Camp Minden

Community Meeting

30 June 2015

Overview of Agenda

- Selection Process
- Technology Selected
  - Description of Technology
  - Moving the M6/CBI safely from bunker to destruction area
  - Monitoring – On site and within community
  - Sharing information with public
  - Dismantling of the contained burn system
  - Tentative schedule
  - Immediate Next Steps
- Future Actions
- Questions and Answers

Quick Logistics

- Restrooms;
- Cell phones;
- Today's Powerpoints—posted on EPA website by Thursday;
- Hold questions until end; and
- Government-Contractor relationship.

Recommended Ground Rules

- Attack the issues and model civility with each other.
- Honor the agenda (time, topic, and process).
- Offer possible solutions when identifying problems.
- If you speak to the media following this media, speak only on your own behalf.

M6 Destruction Contract
Contractor Selection

June 30, 2015

EVALUATION PROCESS

Quote Opening: **March 18, 2015 received 10 Quotes**

Evaluation Committee:

- **The committee was comprised of ten (10) members :**
  - **State of Louisiana (LMD, LDEQ, and AGs Office**
  - **U.S. Environmental Protection Agency**
  - **2 Members of the Dialogue Committee**

- The process was thorough and deliberative of all available data.

- Consensus Decisions on Rankings and Recommendation

- Method, Technical Evaluation of Method, Environmental Considerations of Method, Company and Key Personnel Qualifications, Workplan, Timeline, Health and Safety Plan, and Price

PROPOSERS & METHODS

PROPOSER	PROPOSER METHOD	CATEGORIZATION
LEIDOS	Decineration	Thermal Desorption
AEGIS ENVIRON UXO, INC	Incineration and Sale	Incineration and Sale
TIMBERLINE ENVIRONMENTAL	Low Temperature Thermal Desorption	Thermal Desorption
CLEAN HARBORS ENVIRONMENTAL	Wet Grinder and Slurry Fired Thermal Oxidizer	Slurry Feed Incinerator
GENERAL DYNAMICS ORDNANCE & TACTICAL SYSTEMS	M6 Thermal Treatment Unit with Air Pollution Control Unit	Incineration and Sale
ARCTECH INC	Humic Acid Catalyzed Hydrolysis	Chemical Treatment
KEMRON ENVIRONMENTAL SERVICES	Thermal destruction tunnel furnace process.	Tunnel Furnace
EXPAL	Repurposing in a Blasting Agent and Repurposing in Hunting Powders	Repurposing
EXPLOSIVE SERVICE INTERNATIONAL (Kiln Method)	Kiln System	Kiln Incinerator
EXPLOSIVE SERVICE INTERNATIONAL (Contained Burn System Method)	Contained Burn System	Contained Burn System
CH2M HILL	Propellant Tunnel Furnace.	Tunnel Furnace

CONTRACT

- **Conduct removal, destruction, and site remediation actions of the following materials currently stored at the Camp Minden Site to include:**

  - 1) approximately 15,687,247 pounds of M6 propellant; and

  - 2) approximately 320,890 pounds of Clean Burning Igniter.

  - Contractor shall include all labor, materials, equipment, utilities, permits, licenses, and associated actions to complete the Work.

  - The Camp Minden Site will be available for the Contractor to work seven (7) days a week.

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June 30, 2015

ESI - Team

El Dorado Engineering, Inc.

SEMS Inc.
Southern Environmental Management & Specialties

CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Environmental Quality Management, Inc.

Company History

- ✓ 28 years in business as a Louisiana-based explosive company
- ✓ Routinely work in less than ideal conditions with explosives
- ✓ Industry leading safety record (zero explosive accidents or injuries)

Work Experience

- Explosive Emergency Response
- Hazardous Materials Emergency Response
- Explosive Marine Salvage
- Explosive Training

ESI Camp Minden History

- Responded to conduct remediation resulting from the Explo explosion (October 2012)
- Hired by Weston Solutions (EPA Contractor) to provide explosive safety oversight to various contractors (responsible parties) at Camp Minden

ESI - El Dorado Engineering

- **Received Alternative Technology request from LMD**
- **Reviewed various types of disposal technology**
- **ESI teamed with El Dorado Engineering based upon proven technology and company history**
- **Proposed Contained Burn Chamber as alternative technology**
- **Submitted bid to LMD (March 2015)**
- **ESI chosen by selection committee, recommended by LMD to EPA (EPA concurred with LMD contractor selection)**
- **Contract between ESI and State of Louisiana-LMD signed**

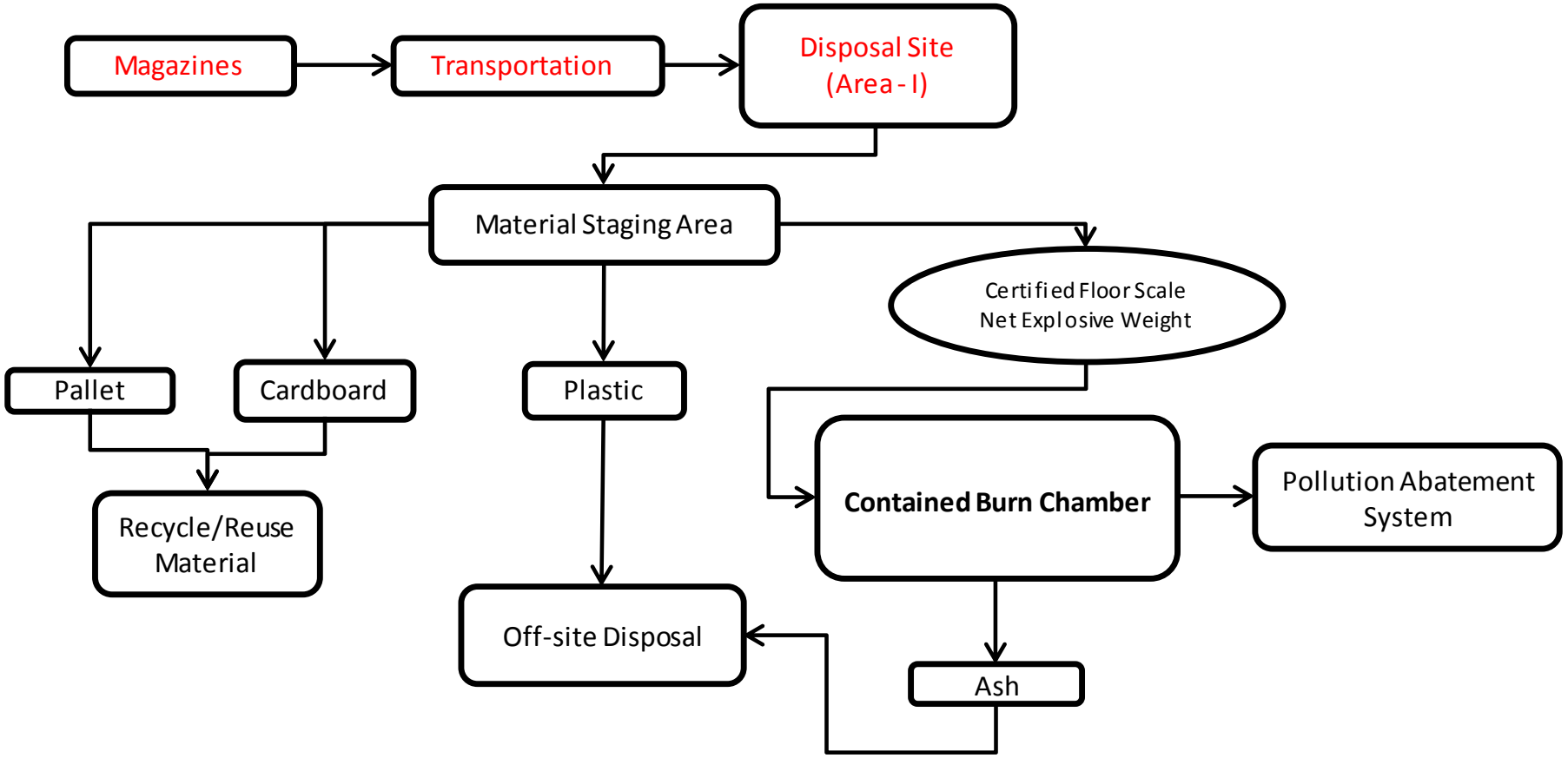
Project Considerations

- Dangers associated with this project
  1. Another magazine explosion prior to start up
  2. Another magazine explosion during operations
  3. Poor working conditions (Material stability- physical and chemical)
  4. Other associated risk dealing with emergency response work (Explosives)
- Time on Target
  - Handling of materials (if you touch it- dispose of it)
- Safety of Explosive Technicians is of the utmost importance
- **Safe resolution to the problem with trained and knowledgeable staff**

Operational Phases

- Phase 1-Site Prep/Mobilization
- Phase 2-Removal Action
- Phase 3-Site Close out Demobilization

Overall Process Flow



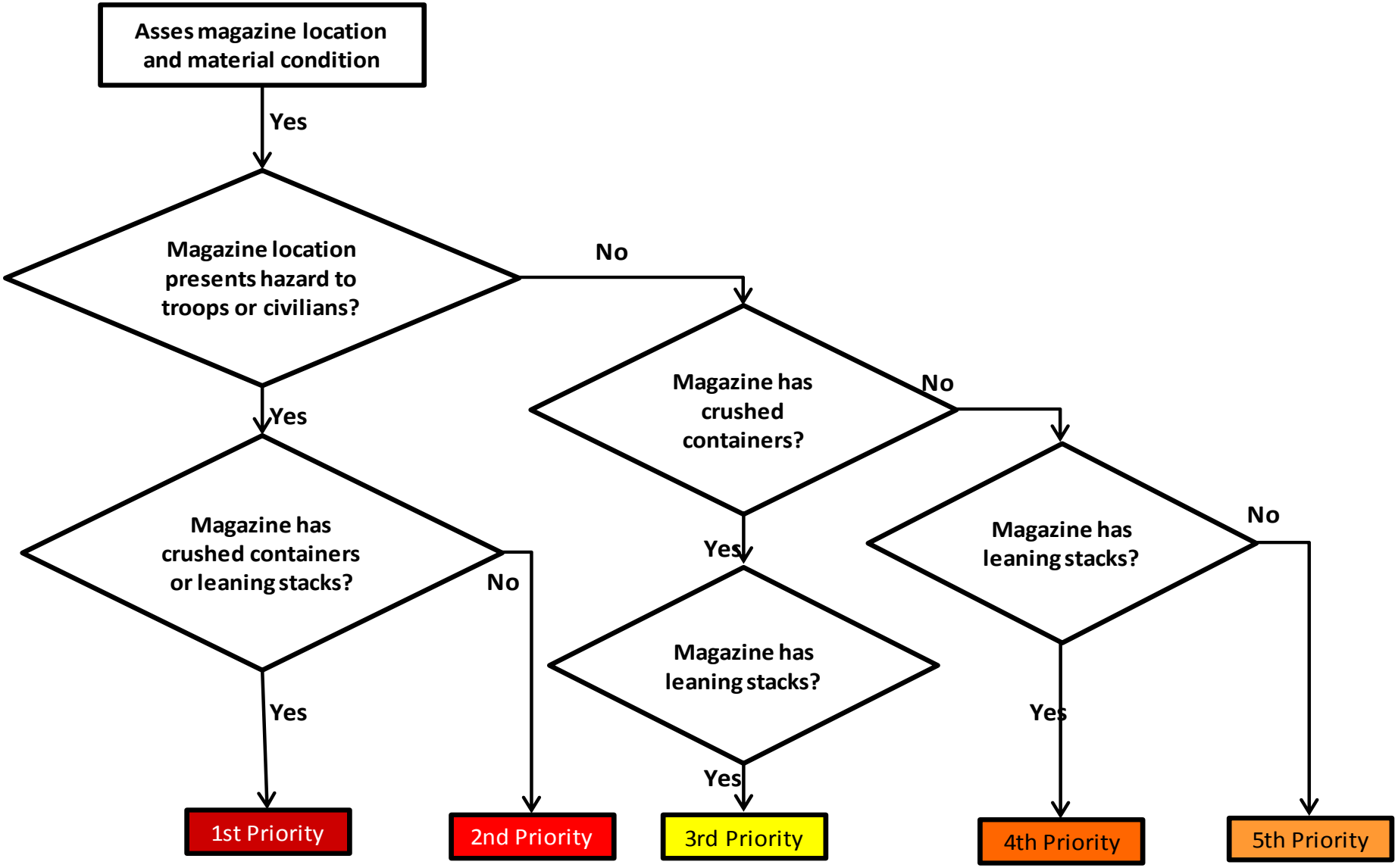
Overall Process Flow

Less than Ideal Storage Conditions

Boxes, Drums, Super Sacks

Magazine Priority

ESI Magazine Priority Decision Matrix

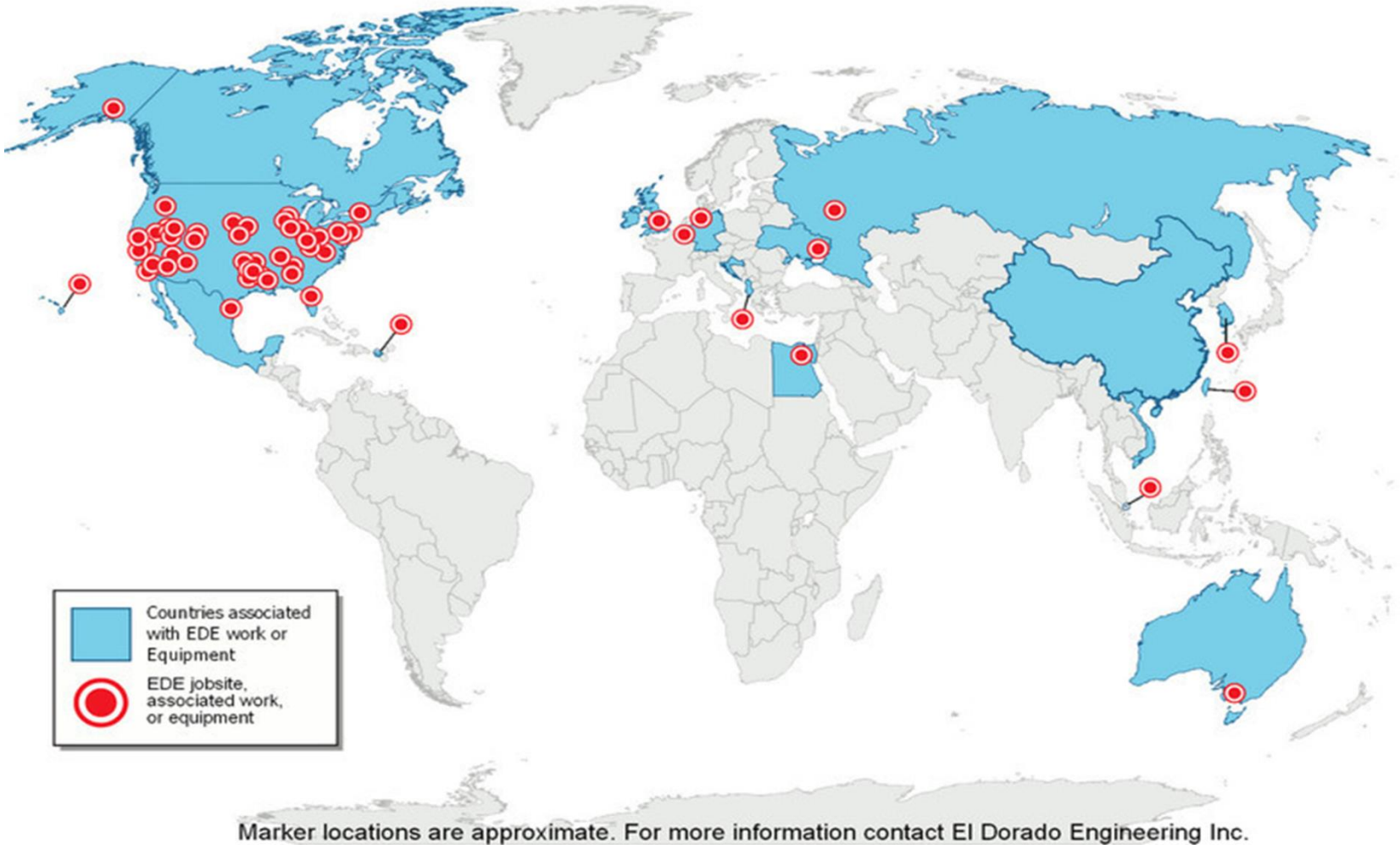


El Dorado Engineering, Inc.

- **EDE Specializes in:**
  - **Demilitarization of conventional munitions, chemical munitions,**

    bulk PEP, and rocket motors
  - **Recycling of munitions, explosive, and propellant wastes**
  - **Environmental consulting, permitting and restoration, related to PEP**
  - **Hazardous/explosive waste treatment and disposal**
- **Design/Consulting**
- **Fabrication/Installation**
- **Commissioning/Training**
- **Permitting**
- **Over 34 yrs. in Demil Business, HQ in Salt Lake City, UT**
- **Take pride in record of client satisfaction, project cooperation, on-time, on-budget performance**

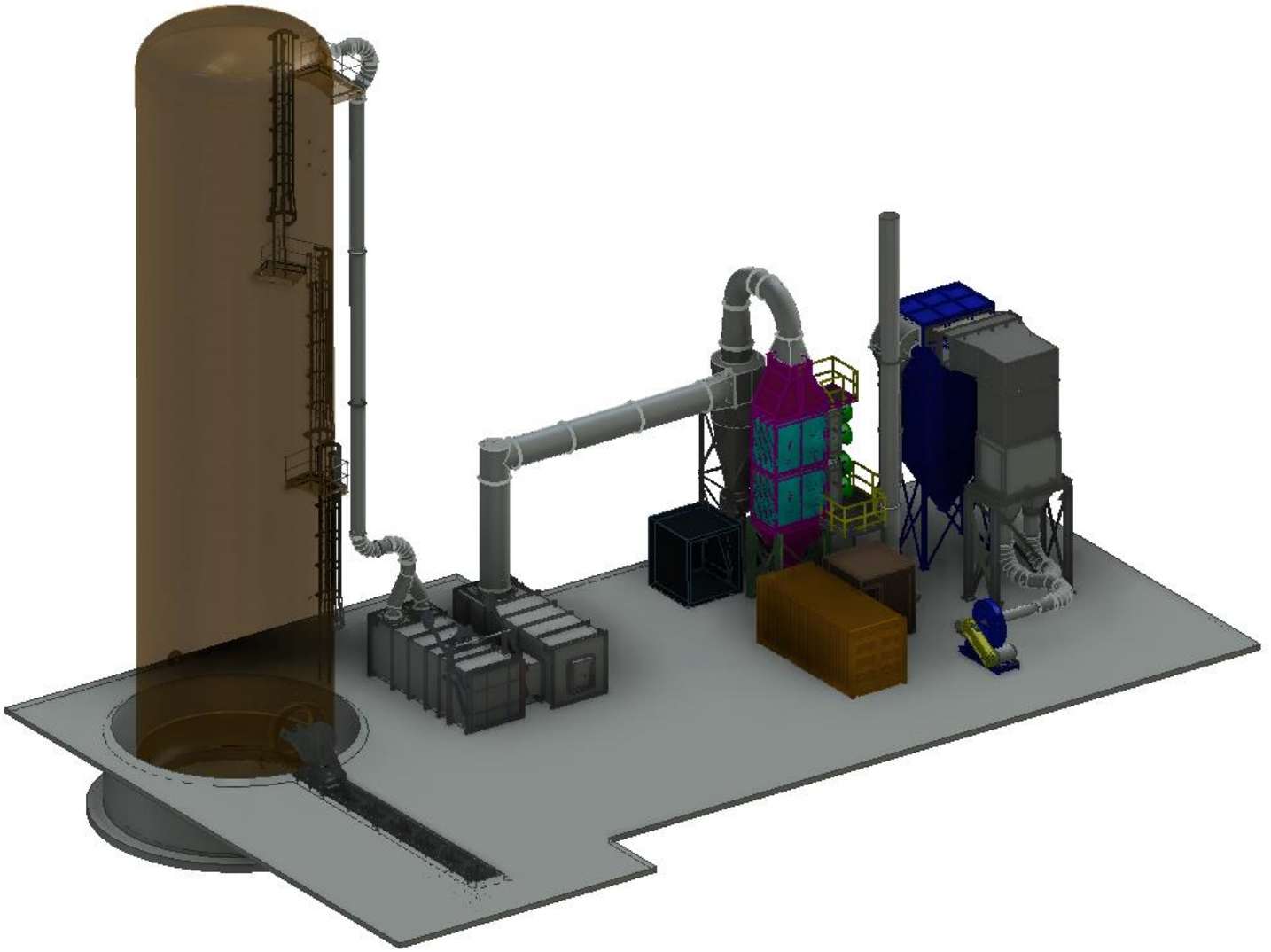
El Dorado Engineering



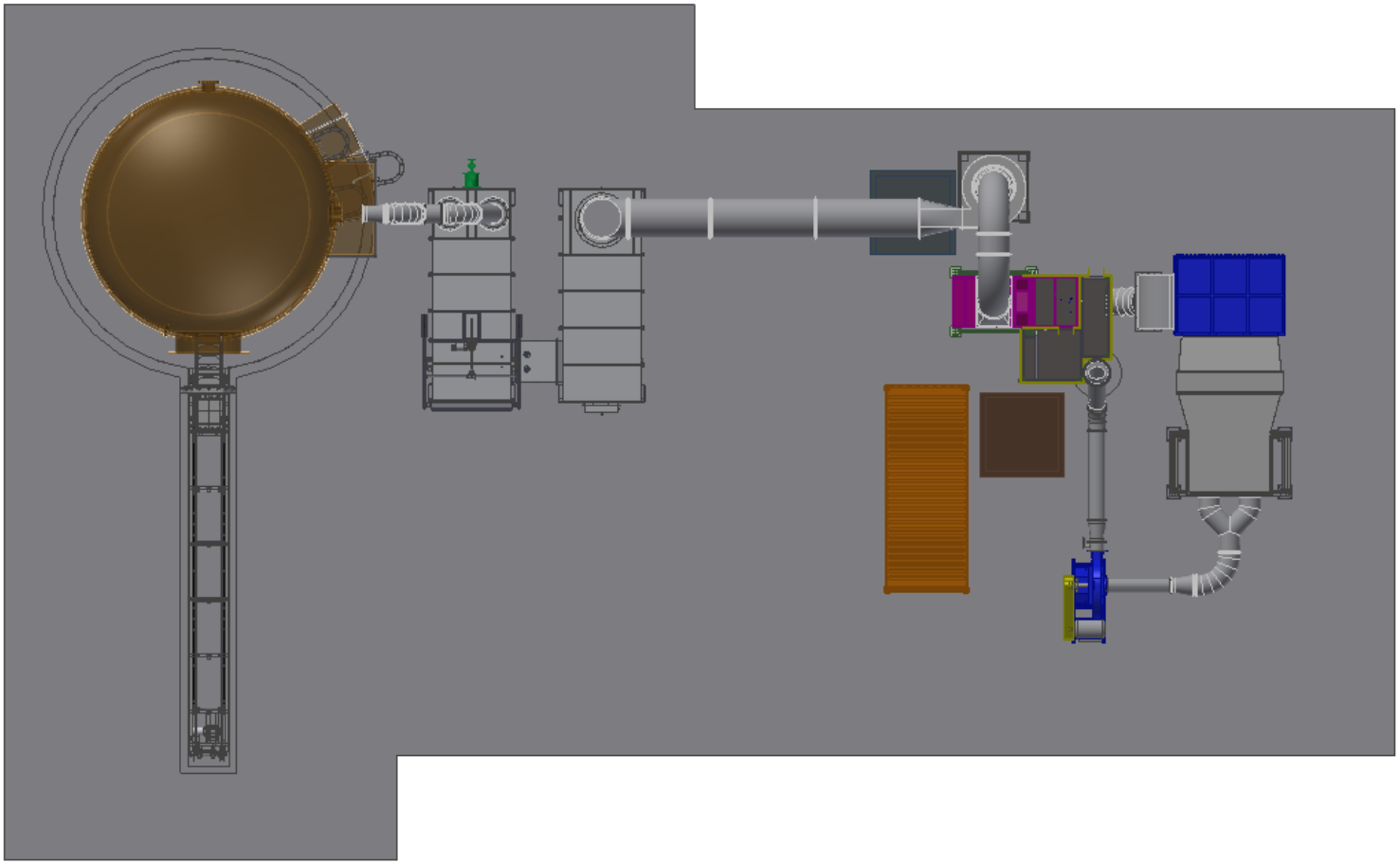
Example Facilities

El Dorado Engineering

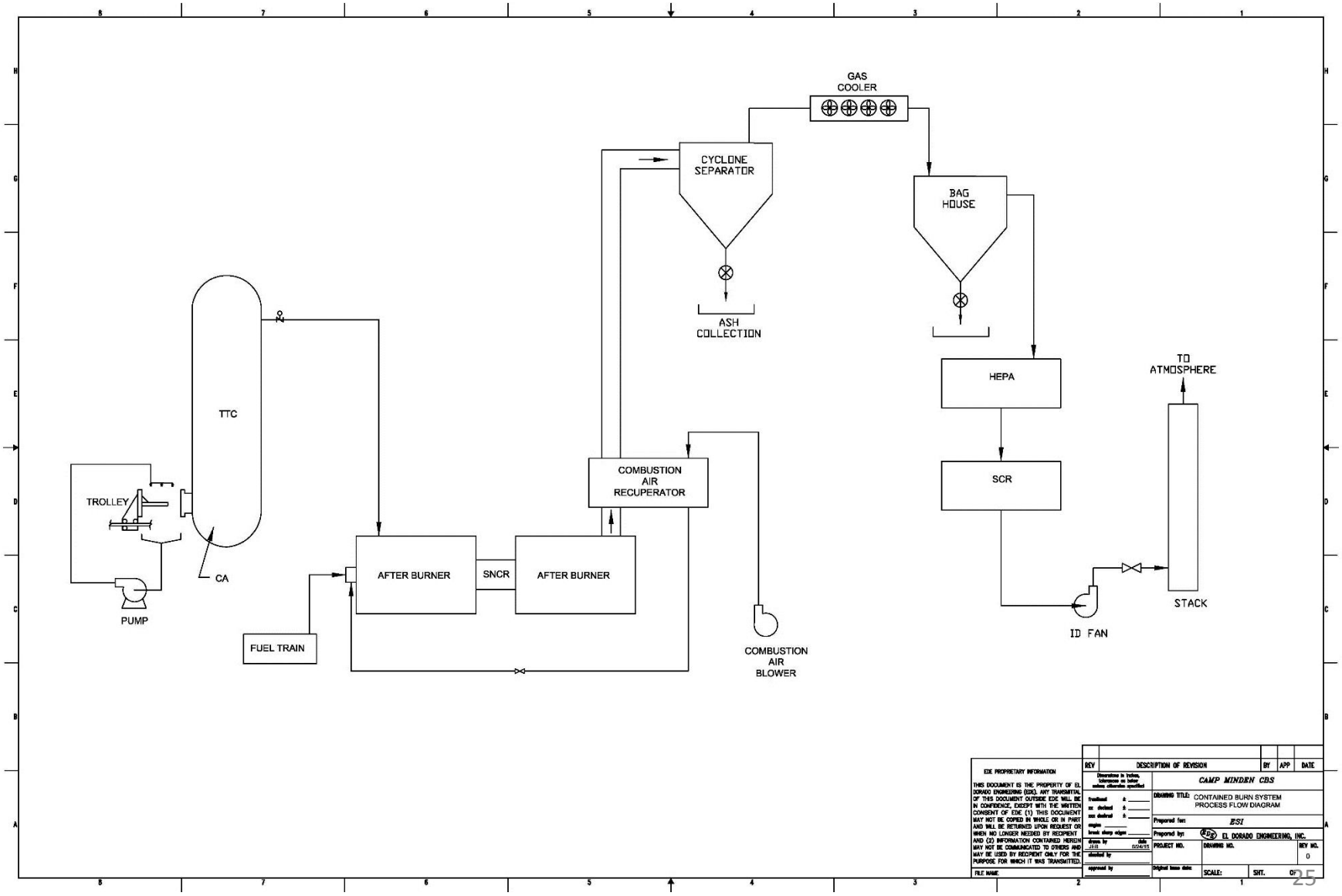
Contained Burn Chamber



Contained Burn Chamber Process



Process Diagram



Compositions

M6

86.1% NITROCELLULOSE - $C_6H_{7.74}N_{2.26}O_{9.5}$

9.9% DINITROTOLUENE - $C_7H_6N_2O_4$

3% DIBUTYLPHTHALATE - $C_{16}H_{22}O_4$

1% DIPHENYLAMINE - $C_{12}H_{11}N$

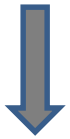
CBI

98% NITROCELLULOSE - $C_6H_{7.74}N_{2.26}O_{9.5}$

0.5-2.5% DIPHENYLAMINE - $C_{12}H_{11}N$

0.1% MAX POTASSIUM NITRATE - KNO_3

0.2% GRAPHITE GLAZE - C



MAJOR PRODUCTS OF COMBUSTION

WATER - H_2O

CARBON DIOXIDE - CO_2

NITROGEN - N_2

Operational Process Monitoring

- Contained Burn Chamber
  Pressure/Temperature
- Afterburner Temperature
- Particulate Filter Pressure Differential
- Gas Cooler/SCR Temperature

Stack Monitoring

- Demonstrate EPA Regulatory Compliance
  - Air Modeling
  - Comprehensive Performance Test
  - MACT EEE Stack Concentration Limits
- Continuous Emissions Monitoring (CEMS):
  - Oxygen, CO, NOx, THC, Flow Rate
- Sampling:
  - Particulate Matter
  - Volatile and Semi-Volatile Organic Compounds (DNT, DPA, DBP)
  - Dioxins/Furans

Groundwater Monitoring

- ESI will install six monitoring wells around Area I
  - Collect/establish baseline water quality
  - Quarterly sampling conducted throughout the disposal
  - Final report of water quality submitted at part of closure report

Surface Water Monitoring

- Surface and sediment samples collected in stream that water drains to from site.
  - Upstream, source point of introduction, and downstream (Clarks Bayou)
  - Baseline sampling prior to any activity
  - Final sampling at conclusion of all removal activity as part of our closure plan.

Camp Minden Community Monitoring Plan

Paul Nony, Ph.D.
Center for Toxicology and Environmental Health, LLC
North Little Rock, AR

AGENDA

- **Air Monitoring and Sampling Equipment**
- **Chemicals Monitored and Sampled For**
- **Air Monitoring and Sampling Approach**
- **Data flow/presentation**

Air Sampling

- **Particulates (PM2.5, PM10)**
  - **Analytical**
- **Semi Volatile Organic Compounds (SVOC)**
  - **Can be particles, gas, mixture**
  - **Analytical (GC/MS)**
- **Volatile Organic Compounds (VOC) (TO-15)**
  - **Analytical (GC/MS)**

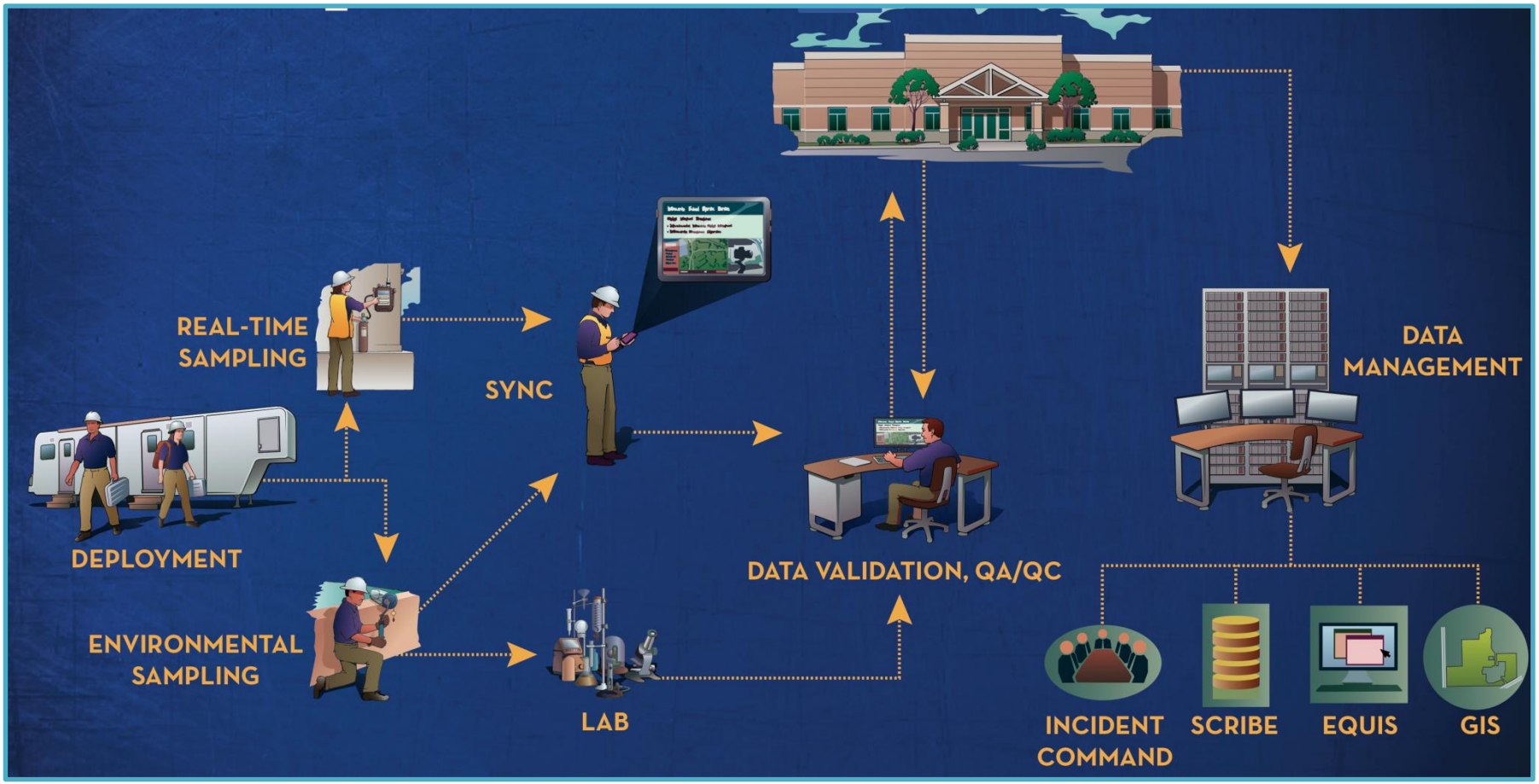
Air Monitoring

- **Criteria Pollutants**
  - **National Ambient Air Quality Standards (NAAQS**
- **Gases (Combustion by-products**
  - **Nitrogen Dioxide (NO_2)**
  - **Sulfur Dioxide (SO_2)**
  - **Carbon Monoxide (CO)**
- **Particles ($PM_{2.5}$ focus)**
  - **PM_{10} (sampling)**
  - **$PM_{2.5}$ (sampling + monitoring)**

Air Monitoring & Sampling Approach

- Equipment (for 1 location):
  - 1 Monitoring Trailer (5 monitors)
  - 5 Samplers
- 4 Locations
  - Upwind of facility
  - Downwind of facility
  - Community location
  - Fence line

Data Handling and Presentation



Reporting

- Daily
  - CEMS Stack & Community Air Monitors
- Weekly
  - Air Monitor locations for SVOC, VOC
  - Soil at Air Monitor location for SVOC, VOC
- Quarterly
  - Groundwater, Stack Emissions (VOC & SVOC)
- Semi-annual
  - Dioxin & Furan (Stack)
- Data Validation/Submittal to LMD for posting

Immediate Path Forward

- Plans (Submittal)
  - Work Plan
  - Health & Safety Plan
  - Sample Analysis Plan
  - Quality Assurance Project Plan
- Site Civil Design and Construction
- Contain Burn System Fabrication

Questions?

EPA
Next Steps and Future Actions

- Tentative Workshops (Dates to be determined)
  - DATA
  - Work Plan
  - Ground Water

Closing Comments