shall be currently enrolled students from a high school, an accredited institution of higher

learning, or an institution such as a science center, museum, planetarium, or youth-serving organization.

• Participant hereby waives any claims against NASA, its employees, its related entities, (including, but not

limited to, contractors and subcontractors at any tier, grantees, investigators, volunteers, customers, users, and

their contractors and subcontractors, at any tier) and employees of NASA’s related entities for any injury, death,

or property damage/loss arising from or related to the NASA Human Exploration Rover Challenge, whether

such injury, death, or property damage/loss arises through negligence or otherwise, except in the case of willful

misconduct.

• This NASA competition is neither affiliated with, nor sponsors or endorses any Rover Challenge competition

other than the NASA Human Exploration Rover Challenge.

• Accredited institutions of higher learning (College/University) teams shall be composed of undergraduate

students

• All scoring decisions for the excursion are final. If an appeal is warranted, the advisor or the team leader shall

submit the appeal in writing for consideration to the Activity Lead within 30 minutes of the posting of score(s)

in question. The final decision of the Activity Lead and Head Judges shall prevail.

• Accredited institutions of higher learning (College/University) undergraduate teams will be composed of

students aged 18 and older. Students who are younger than 18, may require age and enrollment verification.

• Age and enrollment verification may be requested at any time.

• Any team member or advisor found to be exhibiting unsportsmanlike conduct may be disqualified from the

challenge individually or as a team

• Each team, regardless of division, shall identify and be accompanied by an adult age 21 or older to serve as an

advisor. This person shall be employed by the registered institution or organization.

• Students on the team will do 100% of the project, including design, construction of their vehicle and task

components (including performing work that is supported by a professional machinist for the purpose of training

or safety), written reports, presentations, and competition preparation. Any team found in violation of this will

be disqualified. Excessive use of past work will result in disqualification.

**Competition Guidelines, Regulations and Information**

• Rovers may be shipped to USSRC in advance of the competition via the following address (the USSRC will not

receive any rovers that do not have pre-paid return shipping documents with their rover equipment):

ATTN: Warehouse Manager

U.S. Space & Rocket Center

1 Tranquility Base

Huntsville, L 35805

USA

• For return shipping pickup, rovers are required to be fully packaged in an appropriate crate by the team and include all necessary label(s) for shipping by the end of the competition.

• The consumption of alcoholic beverages and/or controlled substances is strictly prohibited by HERC teams on USSRC grounds and use of or possession by any HERC participant or affiliate at any time during the event is grounds for disqualification of the team and/or other repercussions.

• Your safety is our biggest priority. Pilots who are injured, bleeding, or incapacitated will be safely attended to and receive any necessary medical attention. Injuries may occur when adjusting vehicle components, such as drivetrain components, during the excursion. Each team must develop a signal system between the two pilots to ensure safety hazards are clear before proceeding. Pilots will be asked to describe their communication plan to the MSAT and/or another judge before the excursion.

• Using poles or other devices to propel or push the rover is not allowed. A pilot’s use of his or her hands on the wheels (as with a wheelchair) to facilitate vehicle movement is not permitted.

• Using poles or other devices to propel or push the rover is not allowed. A pilot’s use of his or her hands on the wheels (as with a wheelchair) to facilitate vehicle movement is not permitted.

• Each team is required to submit their participation survey by the end of Competition Day 2.

• Upon successful completion of MRR/ERR, teams are permitted two excursions of the course, both on Competition Day 2.

• Teams have a total of 8:00 minutes to complete each excursion. Teams will receive points by successfully traversing obstacles and completing mission tasks.

• Teams failing to complete each of the two excursions in under 8:00 minutes are ineligible for competition awards based on excursion performance. They will be notified that their excursion is aborted, and either be removed from the course or shall proceed with haste to the end, utilizing each available bypass and will not accrue additional points.

• Pilots must be on the vehicle, with safety belt fastened, and all safety equipment (PPE) in place before driving their rover during an excursion attempt.

• The excursion time stops when a team either crosses the finish line or reaches the 8:00-minute limit, whichever comes first.

• On-course judges may make pilots aware of their unofficial excursion times periodically, however teams are encouraged to use their own timing devices on the vehicle for strategic on-course decisions. Teams should not be reliant on excursion times announced by judges. The timing judges will maintain the official excursion time.

• The pilots for the first excursion shall be the same as those who conducted MRR/ERR. Pilot substitutions may be made for the second excursion.

Communication devices are allowed if at least one pilot can hear ambient sounds/instructions from judges.

• Indirectly approaching an obstacle, getting off the vehicle (pushing, pulling), or veering from an obstacle will be considered an unsuccessful attempt.

• The course is comprised of 10 obstacles and 5 mission tasks. Each obstacle will have a bypass, where teams can strategically choose to either attempt the obstacle for points or bypass it for zero points.

• Judges have the authority to remove a disabled or temporarily suspend a slow rover from the course when it will affect the excursion time of the next successive rover. The excursion time for the slow vehicle halts at the point of suspension and resumes once the successive vehicle has passed.

• Individuals (team members and supporters) may not follow the rover around the course during the excursion time.

• Rover numbers will be provided in the event packet on two printed 8.5 by 11-inch waterproof sheets and shall be affixed to the front and left side of the rover, in an unobstructed view for the judges

• All potential teams are required to submit a proposal to compete. A written proposal submission shall follow and answer the requirements outlined in Deliverable, Proposal section 7:

– The Team Lead will submit the team’s proposal into NASA STEM Gateway for consideration. Submissions will only be considered if the Team Lead and Advisor profiles within Gateway have been completed.

– Teams will be scored based on a rubric developed from the Team Proposal Requirements.

– Teams may propose only ONE team per school or institution for consideration. – Proposals shall be written solely by the student members of the team.

– Proposals submitted after the deadline (date and time received) will not be considered.

– Top scoring proposals will be selected to compete and allowed to register for the competition. A team whose proposal is selected will receive an offer email from NASA STEM Gateway and will have seven days to accept the offer and register all team members.

• Each team member must complete a NASA STEM Gateway profile for the registration to be valid. • A Team’s registration will be confirmed via email upon approval of registration.

• Each team is required to submit a Design Review Report and Presentation and participate in a virtual presentation that will make up 20% of the team’s overall score. DR must be completed to progress onto the ORR portion of the challenge.

• Each team is required to submit an Operational Readiness Review Report and Presentation and participate in a virtual presentation that counts towards 20% of the team’s overall score. ORR must be completed to progress onto the excursion portion of the challenge.

• Each team is required to submit STEM Engagement Report(s) that counts towards 10% of the team’s overall score.

• Late submissions of Design Review, Operational Readiness Review and/or STEM Engagement Activity Report deliverables will be accepted up to 24 hours after the submission deadline. Late submissions will incur a 10% penalty. Submissions will not be accepted after the 24-hour window. Teams that fail to submit a deliverable document will be eliminated from the competition.

Team Pit Area Guidelines and Regulations

• Each team is provided two parking spaces for their pit area and must fit all equipment needed in the space provided. Only vehicles registered for the competition during team check-in will be allowed. All other vehicles and/or trailers shall be parked in the designated general parking area.

• Parking passes, inclusive of contact information, must be displayed in the front windshield of registered vehicles in the pit area.

• All vehicles without identification, or those blocking other team spaces, will be towed at the owner’s expense. (Exception: loading/unloading the vehicle and equipment on Thursday of the event).

• Teams shall exercise appropriate safety precautions during the design, build, and test phases of this competition and utilize appropriate PPE when performing construction activities, such as welding, handling metal components, and using tools anywhere on the USSRC property or neighboring areas.

Mission Readiness Review Guidelines

• Teams will complete MRR during the pre-determined time window on Competition Day 2. Time windows, and the method for obtaining a time window, will be communicated to teams well in advance of the competition.

• Teams must arrive on time and ready to participate in their MRR as scheduled. Failure to arrive on time or perform MRR as scheduled will result in a penalty to the team’s overall score.

• Vehicles will be inspected for the 5 x 5 x 5-foot volume constraint in the stowed configuration during MRR. A jig will be placed over the rover for volume constraint verification.

– No modifications or team rover interaction is permitted during this verification.

– Tapes, straps, and/or other devices may be used to confine the rover in the collapsed or stowed configuration,

however, all such devices will be included in total weight measurement of the rover.

– Teams must include task materials during this verification.

• There are no constraints for overall height and length of the assembled rover; however, a rover with pilots that is found to have too high of a center of gravity and/or found to have a weight imbalance will be assessed and may not be allowed to traverse the course if risk of tipping over is deemed too great by judges.

• The vehicle will be weighed in the stowed position with all necessary mission components, to include ALL task materials. Point breakdown for weight categories is listed in section 8.

• From the stowed position, a signal will be given, and a timer will start for the two pilots to unfold and/or assemble their rover. The timer stops when the vehicle is in challenge-ready configuration with pilots in place, and all assembly tools and implements properly stowed on the rover, or in the marked tool area adjacent to the assembly location. Point breakdown for assembly time is listed in section 8.

• The MRR will be combined with the ERR for the first excursion.

Excursion Readiness and Review Guidelines

• Teams must arrive on time and ready to participate in their ERR as scheduled. Failure to arrive on time or perform ERR as scheduled will result in a penalty to the team’s overall score.

• Judges will photograph each vehicle and conduct an inspection of task materials and safety requirements.

• All task materials will be inspected prior to the excursions. Task materials should have the team number marked on each item.

• Task tool may be used at multiple task sites, barring any cross contamination during sample retrieval.

• The ERR will be combined with the MRR for the first excursion.