

V.C. Summer Geologic Mapping Program includes:

- “Target of opportunity” reconnaissance of exposures in various site excavations
- Mapping of trenches and test pits in residual soil and saprolite prior to start of Power Block (PB) excavations
- Mapping of PB excavation at temporary retaining walls
- Mapping of top of rock (MWR) surface in the area of the Nuclear Island (NI) and CWS Area.
- Mapping of excavation walls and final foundation grade in “sound rock” beneath the Nuclear Island
- Mapping of key features in excavations for CWS Area (focus on structures which extend from the Nuclear Island excavation).
- Mapping of key features in final grade within the balance of Power Block Excavation (best efforts basis primarily in PWR and MWR).
- Compilation of geologic maps and interpretative reports for the Unit 2 and 3 excavations.

Goal: To document geology exposed in the excavations and compare to site geology as reported in the FSAR, Chapter 2.5

Shaw Nuclear

- Ev Washer – Geotechnical Supervisor
- Nathan Cooke – Sr. Site Geologist
- Matthew Cooke – Sr. Site Geologist
- Gina Ferrugia – Staff Scientist
- Michael Goyda – QC Engineering Manager

WLA – Fugro

- Frank Syms – Project Manager
- Scott Lindvall – Sr. Technical Advisor
- Randy Cumbest – Geologic Mapping Lead
- Stephanie Briggs – Project Geologist
- Will Huff (Lead), Justin Cox, Tim Glidden, Mark Zellman, Jason Altecruse - Staff Geologists (field geologic mapping and reporting)
- Clint Eldridge – Quality Assurance

Approach to excavation mapping is proactive - from the top down to final grade

- **Shaw ESSOW – Consulting Services for Geologic Mapping - QA Category I**
- **WLA Plans and Procedures:**
 1. Project Planning Document (PPD)
 2. Project Instructions (PIs)
 - Geologic Mapping Data Collection Plan
 - Laboratory Testing Plan
 - Geoscience Evaluation and Analysis Plan
 - Work Instructions (WIs):
 - Field Records
 - Survey Control
 - Field Mapping Standards
 - Sampling Protocol, Handling and Storage
 - Data Compilation and Verification
 - Unit 2 and 3 Excavation Wall Photography and Mapping
 - GPS Unit Accuracy Verification
 - Unit 2 NI and CWS Area Preliminary Geologic Mapping
 - Unit 2 NI Final Foundation Mapping



Quality Assurance



The mapping, data acquisition, and analysis activities shall have a “pedigree” equivalent to the site investigations performed for the COLA - FSAR Chapter 2.5

- Mapping and data evaluation are performed under WLA’s NQA-1 program
- Shaw Audit of WLA Program for Contract Award in September, 2009
- Shaw performed an implementation audit V2010-15 on August 9-11, 2010
 - Identified no technical deficiencies
 - Identified two programmatic deficiencies related to:
 - 10CFR21 Procedure Posting
 - WLA PPD did not address 10CFR 50.55(e)
 - WLA Responses accepted and Audit Closed 12/8/10
- SHAW performed QC surveillances of WLA mapping and records management
 - 4/22/10 Report No. S-132177-2010-008: surveillance results satisfactory
 - 6/23/10 Report No. S-132177-2010-0013: surveillance results satisfactory
 - 3/28/11 Report No. S-132177-2011-006: One Minor C/A (WLA Sample Inventory Log) in Process



Current Status – Future Work



Completed:

- Unit 2 Temporary Retaining Wall Mapping
- Unit 2 Top of Rock (MWR) Mapping in the NI and CWS Pipe Trench Area

Currently:

- Unit 2 Mapping Final Foundation Grade Sound Rock in the NI Area
- Unit 2 Geochronology
- Unit 3 Mapping at Temporary Retaining Wall

Next Steps:

- Unit 2 Complete Final Foundation Grade Sound Rock Mapping in NI, geochronology, and CWS Pipe Trench. Prepare and review Geologic Maps and Report for Unit 2 NI Excavation – Estimated Finish Date is late July, 2011.
- Unit 2 Excavate Remainder of PB area to final grade and map key features (best efforts basis) prior to structural fill placement (Post-COL).
- Unit 3 Complete Mapping at Temporary Retaining Wall, Top of Rock, and Final Foundation Grade. Estimated Completion Date May, 2012.