

City of Lake Elmo Site Access Request

3445 Ideal Avenue

Bay West
General Atomics
US Army ERDC



February 4, 2025

Our Request

Purpose: Field testing of PFAS materials destruction using iSCWO Technology

Why the 3445 Ideal Ave location?

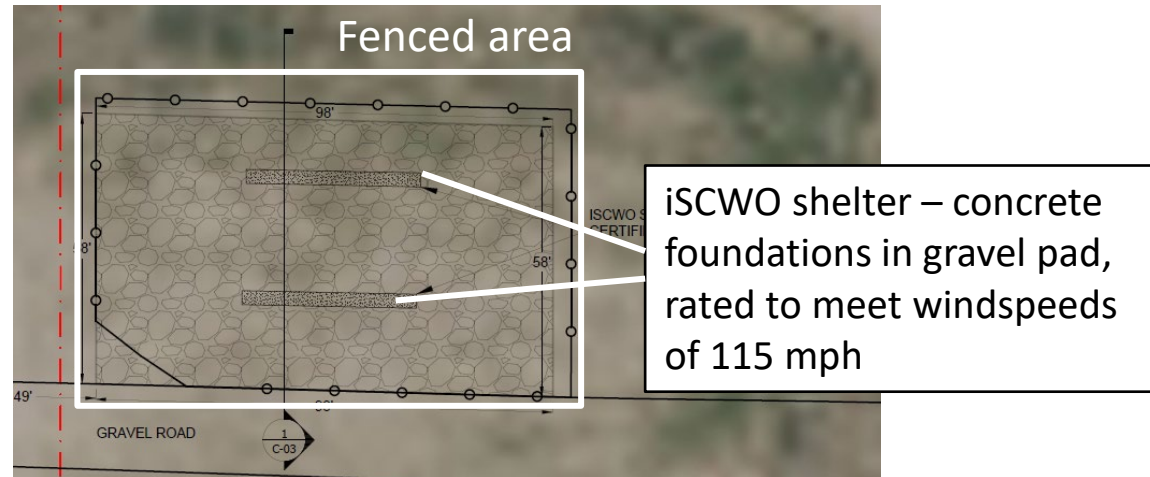
Community & State concerns with PFAS; testing to demonstrate system's destruction at field scale

Request Overview

- Temporary use of < 6000 sq ft area, located north of Public Works HQ
- Costs to City: None, the project is Gov't funded research
- Terms: Bay West and City "Temporary Easement & Access Agreement" defines Bay West and City roles & responsibilities

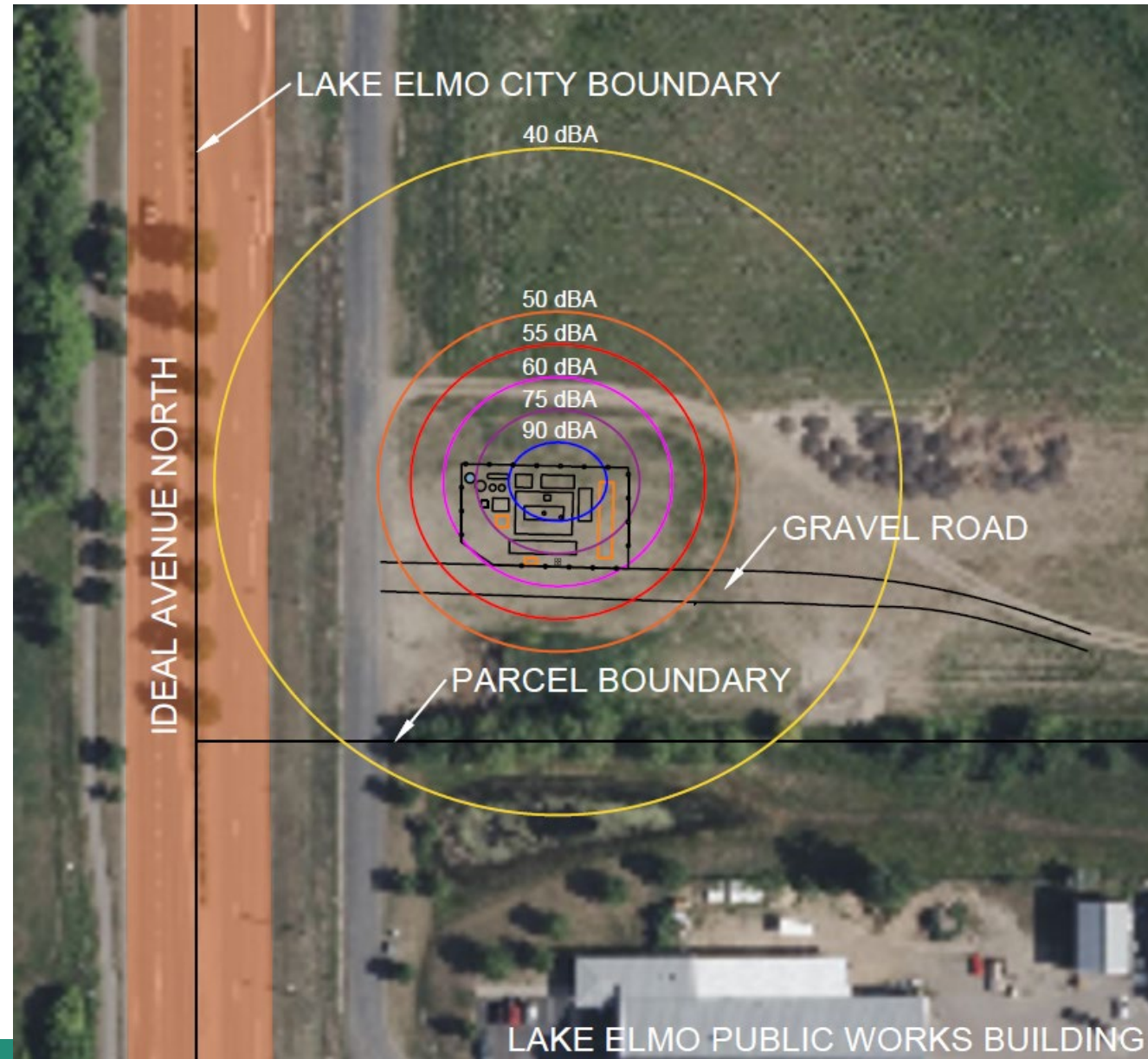
Safety

- Bay West manages all projects with H&S Plan, AHA reviews, and in-depth training of all employees
- General Atomics' system developed and sold for over 30 years that meets highest standards – excellent safety record
- **Onsite:** safety fence and signage, Bay West escort for all visitors
- **City access:** BW will coordinate with and ensure City's PWD access throughout testing



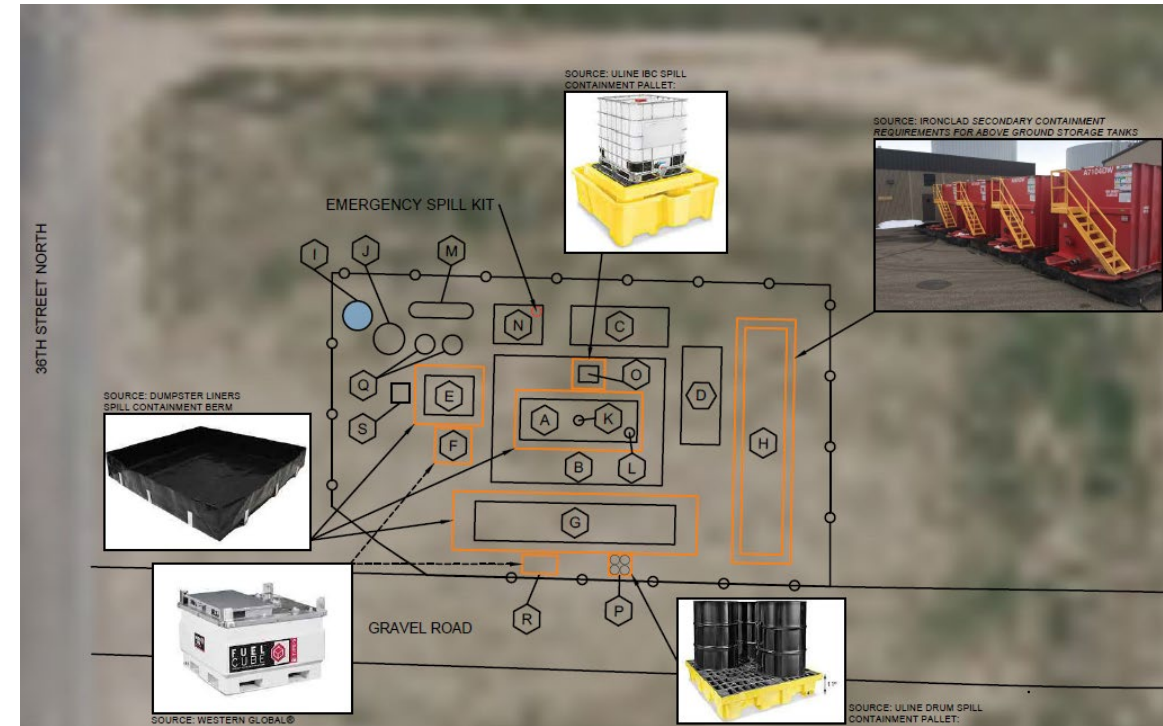
Noise

- Noise measurements by General Atomics
- All structures are outside 40 dBA perimeter.
- Hearing protection required during onsite operations
- Edge of closest neighborhood (road) is 1,000 feet to the west



Materials Storage & Removal

- All site activities coordinated and defined by test plans and procedures
- All materials are shipped and stored in material-specific, approved containers
- Secondary containment throughout
- Aboveground permit for temporary diesel fuel tank, other permits listed in “Temporary Easement & Access Agreement”



Prevention/Mitigation of Potential Spills— first, manage transport and temporary storage to avoid spills. In the case of a spill, Bay West is a Great Lakes Region recognized expert in spill containment and cleanup. Bay West is responsible for cleanup and site restoration to existing site conditions.

Site Restoration: by City request, leave gravel pad



Now: Google imagery 2025

After test completion: Remove equipment, containers, fence. Leave gravel pad in place.



More on Safety and Quality, Our Top Priorities

Safety

- ✓ GA iSCWO system has been extensively tested and approved by ASME pressure vessel codes
- ✓ HAZOP (Hazardous Operations) reviews met every review; safety studies; pressure calculations
- ✓ 40-hour OSHA HAZWOPER and GA system operations training
- ✓ PFAS sampling and waste handling follow Bay West Site Health & Safety Plan requirements and procedures
- ✓ Operations for over 30 years without incident

Examples of Quality Controls

- ✓ General Atomics' SCWO unit meets ISO-9001 requirements
- ✓ Analytical sample results reviewed and validated



Considerations

Technology? Materials are destroyed using supercritical water oxidation (SCWO) which breaks C-F bonds at high temp and pressure in water to produce CO₂, water, inorganic salts

Volume destroyed? about 300-500 gallons of PFAS materials

How long onsite? 4-5 weeks, including system check, equipment staging, testing, and site restoration

- Typical day: 1 hour warm up, 5-6 hrs testing, 1 hour shutdown

Considerations cont'd

How is water managed?

- Similar to the Tablyn Park SAFF® study
- Onsite, temporary storage using tanks in secondary containment
- Test, analysis and then determine best disposal options

Noise management? 40 dBA at the middle of Ideal Avenue ~ sound of refrigerator engine hum

Public outreach?

- Tours will be made available 1x/week to the public at a safe distance
- Possible visits by DoD, MPCA, industry, Congressional staff and other Government agencies
- Test results will be made public through conference presentations and research papers

City and State Benefits

- Proactive demonstration of PFAS destruction as an option now
- Tablyn Park, advance from removing PFAS from water to PFAS destruction. Removes potential future contamination.
- Field deployment of iSCWO aligns with regional PFAS remediation targets
- Supports City's leadership and outreach about PFAS programs
- Supports US test programs to identify best method to destroy PFAS waste

