# HOLDINGS, INC.

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**Total Solutions and Innovative Technologies to Clean Water** 

#### Abtech Holdings, Inc. OTC QB: ABHD

OSPR/Chevron Oil Spill Response Technology Workshop February 25, 2015





The statements contained in this presentation that are not purely historical are forwardlooking statements within the meaning of applicable securities laws. Forward-looking statements include statements regarding our "expectations," "anticipation," "intentions," "beliefs," or "strategies" regarding the future, whether or not those words are used. Forward-looking statements also include statements regarding revenue, margins, expenses, anticipated levels of future revenues and earnings from operations, projected costs and expenses related to our operations, liquidity, capital resources, and availability of future equity capital on commercially reasonable terms. Forward-looking statements in this presentation are based upon a number of assumptions, some of which may not materialize, and unanticipated events may occur which could affect the actual results achieved by the Company during the periods covered by the forward-looking statements. All forward-looking statements included in this presentation are based on information available to us as of the date of the presentation, and we assume no obligation to update any such forward-looking statements. Our actual results could differ materially from the forward-looking statements.

Abtech Holdings, Inc. (OTC QB:ABHD)

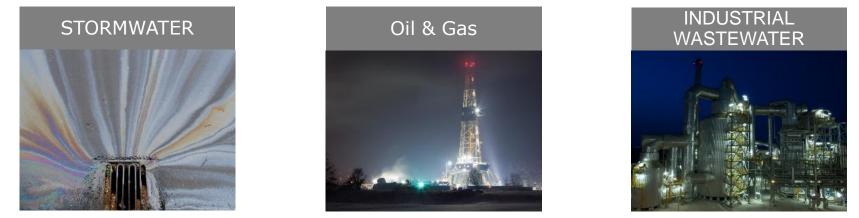
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## Corporate Profile



- Industry catalyst/trend
  - Multi-Billion Dollar Growth in U.S. stormwater market in the last 2-3 Years
  - Growing trend towards water recycling and re-use in the on-shore O&G industry
  - Clean Water Act and subsequent evolving regulations/increased enforcement
- AbTech is an environmental technologies and engineering company providing innovative solutions for water management and treatment



- AbTech is a manufacturer and developer of the patented Smart Sponge® and Smart Sponge Plus technology to remove hydrocarbons and reduce coliform bacteria (EPA Registration # 86256-1) contained in stormwater, produced water and industrial wastewater.
- AbTech is the parent company to AEWS Engineering, a civil and environmental engineering firm bringing innovative planning and design solutions to stormwater management.







## Smart Sponge<sup>®</sup> Core Technology Polymer-based Filtration Media

Absorbing capabilities makes Smart Sponge<sup>®</sup> highly effective as a filtration platform to remove hydrocarbons and other pollutants from flowing or pooled water. Smart Sponge<sup>®</sup> has the ability to be molded in various shapes and sizes for endless applications.







 Highly effective polymer-based filtration platform to remove hydrocarbons and other pollutants from flowing or pooled water due to its unique properties:

<u>Oleophilic</u> - chemically selective towards hydrocarbons

Hydrophobic - will not absorb water

High Porosity, High Flow Rate - can pass 80 gpm/ft<sup>2</sup> with a one-foot media depth

Non-Leaching - creates permanent bond with hydrocarbons

<u>Total Absorption</u> - absorbs 2 to 3 times its weight in hydrocarbons

<u>Unaffected by pH (5-10)</u>, salinity, dissolved solids or suspended solids

- **Patents** 17 U.S. Patents, 16 International (issued 2000 2007)
- **<u>High BTU Value</u>** Base polymer is 18,000 BTU.
- Disposal and Re-use Spent media can be reused as fuel in <u>waste-to-energy facilities or</u> <u>cement kilns</u>. 320lbs would produce 1 megawatt of power which could power 140 homes for 1 hour. <u>Landfill Disposal</u> accepted at Subtitle D Landfills. <u>Recycle</u> Patent-pending method to recycle 100% spent Smart Sponge<sup>®</sup> and its solidified hydrocarbons for potential resale of resulting oil.



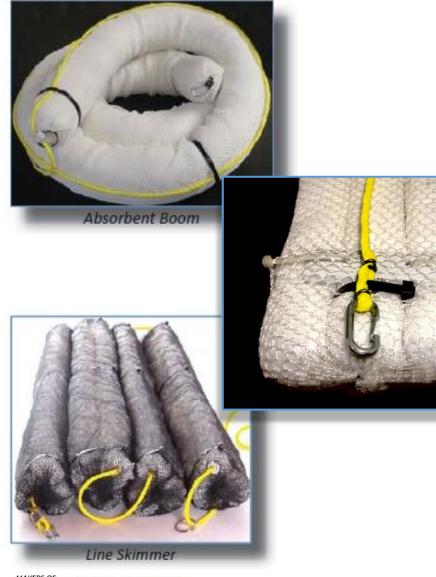


# **Solutions**



## Oil Spill Solutions – On Water Applications





# smart sponge

### Line Skimmers & Booms

- Removes or reduces sheen
- Will not absorb water
- Transforms pollutant to stable form
- Will not leach or leak
- Improved safety no dewatering
- Longer life will not deteriorate
- Lower deployment costs
- Silent sentinel can remain on site indefinitely in case of potential releases

## Oil Spill Solutions – Portable Filtration





#### Smart Drum <sup>TM</sup> Hydrocarbon Absorption Canister (HAC)

- Absorbs and locks hydrocarbons
- Parallel or series operation
- Easy Setup and Disposal
- Flow rates 5-10 GPM at 10 PSI
- > 90% Hydrocarbon removal;
  - Crude, Diesel Range Organics
  - Petroleum Fuels, Machine Oils
  - Select Food Grade Oils
- Operating temperature to 100 °F
- 1:1 absorption (approx 100 lbs)







## **Scalable Engineering Solutions**

- Smart Sponge Contactor Units
- Skid or Trailer Mounted
- Engineered based on Water
  Properties & Flow Rate Needs
  - 10 BWPD to 100+ BWPM
  - Source water treatment
  - Frac water pre-treatment
  - Frac flowback treatment
  - Produced water treatment
  - SWD pre-injection treatment
  - Offshore water management
  - Remedial work





- Variable flow rates depending on loading and contactor vessel size and arrangement
- Empty Bed Retention Time (EBRT)
  - Guideline is 10 minutes (minimum) depending on vessel size, loading, etc.
- Virtually no pressure drop <5psi at typical operating pressures and flow rates
- Adaptable to pressure or gravity environments; steel pressure vessels, custom engineered systems, multi-bag vessels, gravity vessels, and steel drums
- Rapid deployment, uses standard ASTM rated





- Project management and engineering services from concept through delivery and commissioning
- Project management and engineering services includes:
  - Chemical Engineering
  - Civil Engineering
  - Environmental, Public Health and Regulatory
  - Process Engineering
- Over 70 years staff experience in water and wastewater design, environmental engineering and application
- Collaborate on project management and engineering with companies, contract firms, and project contractors





#### **MISSION:** Innovative Engineering for Environmental Water Solutions

AEWS Engineering provides best in class stormwater Best Management Practice (BMP) design. With direct access to cutting edge technology and research through University affiliations, AEWS is able to deliver comprehensive and targeted solutions to specific pollutants and compliance/permit issues for any site, watershed, or jurisdiction. AEWS Engineering offers an integrated approach to consulting, planning, design, and engineering delivering efficiencies in cost and time. AEWS constructs smarter environments and strives for minimal infrastructure disruption.

#### **Areas of Environmental Expertise:**

Stormwater; Wastewater (Decentralized); Combined Sewer Overflows; Water Reclamation & Reuse.

#### **AEWS Stormwater Services Include:**

Stormwater Program Development and Management; Stormwater Civil/Environmental Design; Environmental Site Assessments; NPDES Regulatory Compliance; BMP Analysis & Design; Low Impact Development (LID); Green Infrastructure Design; Stormwater Modeling and Monitoring; Data Management – GIS and Mapping Applications; Public Relations and related Outreach Services; Total Cost Analysis/Value Proposition Development; Flood Control Engineering; Master Site Planning.

#### **Research & Development Collaboration:**

<u>North Carolina State University</u>, leader in development of stormwater management. <u>National Environmental Services Center at West Virginia University</u>, 34 year history communicating information regarding water quality problems and solutions to municipalities, federal and state agencies, nongovernmental organizations, and industry.







# **Thank You for Your Time**

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