

## **General Disclaimer**

### **One or more of the Following Statements may affect this Document**

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.
- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.
- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.
- This document is paginated as submitted by the original source.
- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.

Samantha Harris  
Artifacts  
Mentor: Johnny Nguyen  
Center: Kennedy Space Center

As the Shuttle Program comes to an end and NASA's Constellation Program begins to take precedence, facilities and equipment at Kennedy Space Center need to be transitioned or retired. Enabling and executing this retirement and transition is the primary purpose of the Launch Vehicle Processing Transition and Retirement group that I was assigned to this summer. NASA Headquarters sent a list of items to KSC that were deemed potential artifacts. These items played a role in the Shuttle Program's development and maintenance. Because these items are national assets, many are of interest to museums, schools, other government entities, etc. upon the Space Shuttle's retirement. The list contains over 500 items. All of these items need to be located, photographed, and catalogued with accompanying specific data that needs to be gathered. Initial research suggests that this is a time, labor, and cost intensive project. The purpose of my project was to focus on 20-60 of these 500 items, gather the necessary data, and compile them in a way that can be added to by other users when/if the project goes into full effect. Due to temporary access constraints, I needed to be escorted in all the areas that housed the potential artifacts. Therefore, I was partnered with United Space Alliance (the Shuttle Processing contractor at KSC) personnel to locate and document the items. We encountered some resistance from contractors, had trouble locating some items, and had to make compromises on how the data was stored, but in the end gained some beneficial lessons learned. As it turns out, the contractors, who have been working with the equipment for twenty years, are one of the most valuable resources in terms of locating the items and collecting the needed data. Therefore, I recommended that this project go into full effect prior to the end of the Shuttle Program while the workforce is still available.

The Shuttle Transition and Retirement (T&R) group is responsible for the turnover of all the facilities owned by the Shuttle Program. Some of the facilities, such as launch Pad B, will be transferred to the Constellation Program, while others such as the Mobile Launch Platform will be decommissioned. Various NASA groups have made suggestions on what tools and equipment may be of interest to others once the Shuttle Program ends. My job was to locate, photograph, and identify the purpose of various items that have been classified as potential artifacts.

The completion of this project will allow T&R to predict the resources that will be required to attain all the items presented on the potential Artifacts wish list. Initial estimates predicted a high cost for locating these items. But aside from cost, there were other issues that were initially overlooked. As of now this information is stored on a share point Wiki site. The Wiki sites have constraints that my office was not originally aware of. There are over 500 items on the wish list; therefore multiple people may be given a portion of the list to be responsible for. The Wiki provides a site where users can log on and add their information. However, it has limitations in terms of exporting the information if needed. These potential Artifacts will be the Space Shuttle equipment that will be in museums and at schools. For most of the public this will be their only exposure to any Space Shuttle equipment. It is important to collect the right information on the equipment so that museums and schools will see its value. One of these items may expose a child to the wonders of space exploration and help pave the way for the next generation of NASA engineers, scientists, and astronauts.

MUST has been an invaluable tool over the past two years. It has supplied me with the resources to not only succeed but to simply attend college. After graduating high school in 2004, I attended Palm Beach Community College for the next three years, and throughout this time period changed my major every semester. I wanted to be a doctor, an architect, a physical therapist, etc. I touched on almost every general field; well all except engineering. If I knew anything at that age it was that I could never be an engineer. As a physical therapy major I was able to job shadow in the Rehab Works facility at KSC. Within an hour I was able to realize that this was not the major for me, and while on my lunch break I took an opportunity to tour the Space Shuttle Processing Facility High Bay. On this tour I realized that NASA was the most captivating and intriguing place I have ever been, and would complete any major I needed in

order to work at KSC every day. So in 2007 I switched to majoring in Industrial Engineering and transferred to the University of Central Florida.

Engineering classes have a tendency to be quite challenging and time consuming, and after eight months of classes it is easy to get a little burned out. This is especially true when it is necessary to work twenty hours a week to afford food and rent. That is where MUST comes in. The scholarship this program provides enables me to focus on school full-time, complete a minor in Leadership, and participate in various organizations. Due to this opportunity I have been able to maintain close to a 4.0 GPA. I was raised in a single family home so my mom was forced to work until eight o'clock six nights a week, which has caused her to have insecurities with her parenting abilities. At the end of every semester I print a copy of my grades for her to put up at work. Every time she holds the paper in her hand and sees those As it makes her feel like she did the right thing all those years. It is almost as if I give my mom a piece of her life back, and I could not do it without the financial help MUST provides.

The MUST program provides more than financial assistance. The internship at a NASA center has given me a way to recharge my battery from school and remind me why I go through all the late nights and stress. KSC is a magical place filled with flying rockets and state of the art technology. This summer alone I have seen a Shuttle launch and landing first hand. I have stood under the pad with the Shuttle above me and I have worked inside a segment for the upcoming Ares I-X test launch. I am getting hands on experience with both programs, which is nothing short of seeing history in the making. This summer is providing more than an appreciation for an end to one legacy and the beginning of another. It is unique because it is the 40<sup>th</sup> anniversary of the first moon landing. I was fortunate enough to hear a number of Apollo astronauts share their experiences in space, and realize that I want to follow in their footsteps and fly to the moon.

Every summer I spend out here makes me set my goals a little higher and push myself a little more.

Next year I will be graduating college and hopefully attaining a full-time position with NASA. My mentor started his career with KSC as a co-op, and used that experience to shape my internship this summer. The T&R group I worked with made the effort to include my opinions in the meetings and give me a project with responsibilities. I have learned how to work with an array of individuals and adjust to different personality styles. MUST has allowed me to gain firsthand knowledge of the working atmosphere at KSC, and get my foot in the door for my future.