

Communicating Advanced Geophysical Classification to Stakeholders

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Outline

- Before the first engagement with stakeholders
- At the first planning meeting
- During the course of the project
- At the conclusion of the field work

Before You Meet with Stakeholders

- Develop a basic understanding of the technology
 - ◆ you don't have to be able to solve the equations that describe the process
 - ◆ EMI data → intrinsic parameters → classification decision
- Make sure classification is appropriate to your site
 - ◆ this stuff is great and works most places but not everywhere
- Make sure you have a qualified contractor

Training Resources

- USACE Training
- ITRC “Tech Reg” Guidance Document & Internet-based Training
- ESTCP Training Resources

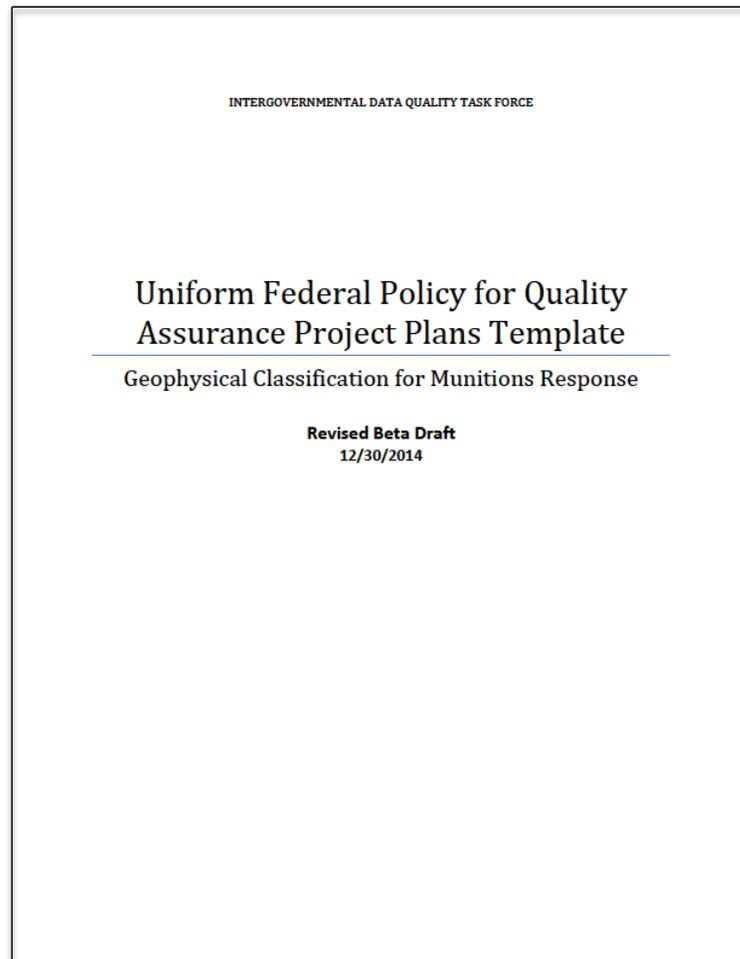
At the First Planning Meeting

- There is a big change here but it may not be what you think
 - ◆ we've always left metal in the ground
 - missed detections due to obstructions
 - anomalies below threshold
 - ◆ we just didn't know much about that metal
- Using classification we know a lot about the items we leave in the ground
 - ◆ and we have put quality systems in place to prove it

At the First Planning Meeting

- Don't exaggerate the capabilities of classification
 - ◆ it's a really cool technology
 - ◆ there really are no silver bullets
- Seek buy-in on the remedial action objectives
 - ◆ defined and quantitative RAOs make classification much easier
 - ◆ should have been spelled out in the DD or ROD

At the First Planning Meeting



- Be ready with a thoughtfully-developed QAPP
- This is the cornerstone of the QC/QA process and should enable all team members to have confidence in the project results

During the Course of the Project

- Enforce the QC reporting schedule specified in the QAPP and make sure the QA Geophysicist stays up to date
- Stakeholder confidence is increased by
 - ◆ early identification of QC issues
 - ◆ careful and complete root cause analyses
 - ◆ prompt implementation of any required corrective actions

Example Project Documentation

- Surface Clearance Memo
- IVS Tech Memo
- Weekly QC Reports throughout the field work
- Anomaly Selection Tech Memo
- Intrusive Investigation Report
- Final Analysis Report and Justification for Stop Dig Point

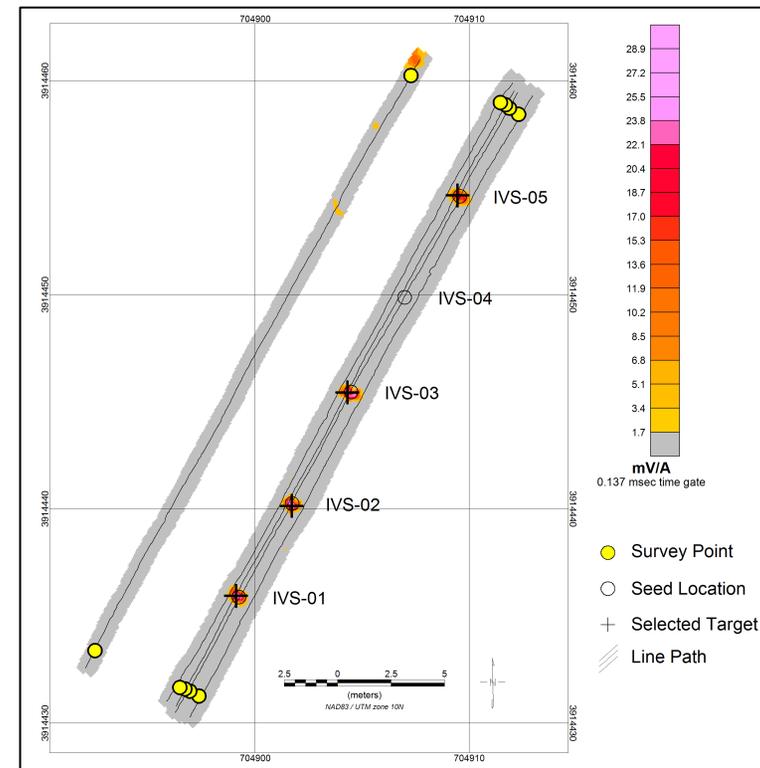
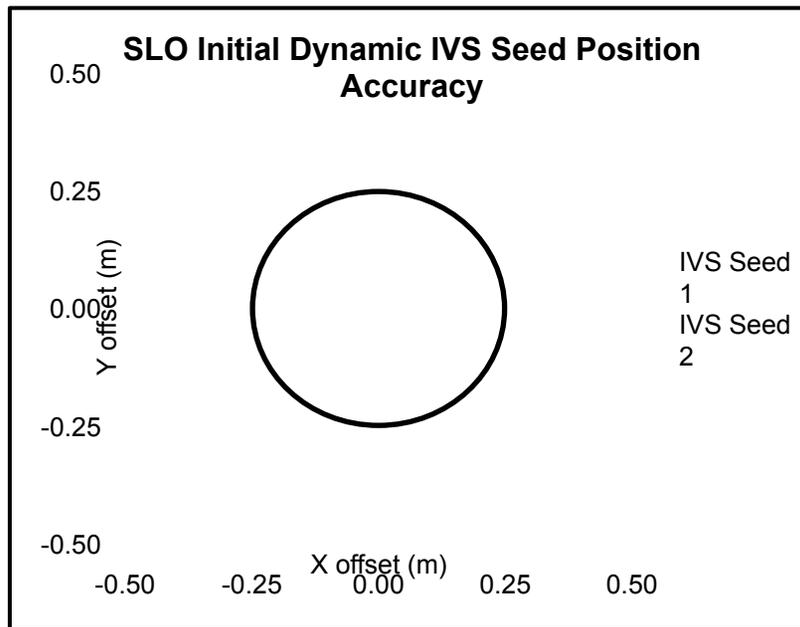
Surface Clearance Memo

- Was everything found consistent with the CSM?
- Is there anything the analysts need to know?

CSM	Evidence Found in Surface Sweep
37-mm projectile	Y
2.36-in rocket	Y
60-mm mortar	Y
75-mm projectile	Y
81-mm mortar	N
3-in stokes mortar	Y
Unexpected munition	N

IVS Tech Memo

- Is the Sensor Functioning Properly and Ready to Collect Data?

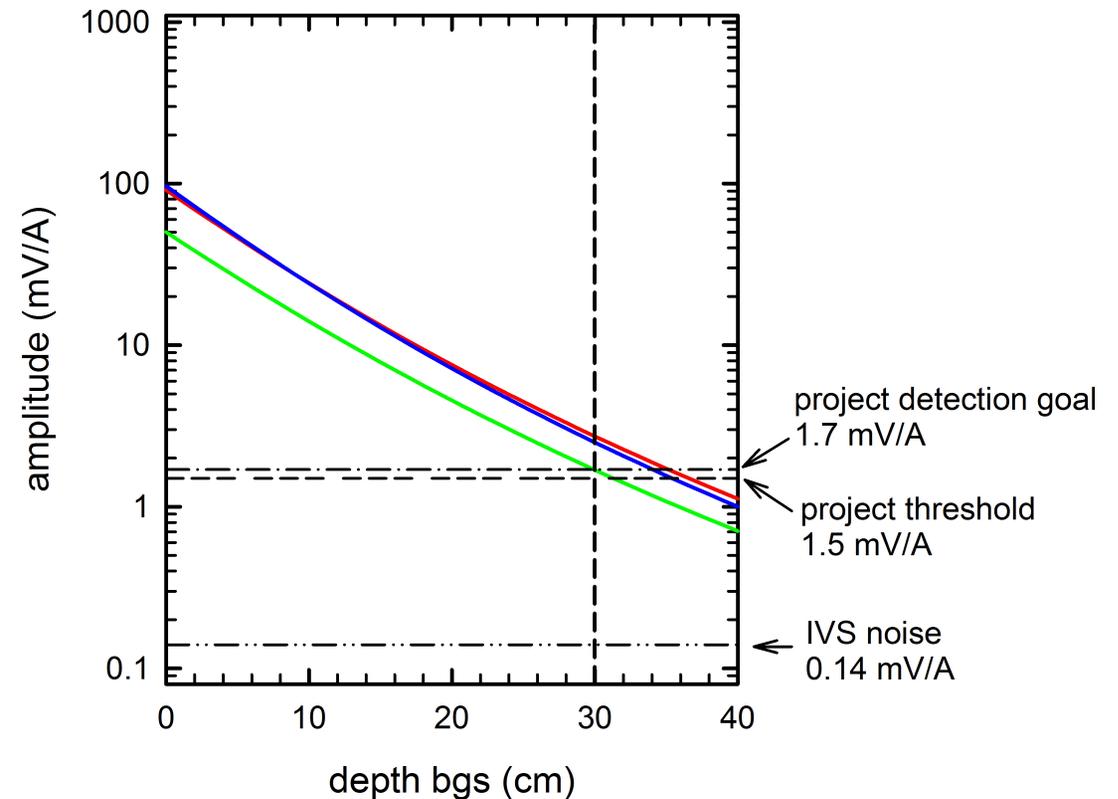


IVS Tech Memo

- Are the remedial objectives achievable?

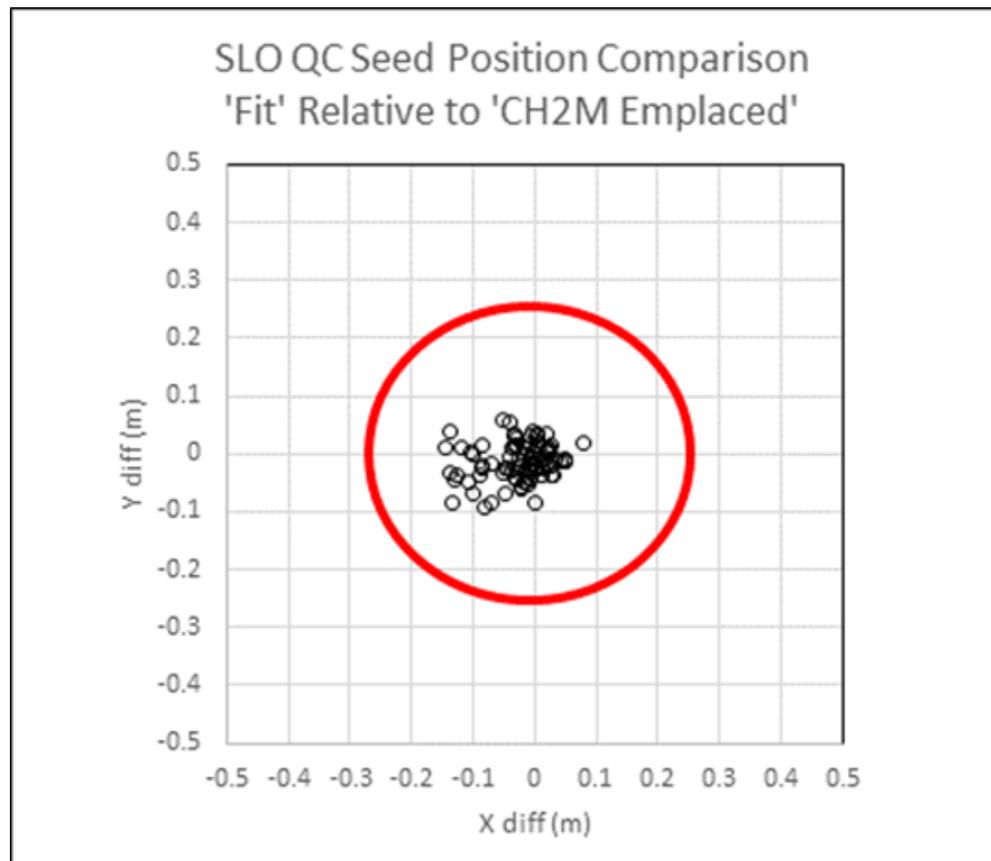


TEMTADS 2x2 Sensor Response Curves for 3 Variants of 37-mm Projectile



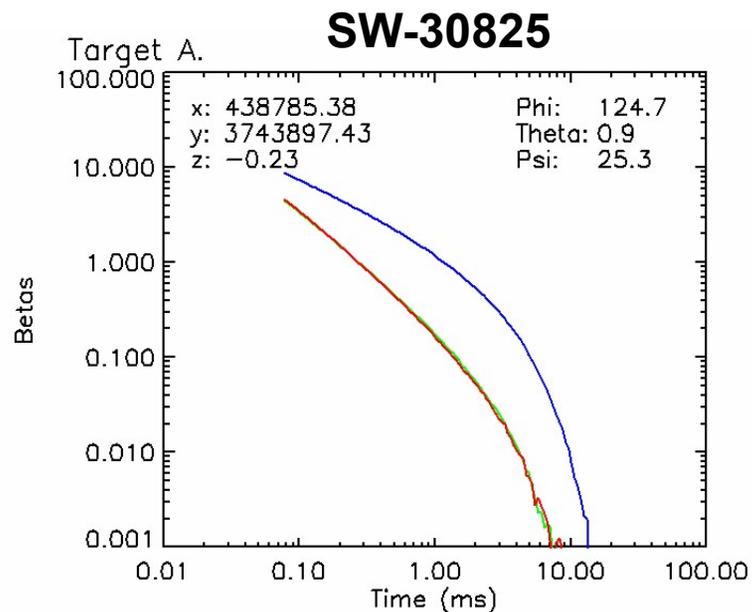
Anomaly Selection Tech Memo

- Were all the blind seeds detected within spec?

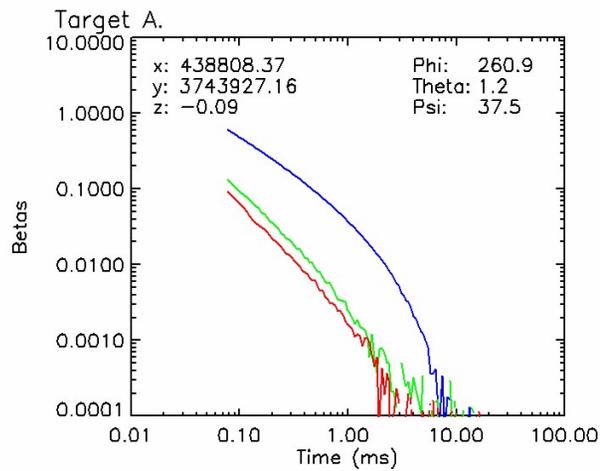
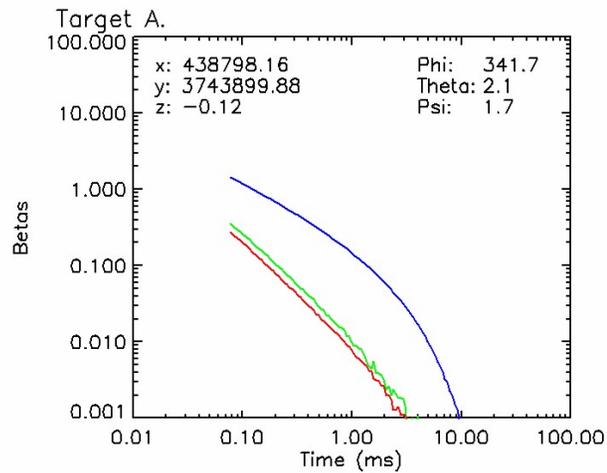


Intrusive Investigation Report

- Were all recovered items consistent with analyst's predictions?



Intrusive Investigation Report



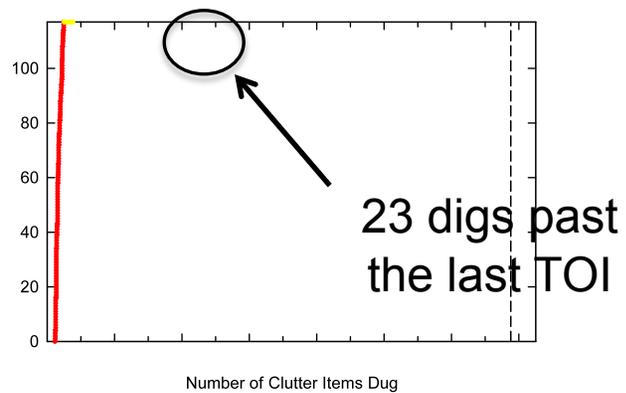
What We Are Doing to Facilitate This

- Develop a set of standard QC and QA plots in UX-Analyze
- Work hard at the QC interface between data collection and data analysis
- Make sure both of the above are in line with the evolving QAPP template

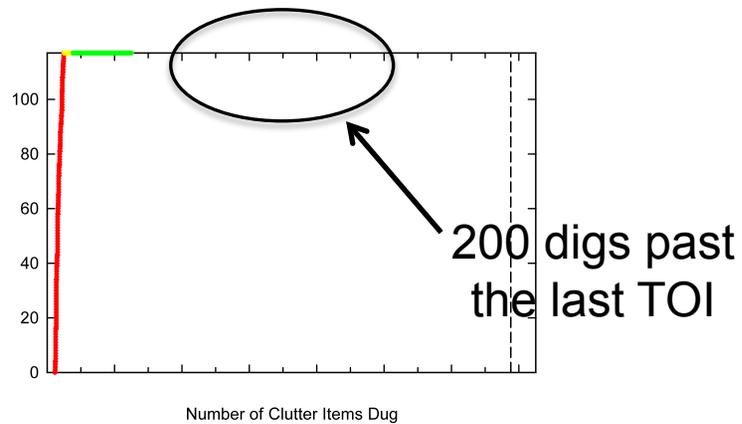
Verification and Validation

- Involve the stakeholders early and often in planning
 - ◆ draft plan before field work
 - ◆ final plans after contractor completes field work
- Verify the stop-dig threshold
 - ◆ dig past the last TOI

Contractor Stop Dig Threshold



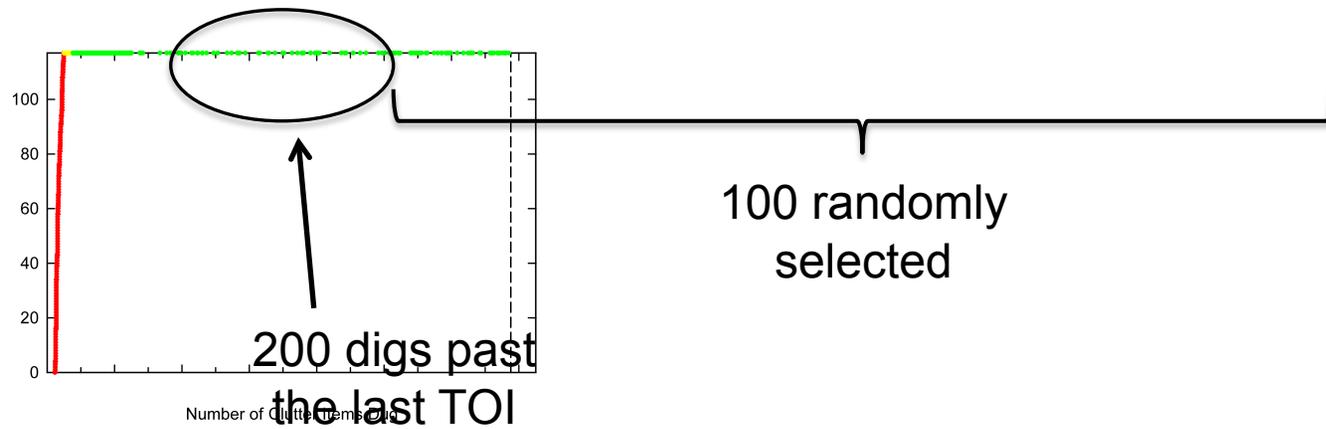
Verify The Threshold



Verification and Validation

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 - ◆ dig past the last TOI
- Validate the whole process
 - ◆ targeted investigation of items classified as likely clutter

Validate the Process



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For More Information

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