

**Lesson Title:** Continuous Improvement (CI)

**Summary:** CH2M Hill has had great success with a recognition and incentive driven optimization effort that they call their Continuous Improvement Program. Employees are encouraged to look for ways to work smarter, more efficiently, more safely, etc. KCC Engineering students will follow the same format, including the competitive aspects of being selected for generating the best ideas for improvement.

**Timeframe:** Two hours for the introduction, working through samples, and then splitting into pairs and completing a CI submission on their own. In the future, submissions will be made without using any significant amount of class time.

**Standards/benchmarks:** N/A. None identified yet by ASD for engineering curriculums.

**Lesson Objectives:** Students will know how to systematically describe/document their ideas for improving an existing piece of equipment, procedure, etc.

Students will be able to look at some aspect of their daily work in the shop and think of some way of improving it (safety, efficiency...) and then have a known procedure for submitting their ideas for review by peers and instructor.

**Assessment/Evaluation:** students will present their ideas to their classmates and the instructor, essentially promoting their CI plan of action. The quality of their work, teamwork, and presentation will all figure into the evaluation.

**Lesson description:** The instructor will discuss, for as long as seems appropriate, safety and efficiency issues and how small investments in time or money initially can result in huge savings down the line (for example, if an injury is prevented). The Instructor will provide pairs of student with copies of the "Team Alaska Continuous Improvement A3 Binder, Volume 2, May 2012" and let them look at some of the ideas that came from different CH2M Hill Employees. After fifteen or twenty minutes of looking through the binder, students will set out in the shop and look for an improvement idea of their own to document. They will have a sample CI page with them and use that as a template to make the necessary notes. They will photograph the relevant items/areas, and go to the computer lab to put the document together for submission.

**Materials/Supplies/Equipment:** Team Alaska Continuous Improvement Binders, camera or phone, computer access, color printer access.

**Handouts:** A sample page from the binder is included below.

**DEFINE:**

- Hazards from Grinding and wire wheeling of parts.

**MEASURE:**

- Near Miss, Hazard Assessment

**ANALYZE:**

- At the ANSI Shop we are often grinding and buffing the valve parts to prep them for repair. This hazard includes sparks and flying debris. This process is putting the other workers in the shop at risk of an incident. When this type of work is going on others cannot work in the surrounding areas and must stop what they are doing and wait until the task is finished.



- Group: Integrity - ANSI Shop

- Savings Reported: HSE

**IMPROVE:**

- Movable curtains were purchased to allow the work area where the grinding & buffing was taking place to be isolated from the other areas. These curtain can be set up at any location in the shop and other are allowed to work in the area on other task.



**CONTROL:**

- Keep in location for everyone to use.

- Accountable Representative; ANSI Shop , Jason Holta