

# STUDENT SUMMER INTERNSHIP TECHNICAL REPORT

## DOE EM Web Refresh Project and LLNL Building 280

### DOE-FIU SCIENCE & TECHNOLOGY WORKFORCE DEVELOPMENT PROGRAM

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## **ABSTRACT**

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This report provides an overview of the 2018 summer internship served with the Department of Energy's Office of Environmental Management in the Office of Infrastructure and D&D (EM-4.11) based at the Germantown, Maryland, facility headquarters. Over the duration of the internship, the tasks assigned included: 1) supporting the web refresh project, specifically updating the Facility Infrastructure Management & D&D section, and 2) the Lawrence Livermore National Laboratory Building 280 project. This report will explore each of the project tasks to provide a brief overview of the entire internship experience and what was accomplished during the summer.

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# 1. INTRODUCTION

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Over the duration of the summer internship with the DOE EM Office of Infrastructure and Deactivation and Decommissioning (D&D) in Germantown, MD, Alejandro Koszarycz had the opportunity to work alongside Andrew Szilagyi (DOE EM 4.11). The project tasks assigned over the summer reflected a wide spectrum of duties. The two main project tasks included the web refresh project for the DOE EM website, headed by Lauren Milone, and the Lawrence Livermore National Laboratory (LLNL) Building 280 D&D project, headed by Claude Magnuson.

The web refresh project was a collaborative task assigned to archive the outdated web content across the DOE EM website while updating and providing new content corresponding to the taxonomy of the website. The website is broken into 4 main sections: Services, Program Scope, Mission, and About Us. Each main section includes various subsections to organize additional information. Mr. Koszarycz was tasked with updating web content, pictures, and videos while working with in-house contractors and staff to represent the mission and accomplishments of the facility infrastructure management and D&D sectors.

The LLNL Building 280 project had recently gotten approval to proceed with D&D and was beginning to receive allocations of funding. Mr. Koszarycz was tasked with organizing and maintaining a log/record of information from weekly and monthly meetings and circulating emails related to this project. He was specifically charged with taking notes during the weekly and monthly teleconference meetings among the project stakeholders as well as summarizing progress, information, and action items for the rest of the EM 4.11 staff to send reports in a timely fashion.

## **2. EXECUTIVE SUMMARY**

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This research work has been supported by the DOE-FIU Science & Technology Workforce Initiative, an innovative program developed by the US Department of Energy's Environmental Management (DOE-EM) and Florida International University's Applied Research Center (FIU-ARC). During the summer of 2018, a DOE Fellow intern Alejandro Koszarycz spent 10 weeks doing a summer internship in Germantown, MD, working for the Department of Energy under the supervision and guidance of Andrew Szilagyi of EM-4.11, Office of Infrastructure and D&D. The intern's project was initiated on May 31, 2018 and continued through August 10, 2018 with the objective of maintaining the website inventory and refreshing/updating website content for EM-4.11, as well as supporting the initiation of planning for the LLNL Building 280 deactivation and decommissioning.

### 3. INTERNSHIP DESCRIPTION

#### Web Refresh Project

The DOE EM external public website was last updated prior to the internship in 2016. Many dramatic changes have occurred since the website had last been updated: a new federal governmental administration with a shift in the scope and focus of EM, and new EM leadership. The website needed to reflect these changes and prioritize the new focus for EM work.

Everyone collaborating in the web refresh project was tasked with archiving outdated web content across the EM website while updating and providing new content for the designated subsections of the new taxonomy (i.e., website organization). The first major task was to do a redesign of the taxonomy of the website. This entailed changing the focus and scope of the EM website due to policy and governmental changes. After multiple weeks of meetings and insights from all offices across EM, a final taxonomy was agreed to which provided the blueprint of the new website.

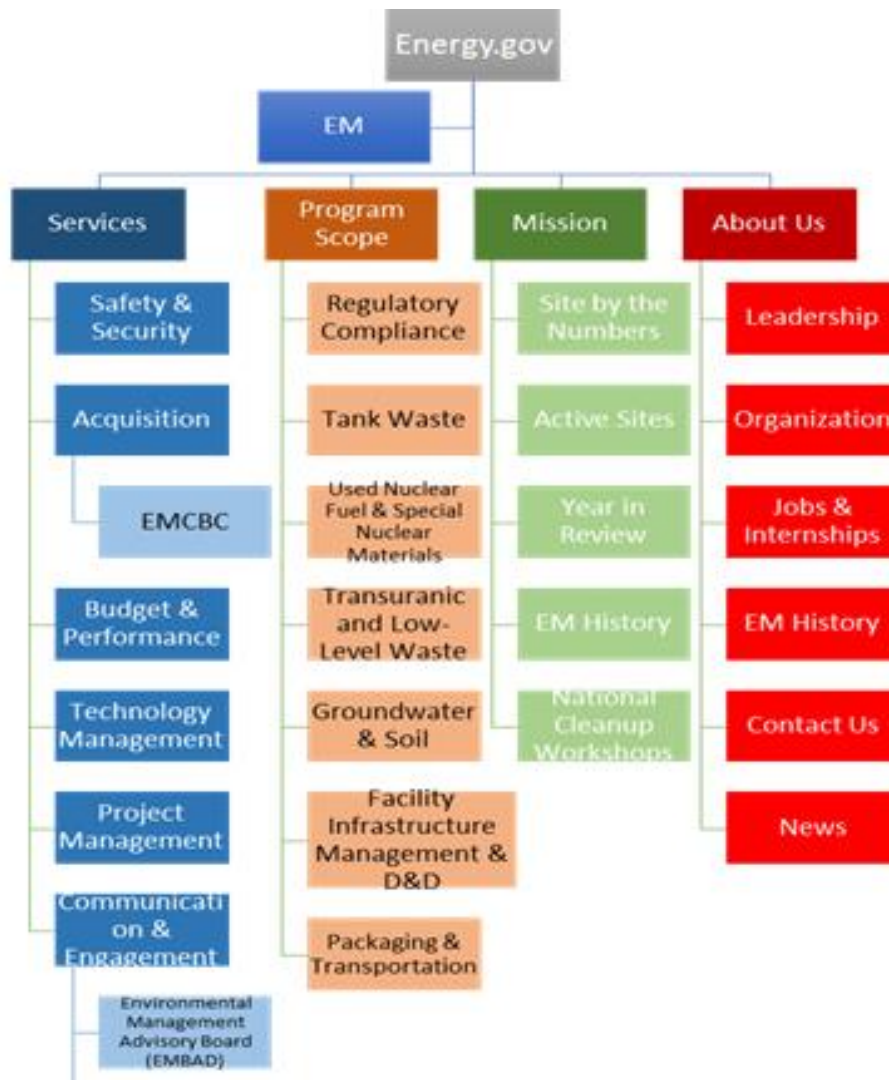


Figure 1. DOE EM website taxonomy.



In order to update or make changes to information in the subsections of the taxonomy, every link on the website needed to be archived. This was achieved through the use of the Snagit tool. The Snagit tool is a screen shot program used to capture images and record videos. This tool was chosen to archive the old information on the website just in case there was a later need to retrieve it, such as during a future update of the website. Snagit provided the ability to capture entire web pages in both vertical and horizontal formats.

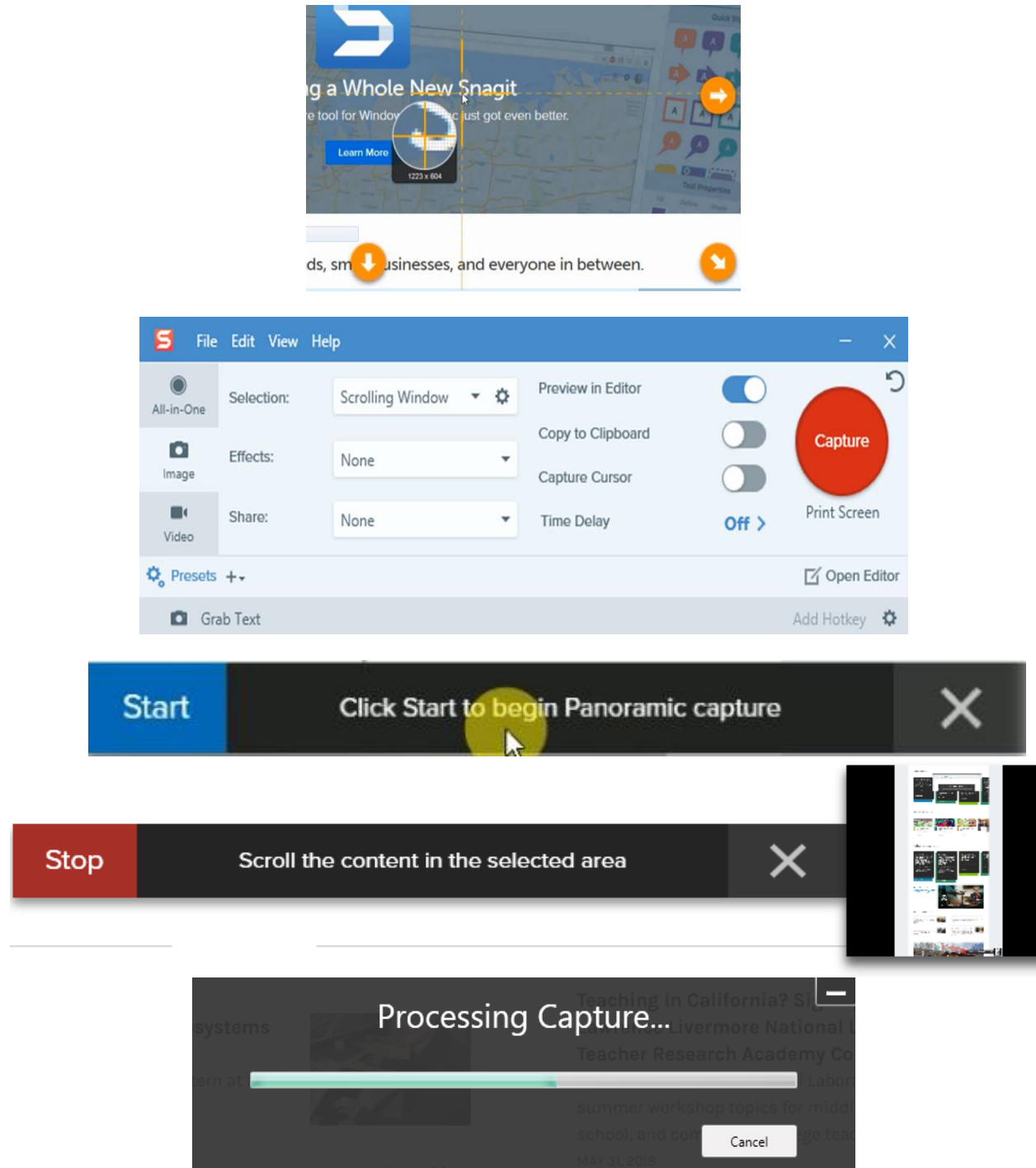


Figure 2. Snagit screen capture software.

Once each link from a website subsection was snagged, archived, and put in its corresponding folder, the web inventory of that section was updated in order to keep track of all of the links in the corresponding section and document project progress. The web inventory had thousands of links and the project team had to go through each link individually to complete the web refresh project. This effort entailed reading the information from each link in the web inventory, assessing whether the information was outdated and needed to be archived or if it could be kept and updated with newer content from the monthly updates of active projects. The web inventory was used as a tool to track the work as well as to ensure that no data was inadvertently being deleted and wiped from the website without being archived.

fx EM-4.11						
	A	B	L	M	N	O
2	Level 1	Level 2	URL	Comments	WCMwebpagestatus	Page-Node ID
267	EM-4.11		<a href="https://energy.gov/em/policy-decommissioning-department-energy-facilities-under-comprehensive">https://energy.gov/em/policy-decommissioning-department-energy-facilities-under-comprehensive</a>	*Considering archiving. Page is full of text	Archived	
268	EM-4.11		<a href="https://energy.gov/em/decommissioning-under-cercla-information-sheet">https://energy.gov/em/decommissioning-under-cercla-information-sheet</a>	*AK: How do you navigate here? Regulatory Compliance?	Archived	
269	EM-4.11		<a href="https://energy.gov/em/part-1-bottom-line">https://energy.gov/em/part-1-bottom-line</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
270	EM-4.11		<a href="https://energy.gov/em/part-2-cercla-authority">https://energy.gov/em/part-2-cercla-authority</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
271	EM-4.11		<a href="https://energy.gov/em/part-3-removal-action">https://energy.gov/em/part-3-removal-action</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
272	EM-4.11		<a href="https://energy.gov/em/part-4-special-circumstances">https://energy.gov/em/part-4-special-circumstances</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
273	EM-4.11		<a href="https://energy.gov/em/part-5-detailed-information">https://energy.gov/em/part-5-detailed-information</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	

Figure 3. DOE EM website inventory.

Once the archival effort was complete, work shifted to updating the information and adding new content to web pages that were kept. The EM public website form (PWF) was used for this effort. Each web page was reviewed and the changes that needed to be made were documented, including everything from a simple new description for a figure caption to re-designing an entire webpage. The EM-4.11 staff worked collaboratively with the in-house contractors to accurately represent the mission and accomplishments of the facility infrastructure management and D&D sectors.

<b>EM Public Website Form (PWF)</b>	
<b>Contact Information</b> (Authorized person completing and submitting PWF)	
Web Content Manager Name:	<input style="width: 90%;" type="text"/>
Date:	<input style="width: 80%;" type="text"/>
Office:	<input style="width: 90%;" type="text"/>
Phone:	<input style="width: 80%;" type="text"/>
Email:	<input style="width: 95%;" type="text"/>
<b>LIMIT 3 URLS PER FORM</b>	
URL of Page:	<input style="width: 95%;" type="text"/>
Topic Area:	<input style="width: 95%;" type="text"/>
Frequency of Update:	<input type="checkbox"/> One Time <input type="checkbox"/> Monthly <input type="checkbox"/> Semi-Annually <input type="checkbox"/> Weekly <input type="checkbox"/> Quarterly <input type="checkbox"/> Annually
Change Description:	<input type="checkbox"/> Archive Existing Page <input type="checkbox"/> Edit/Update Existing Page <input type="checkbox"/> Create New Page <input type="checkbox"/> Annual Certification Review
Title(s) of Attachment(s) included for this URL:	
<input style="width: 95%;" type="text"/>	
<input style="width: 95%;" type="text"/>	
<input style="width: 95%;" type="text"/>	
Comments:	
<input style="width: 100%; height: 150px;" type="text"/>	

Figure 4. DOE EM public website form (PWF).

**LLNL Building 280 Project**

The LLNL Building 280 site was the location of a Livermore Pool-Type Reactor (LPTR), a pool-type research reactor cooled and moderated with light water. This facility served as an instrument for fundamental neutron-irradiation research and as a tool for measurement and calibration from 1956 until being decommissioned in 1980.



**Figure 5. LLNL Building 280.**

Early efforts in the LLNL Building 280 included neutron diffraction, fission, and capture gamma-ray studies. In the 1960's, radiochemical and physical measurements on nuclear-explosive tests were performed and, in the 1970's, trace-element measurements, radiation-damage studies, and radiochemical studies of the shorter lived fission products were executed. Fourteen beryllium reflector elements may be stored at the bottom of the reactor pool. As of 2011, the LLNL Building 280 was classified as a Tier I Non-nuclear Hazard. Inspections of the facility have identified large cracks in the concrete of the lower structure (Figure 6).



**Figure 6. Interior cracking for LLNL Building 280.**

The plan for the LLNL Building 280 project was to begin the process of selecting the contractors to perform the scope of work and to identify any constraints in beginning a full D&D effort.

## 4. RESULTS

### Web Refresh Project

Figure 7 displays a brief screenshot captured from the EM 4.11 website inventory using the Snagit tool. Over 75% of the prior website content for EM 4.11 was archived and removed from the website. After reviewing the entire website, a huge amount of information was removed for a variety of reasons, with the most common including outdated information (within a 3 to 5 year timeframe), broken links within the webpage, design flaws, and information that was not relevant to the subsection category.

	A	B	L	M	N	O
	Level 1	Level 2	URL	Comments	WCMwebpagestatus	Page-Node ID
2	EM-4.11		<a href="https://energy.gov/em/policy-decommissioning-department-energy-facilities-under-comprehensive">https://energy.gov/em/policy-decommissioning-department-energy-facilities-under-comprehensive</a>	*Considering archiving. Page is full of text	Archived	
267						
268	EM-4.11		<a href="https://energy.gov/em/decommissioning-under-cercla-information-sheet">https://energy.gov/em/decommissioning-under-cercla-information-sheet</a>	*AK: How do you navigate here? Regulatory Compliance?	Archived	
269	EM-4.11		<a href="https://energy.gov/em/part-1-bottom-line">https://energy.gov/em/part-1-bottom-line</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
270	EM-4.11		<a href="https://energy.gov/em/part-2-cercla-authority">https://energy.gov/em/part-2-cercla-authority</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
271	EM-4.11		<a href="https://energy.gov/em/part-3-removal-action">https://energy.gov/em/part-3-removal-action</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
272	EM-4.11		<a href="https://energy.gov/em/part-4-special-circumstances">https://energy.gov/em/part-4-special-circumstances</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	
273	EM-4.11		<a href="https://energy.gov/em/part-5-detailed-information">https://energy.gov/em/part-5-detailed-information</a>	LM: How do you navigate here? Regulatory Compliance?	Archived	

**Figure 7. DOE EM 4.11 website inventory.**

The remaining 25% of the webpages for EM-4.11 were either kept as is or updated with newer content. The project team worked collaboratively to update and modify embedded files as well as to provide more in depth information for the users with interactive newsletters, pictures, and videos.

### LLNL Building 280 Project

The objectives of the weekly meetings for the LLNL Building 280 project were to status the progress being made on tasks ranging from funding, creating a schedule for all project parties, renting office space, hiring technical assistance, setting up a file sharing system, updating contracts that need to be signed by multiple parties, and assessing environmental review/NEPA coverage. These meetings included all project stakeholders and aimed to clearly define the roles and responsibilities of each in order to delegate and complete these tasks in a time efficient fashion in order to progress to the active D&D of the site. From the first meeting to the last meeting, significant progress was made in all areas; for example, funding began to slowly trickle in for the removal of a trailer area on the designated land. All of the tasks listed above were completed by the end of the summer internship and the project team was waiting for approval from upper management to continue with more designated tasks. The only major issue encountered was the disbursement of funds due to prioritization of other EM projects.

## 5. CONCLUSIONS

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The web refresh project conducted during the summer internship at DOE HQ in Germantown, MD, had primary goals of creating a more user friendly website to navigate, reducing the number of links and repeated information, providing more up to date information/facts, and removing outdated information and broken links across the entire EM 4.11 website. The EM 4.11 section of the website was condensed by almost 80% and now provides the users with more accurate and up to date information on all of the active projects across the DOE complex through factsheets, PDF's, and newsletters. Navigation of the website was also made easier by reducing the number of links on the webpages and removing all broken links. In addition, users now have more up to date information regarding the project sites.

## 6. REFERENCES

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1. Department of Energy Office of Environmental Management  
<https://www.energy.gov/em/office-environmental-management>
2. Deactivation and Decommissioning, Department of Energy  
<https://www.energy.gov/em/services/site-facility-restoration/deactivation-decommissioning-dd>