

D&D Knowledge Management Information Tool -2014

www.dndkm.org

Himanshu Upadhyay
Program Manager(IT)





FLORIDA
INTERNATIONAL
UNIVERSITY

Research Paper Authors

- Dr. Leonel Lagos (FIU)
- Walter Quintero (FIU)
- Peggy Shoffner (FIU)
- John DeGregory (DOE-HQ)

Developed by:



In Collaboration with:



**ALARA
Centers**



Acknowledgments & Thanks

- Department of Energy Office of Environmental Management (DOE-EM)
Office of D&D & Facility Engineering (EM-13)

Mr. Andy Szilagyi (Director)
Mr. John DeGregory (FIU Technical Monitor)

- Florida International University

Dr. Leonel Lagos (Principal Investigator)
Peggy Shoffner
Walter Quintero
Clint Miller
Justin Phillips

- DOE Fellows and Graduate Students (FIU)

Steve Noel, Revathy Venkatraman, Pedro Cardon
Michelle Embon, Chandrashekhar, Sandhya Appunni



- Applied Research Center at Florida International University (FIU)
- Department of Energy (DOE EM)
- Department of Energy-IT (DOE EM-72)
- Energy Facility Contractor Group (EFCOG)

Developed by:

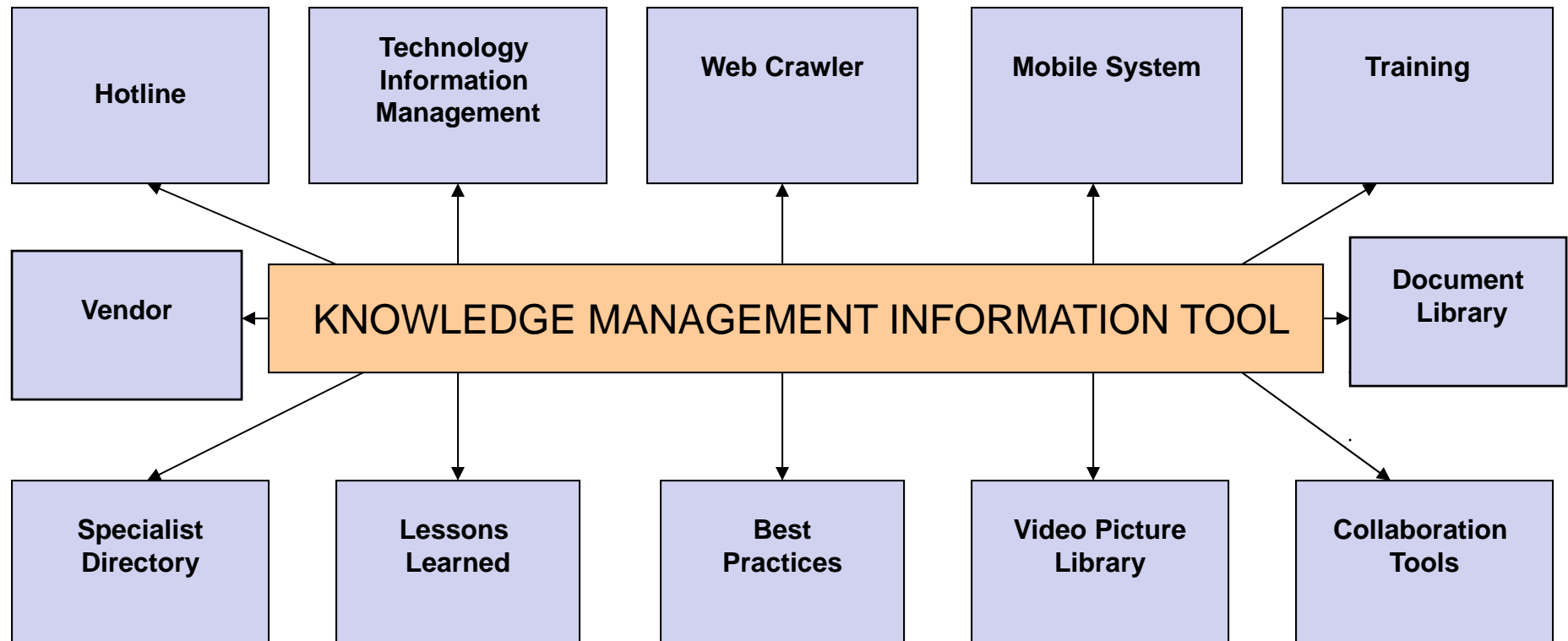


In Collaboration with:



**ALARA
Centers**





Developed by:

In Collaboration with:



ALARA Centers



D&D KM-IT is a web-based knowledge management information tool custom built for the D&D community. Various features of the system are as follows:

- **Hotline**- Hotline allows the D&D community to post problems in a specific D&D area and get solutions from the subject matter specialists. Users can also search for previously published problems and their solutions.
- **Technology** -Technology provides information on D&D related technologies and any associated demonstrations. It provides technology descriptions, benefits, limitations, and associated links and documents. It also provides vendor information, technology and demonstration fact sheets, and search capabilities.

Developed by:

In Collaboration with:



**ALARA
Centers**



D&D KM-IT Features Continued

- **Web Crawler-** Custom D&D web crawler will search and retrieve information from D&D related websites. The crawler will provide the user with a list of the best-matching web pages, usually with a short summary containing the document's title or parts of the text.
- **Mobile System-** Mobile system will provide access to important D&D KM-IT features through wireless devices. The D&D community users will be able to access the hotline, technology information, specialist directory, lessons learned titles, news/alerts, announcements, events calendar, and vendor information on their wireless devices.
- **Training-** Training component will provide training videos related to D&D work, ALARA Centers' training material and custom training for the D&D community.

Developed by:

In Collaboration with:



**ALARA
Centers**



D&D KM-IT Features Continued

- **Collaboration Tools** -Collaboration tools will provide information-sharing mechanisms such as D&D news, events calendars, links, message boards, and frequently asked questions (FAQs), wikis and blogs. This will allow the D&D community to interact with fellow members.
- **Specialist Directory**- Specialist Directory provides a directory of D&D specialist in different areas along with their contact information. The user can search the Specialist Directory by name or by area of interest.
- **Lessons Learned**- Lessons Learned provides a repository of documents published by the D&D community users. This will allow them to share their experience with the community.

Developed by:

In Collaboration with:



**ALARA
Centers**



D&D KM-IT Features Continued

- **Best Practices** - Best practices provides a repository of D&D best practices documents that the user community can upload to the system.
- **Video Picture Library**-Video/picture library allows community users to upload D&D technology and demonstration videos and pictures to the D&D KM-IT system. The videos and pictures could then be viewed by the D&D community.
- **Vendors** - Vendor management will provide a directory of D&D vendors along with their contact information.
- **ALARA Reports** -Weekly reports published by the ALARA center include the status of the D&D activities that have taken place at various centers. It includes the list of ALARA center activities for consecutive weeks. This feature makes the reports available to the entire D&D user community.

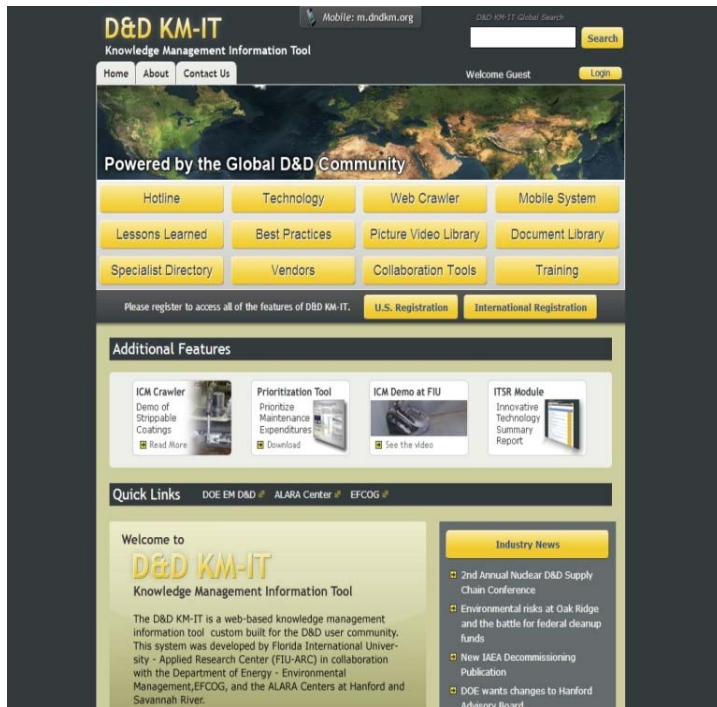
Developed by:

In Collaboration with:

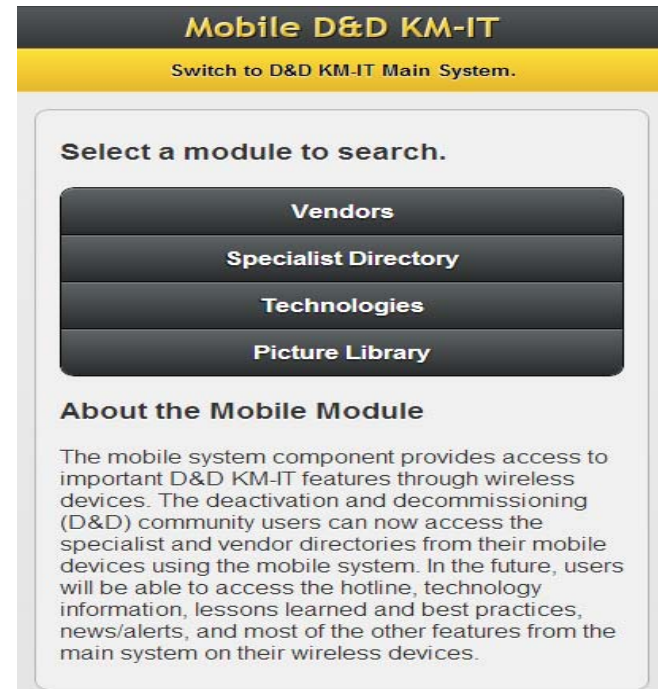


**ALARA
Centers**





<https://www.dndkm.org>



<https://m.dndkm.org>

Developed by:



In Collaboration with:



ALARA Centers



Research Project Contact:

Dr. Leonel Lagos

Director of Research

Florida International University

305-348-1810

lagosl@fiu.edu

Research Work Demo : <http://localhost:82/default.aspx>

Developed by:



In Collaboration with:



ALARA
Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Hotline **Search** Post Problem Help

Search

My Submitted Problems
 My Managed Problems
 Published Problems

Functional Group :



Functional Category :

Search For :

Status :

Results Per Page:

SEARCH



 Hanford
ALARA
Center

Design and Development by
Applied Research Center at Florida International University
with funding provided by
U.S. Department of Energy - Environmental Management

Copyright 2009 D&DKMIT. [Disclaimer.](#)

Developed by:



In Collaboration with:



ALARA
Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Hotline **Search** | Post Problem | Help

Search

My Submitted Problems
 My Managed Problems
 Published Problems

Functional Group :

Functional Category :

Search For :

Status :

Results Per Page:

SEARCH

11 Records Found

Advanced Search Results

- Fixatives for Single-Shell Valve Pit Covers** Submitted to SMS

Looking for fixatives that can be used to seal openings and crevices in single-shell valve pit covers....

Category:Deactivation & Decommissioning->Worker Safety

Entered: 3/11/2008 12:10:48 AM Last Updated: 3/5/2010 2:56:37 PM # of Solutions: 1
- Fixatives for Worker Entry** Published

Decontaminating a 500 sq ft area in a PNNL facility. Require fixatives that can be used to cover this contamination before workers entered the room. ...

Category:Deactivation & Decommissioning->Decontamination

Entered: 3/11/2008 1:02:08 AM Last Updated: 3/19/2008 1:05:27 PM # of Solutions: 1
- Paint Flaking at a Large Contaminated Facility** Published

A large facility that is highly contaminated has paint flaking off the walls, ceiling and floors. The lower portion of the building is concrete with two large towers that are made of steel. Please advise with regards to suitable fixatives. ...

Category:Deactivation & Decommissioning->Decontamination

Entered: 3/11/2008 1:40:56 PM Last Updated: 3/26/2008 9:44:46 AM # of Solutions: 1
- D&D of a Highly Contaminated Incinerator** Published

Savannah River Site SRS has an incinerator which the interior is a High Contamination Area. It is lined with bricks "like a fireplace" and has residual ash. SRS needs expertise in selecting a fixative to fix the residual ash and contaminated brick. ...

Category:Deactivation & Decommissioning->Decontamination

Entered: 3/11/2008 2:24:08 PM Last Updated: 3/19/2008 2:44:38 PM # of Solutions: 1
- Fixative Recommendation for Metal Corrugated Bldg** Published

Could you please help identify the best fixative/coating products to apply to the exterior of a corrugated metal building that has both rust and flaking paint? We plan to test at least 3 products and the fixative/coating would need to last until D&D ...

Category:Deactivation & Decommissioning->Decontamination

Entered: 6/23/2008 2:55:52 PM Last Updated: 7/7/2008 4:02:54 PM # of Solutions: 1

Developed by:



In Collaboration with:



ALARA Centers





FLORIDA
INTERNATIONAL
UNIVERSITY

Hotline Problem Factsheet

D&D KM-IT
Knowledge Management Information Tool

Welcome admin admin [Profile](#) [Log Out](#)

[HOME](#) | [COLLABORATORS](#) | [CONTACT US](#)

[Hotline](#) | [Search](#) | [Post Problem](#) | [Help](#)

Work Flow Menu:

[Submit to Coordinator](#) | [Revert to SMS](#) | [Publish](#) | [Reject](#) | [View Workflow](#)

Problem Information

Fixative Recommendation for Metal Corrugated Bldg

Status : Published Problem entered 6/23/2008
Problem updated 7/7/2008

Problem Category Deactivation & Decommissioning > Decontamination

Problem Description:

Could you please help identify the best fixative/coating products to apply to the exterior of a corrugated metal building that has both rust and flaking paint? We plan to test at least 3 products and the fixative/coating would need to last until D&D of the building in approximately 3 years. A response to an earlier peeling paint problem mentioned that Kool Seal is recommended by Oak Ridge. Can you provide a contact or project name for that recommendation?

Applicable Project(s): [Add Projects](#) [Manage Projects](#) **Problem Link(s):** [Add Link](#)

[\(0000\) Not Applicable](#)

Problem Contact: [admin admin](#)

Problem Document(s): [Add Document](#)

- [Building Photo 1](#)
- [Building Photo 2](#)
- [Building photo 3](#)
- [Building Photo 4](#)

Solution(s) for Posted Problem [Add Solution](#)

- [Fixative Solution for Metal Corrugated](#)

Comments:



FIU
FLORIDA
INTERNATIONAL
UNIVERSITY

Hanford
ALARA
Center

Design and Development by
Applied Research Center at Florida International University
with funding provided by
U.S. Department of Energy - Environmental Management

Developed by:



In Collaboration with:



**ALARA
Centers**





FLORIDA
INTERNATIONAL
UNIVERSITY

Hotline Problem Picture

D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Hotline Search Post Problem Help

Work Flow http://localhost/dndkm/DOEKMDocuments/General/213-100_0305.jpg - Windows Internet Explorer

http://localhost/dndkm/DOEKMDocuments/General/213-100_0305.jpg

Problem
Fixativ
Status : Problem


Problem
Could you building need to mention recomm


Applicab
[\(0000\) N](#)

Problem
[admin.adr](#)

Solution
• [Fixat](#)

Commer



 FLORIDA INTERNATIONAL UNIVERSITY

ALARA Center

with funding provided by U.S. Department of Energy - Environmental Management

Developed by:



In Collaboration with:



ALARA
Centers




D&D KM-IT
Knowledge Management Information Tool

Welcome admin admin [Profile](#) [Log Out](#)


HOME
COLLABORATORS
CONTACT US

Technology Home

Technology



Demonstration



Above Images are randomly selected from the Technology Database.

Click image to view technology or demonstration details.

The Technology module provides information on D&D related technologies and any associated demonstrations. It provides technology descriptions, benefits, limitations, and associated links and documents. It also provides technology and demonstration fact sheets and search capabilities. The Technology module was created to provide up-to-date reliable information on technologies in the following areas:

- Characterization
- Decontamination
- Dismantlement
- Waste Management
- Worker Health & Safety
- Other - may be expanded upon request

Technology information consists of technology name, description, benefits and limitations. Pictures, documents and videos can be attached to provide complete information about the specific technology.

Demonstration information includes demo name, date, site location, objective, results and contact person information. Additional documents, videos and pictures can be attached to the demonstration information.


All information within the Technology module will be monitored and maintained by D&D KM-IT administrators.

Technology Approval

Search

Searching features include:

- String Search
- Technology or Application by Group / Category / Subcategory Search
- Vendor Search
- Technologies Demonstrated Search



FIU
FLORIDA INTERNATIONAL UNIVERSITY

Hanford
ALARA
Center

Design and Development by
Applied Research Center at Florida International University
with funding provided by
U.S. Department of Energy - Environmental Management

Copyright 2009 D&DKMIT. [Disclaimer](#).

Developed by:



In Collaboration with:



**ALARA
Centers**



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Technology Home | **Search** | Links | Help | Technology | Vendor | Technology Approval

Advanced Search

Technology Category Group: Characterization
 Application Category Category: All Category
 Vendor Subcategory: All Subcategory

Search String: Demonstrated 5 results 40 Records found

Advance Search Results

[2-D Linear Motion System](#)
Two-dimensional linear motion systems can be used to semi-robotically operate tools or instruments on surfaces. A two dimensional system, the Pentek, Inc. (Coriapolis, PA) 2-D Wall Walker was demonstr [...more](#)
Source : Hanford C-Reactor
Category : Characterization > Monitors > Radiation Monitors [Similar Pages](#)
Vendor : [Pentek, Inc.](#) Demonstrated

[Airborne Laser-Induced Fluorescence Imaging](#)
LIF is an optical technique that consists of two major components: one comprised of the laser, a close-coupled device (CCD) camera and monitor which were mounted on a tripod, and the other consisting [...more](#)
Source : Fernald Environmental Management Project
Category : Characterization > Monitors > Radiation Monitors [Similar Pages](#)
Vendor : [Special Technologies Laboratory](#) Demonstrated

[Alpha Sentry CAM System](#)
The spectroscopic algorithm (which uses a stripping method instead of ROIs) is extremely effective at subtracting out the radon daughter interference from the transuranic region of interest. This phys [...more](#)
Source : Catalogs
Category : Characterization > Sampling & Analysis Equipments > Analysis Equipment [Similar Pages](#)
Vendor : [Canberra Industries, Inc.](#)

[Beta Fiber-Optic Sensor for Detecting Strontium-90 and Uranium-238 in Soil](#)
The BetaScint(TM) sensor is designed to measure beta emissions from Sr-90 and U-238 in soils. The sensor is 150x35x8cm; it can measure contamination of the soil surface or of a soil sample spread over [...more](#)
Source : Laboratory for Energy-Related Health Research
Category : Characterization > Sampling & Analysis Equipments > Analysis Equipment [Similar Pages](#)
Vendor : [BetaScint, Inc.](#) Demonstrated

[Compact Subsurface Soil Investigation System](#)

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT
Knowledge Management Information Tool

Welcome admin admin [Profile](#) [Log Out](#)

[HOME](#) | [COLLABORATORS](#) | [CONTACT US](#)

[Technology Home](#) | [Search](#) | [Links](#) | [Help](#) | [Technology](#) | [Vendor](#) | [Technology Approval](#)



Technology Information Exit

2-D Linear Motion System

Category : Characterization > Monitors > Radiation Monitors
Reference # : OST 1476 DOE/EM-0403 **Model No :** 2-DLMS

Description

Two-dimensional linear motion systems can be used to semi-robotically operate tools or instruments on surfaces. A two dimensional system, the Pentek, Inc. (Coriapolis, PA) 2-D Wall Walker was demonstrated at the Hanford Demonstration Site C Reactor complex. Such systems are suitable for high flat (or slightly curved) walls. The motor-driven pulleys can be attached to the wall temporarily with magnetic force for steel walls, or with anchors or vacuum force for concrete walls. For locations with no ceiling in the way, the pulleys can be attached to standoffs above the wall, thereby allowing the end effector to reach the full height of the wall. Similarly, if there are no sidewall restrictions, the standoffs can be positioned to allow reaching the full wall width. The operator can command the system to traverse any two-dimensional path at constant speeds up to 60 feet per minute. This technology makes it possible to deploy completely automated work modules to large vertical surfaces, while eliminating scaffolding, respiratory protection, and other safety equipment required to protect human workers. Equipment weighs only 55 pounds (20 kg); a single laborer easily handles the operation. Once installed, the initial setup parameters are entered into an IBM-compatible computer via an easy to use touch-screen, and the operator can command the machine to traverse any path at velocities of up to 60 feet per minute (18 M/min). Hands-on operator activities are eliminated, as well as scaffolding, respiratory protection, and other forms of personnel protection and support. Dimensions of Tech Model (L x W x H): Weight of Tech Model (lb.): 350lb Pulley : 50 lb

<p style="margin: 0;">Benefits</p> <p style="margin: 0;"> More accurate and consistent scanning conditions for surveys Improved production rates for large walls Payload capacity at least 300 lb Accurately positions instruments and tools repeatedly Remote operation provides improved ALARA For radiation surveys, the controller software could be adapted to provide maps showing the location of measured radiation levels. </p> <p style="margin: 0;">Limitations</p> <p style="margin: 0;"> A variety of tool holders need to be developed. Pentek has a few designs completed The technology is not well suited to walls that have many protrusions; rather it works better on flat or slightly curve surfaces Pentek now can apply the technology to floor and ceilings </p> <p style="margin: 0;">Vendor Information</p> <p style="margin: 0;">Pentek, Inc</p> <p style="margin: 0;">Demonstrations</p> <ul style="list-style-type: none"> • Concrete Wall 	<p style="margin: 0;">Pictures</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p style="margin: 0;">2D Linear Motion</p> </div> <div style="text-align: center;">  <p style="margin: 0;">Remote control station</p> </div> </div> <p style="margin: 0;">Documents</p> <p style="margin: 0;"> Title: 1476-Linear Motion.pdf (Posted: 09/25/2002) Description: Innovative Technology Summary Report </p> <p style="margin: 0;">Video</p>
--	---

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT

Knowledge Management Information Tool

HOME
COLLABORATORS
CONTACT US
Welcome admin admin [Profile](#) [Log Out](#)

Technology Home
Search
Links
Help
Technology
Vendor
Technology Approval

Demonstration Information
Exit

Technology Name : [2-D Linear Motion System](#)

Demonstration Name : Concrete Wall **Demonstrated on** 9/22/1997

Demonstration Site : Hanford C-Reactor


Demo Objective

Characterization of the outer wall of the C reactor front face work area *The wall involved were 47 ft high by 14 to 60 ft wide, and has previously been surveyed only near ground level up to 8 ft high.


Demo Results

The technology is suitable for DOE nuclear facility D&D sites or any other sites involving D&D or remediation activities in contaminated areas. Also, the technology inherently reduces the potential for personnel falling from lifts and scaffolds and for exposure to radioactive or chemical contamination

Pictures



[Two linear motion](#)




[2D Linear motion during demonstration](#)

Contact Information

Name : Stephen Pulsford
Phone : (631) 344-2394
Email : pulsford@bnl.gov

Documents

Video



FIU
FLORIDA INTERNATIONAL UNIVERSITY

Hanford
ALARA
Center

Design and Development by
Applied Research Center at Florida International University
with funding provided by
U.S. Department of Energy - Environmental Management

Copyright 2009 D&DKMIT. [Disclaimer](#).

Developed by:



In Collaboration with:



ALARA
Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Technology Home **Search** Links Help Technology Vendor Technology Approval

8 Records found

Vendor Information

Vendor Name : Pentek, Inc
 Address : 1026 Fourth Avenue , Coraopolis , Pennsylvania , United States 15108
 Phone : 412-262-0725 Phone 800 : Fax : 412-262-0731
 Email : pentekusa@aol.com WebSite : <http://www.pentekusa.com>
 Comments :

[Exit](#)

Technology by Vendor

[2-D Linear Motion System](#)
 Two-dimensional linear motion systems can be used to semi-robotically operate tools or instruments on surfaces. A two dimensional system, the Pentek, Inc. (Coraopolis, PA) 2-D Wall Walker was demonstr [...more](#)
 Source : Hanford C-Reactor
 Category : Characterization > Monitors > Radiation Monitors Demonstrated

[Pentek Decon System MOOSE, SQUIRREL-III, SQUIRREL-I, & CORNER CUTTER](#)
 The MOOSE is a remotely operated floor scabblers designed to scarify large concrete floor slabs in environments that require strict control of airborne contamination and debris. The MOOSE scabblers utili [...more](#)
 Source : Applied Research Center (formerly HCET)
 Category : Decontamination > Chemical Surface Cleaning > Biological/Microbial Degradation Demonstrated

[Remotely Operated Scabbling](#)
 The Pentek, Inc., remotely-operated scabblers, the Moose ®, is designed to scarify large concrete floors and slabs in environments which require stringent control of airborne contamination and debris. [...more](#)
 Source : TMS Technology Database
 Category : Decontamination > Mechanical Surface Removal > Scabbling , Mechanical Demonstrated

[ROTO PEEN Scaler and VAC-PAC SYSTEM](#)
 The ROTO PEEN Scaler and the VAC-PAC waste collection system, is a fully developed and commercialized technology used to remove hazardous coatings from concrete and steel floors, walls, ceilings, and [...more](#)
 Source : Chicago Pile-5 Reactor
 Category : Decontamination > Mechanical Surface Removal > Scabbling , Mechanical Demonstrated

[ROTO-PEEN Scaler](#)

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT
Knowledge Management Information Tool

Welcome admin admin [Profile](#) [Log Out](#)

[HOME](#) | [COLLABORATORS](#) | [CONTACT US](#)

[Technology Home](#) | [Search](#) | [Links](#) | [Help](#) | [Technology](#) | [Vendor](#) | [Technology Approval](#)

Technology Information
Exit



Pentek Decon System MOOSE, SQUIRREL-III, SQUIRREL-I, & CORNER CUTTER

Category : Decontamination > Chemical Surface Cleaning > Biological/Microbial Degradation

Reference # : Model No : Pentek Decon System

Description

The MOOSE is a remotely operated floor scabblers designed to scarify large concrete floor slabs in environments that require strict control of airborne contamination and debris. The MOOSE scabblers utilizes a highly effective, single-step floor scarification process with an integrated vacuum control. The scabbling head houses seven independent reciprocating tungsten carbide-tipped bits to remove protective coatings and concrete substrates. The bits pulverize the surface by delivering 1,200 hammer impacts per minute through pistons driven by compressed air. Dust and debris are captured by the on-board 23 gallon HEPA vacuum system. The six-wheel chassis is powered by dual DC motors. The SQUIRREL-III is designed to tackle small jobs and to get into tight spaces near corners, wall/floor joints, floor joints, floor penetrations, equipment pedestals, steps, and under protruding equipment. The SQUIRREL-III uses high-speed, reciprocating tungsten-carbide tipped bits to pulverize protective coatings and concrete substrate in a single-step process. The SQUIRREL-III is a manually operated pneumatic scabblers that operates in conjunction with a HEPA vacuum system. The SQUIRREL-I is a single piston, air-driven scabblers with localized exhaust; it is ideal for spot remediation in deeply settled hot areas. The SQUIRREL-I is a manually operated, hand-held scabblers similar in function to the SQUIRREL-III. The CORNER CUTTER is a hand-held pneumatically operated shrouded needle scaler that operates in conjunction with a HEPA vacuum system. Multiple hardened steel needles operate within an evacuated stainless steel shroud, which prevents the release of dust, debris, and airborne contamination. Standard shrouds allow the unit to conform to inside and outside corners and flat surfaces. Dimensions of Tech Model (LxWxH): MOOSE: 68" x 31" x 70" SQUIRREL-III: 12" x 6" x 12" SQUIRREL-I: 12.7" x 2.3" x N/A CORNER CUTTER: 14" x 1.75" x N/A Weight of Tech Model (lb): MOOSE: 1650 lbs. SQUIRREL-III: 50 lbs. SQUIRREL-I: 40 lbs. CORNER CUTTER: 9 lbs.

<p>Benefits</p> <p>The Pentek Decontamination System is fully integrated with a vacuum and dust collection system. Fully contained system; no airborne dust escapes during operation. There are many commercial units available. System requires minimal time to set up and operate. System can be adjusted to remove a selected amount of surface. The SQUIRREL-III and I models and the CORNER CUTTER can reach edges and corners. The MOOSE is remotely controlled, reducing operator fatigue. The MOOSE has a built-in HEPA vacuum.</p> <p>Limitations</p> <p>The surface of the concrete must be dry for the equipment to operate. If wet, the debris becomes wet and may clog the machine. Steel reinforcing will damage the tungsten-carbide bits. The MOOSE requires significant maintenance activities due to the large amount of force</p>	<p>Pictures</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Pentek MOOSE</p> </div> <div style="text-align: center;">  <p>Pentek MOOSE</p> </div> </div> <p>Documents</p> <p>Video</p>
--	---

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin | Profile | Log Out

Technology Home | Search | Links | Help | Technology | Vendor | Technology Approval

Technology Home | Search | Links | Help | Technology | Vendor | Technology Approval

Technolo... http://localhost/dndkm/DOEKMDocuments/GetMedia/Technology/101-Pentek.jpg - Windows Internet Explorer

Pentek CORNER
Cate...
Refere...
Descri...
The MOOS require str floor scarif reciprocate the surfac debris are motors. Th floor joints high-spee single-ste a HEPA va spot reme function to that opera evacuated shrouds al (LxWxH): 1 x 1.75 x N, CUTTER: 9

Benefi...
The Pente with a vac system; n There are requires n be adjust SQUIRREL reach edg controlled built-in HE

Limitatio...
The surface of the concrete must be dry for the equipment to operate. If wet, the debris becomes wet and may clog the machine. Steel reinforcing will damage the tungsten-carbide bits. The MOOSE requires significant

Video

Developed by:



In Collaboration with:



ALARA Centers



The screenshot shows a web browser window displaying a technology page. The browser's address bar shows the URL: http://localhost/dndkm/DOEKMDocuments/GetMedia/Technology/37-WallWalker_2year.jpg. The page content includes:

- Technology Home** | Search | Links | Help | Technology | Vendor | Technology Approval
- Technology Information** [Exit]
- WallWalker 3D**
- Category :** Decontamination > Mechanical Surface Removal > Scabbling , Mechanical
- Reference # :** **Model No :** WallWalker 3D
- Description**
The WallWalker head, an ultra consists of a heart of the m be configured Windows 95 b it's path of m moved along line help, as w or unsafe are hazardous co single-piston : scabblers can VAC-PAC ultra efficient remo with a second first stage filte clogging, and The monorail i important saf brake pin on e using an AC v trolleys also ir
- Benefits**
Unit is remot labor intensiv respiratory pr very manuev the scabbling another secti large areas.
- Limitations**
When used ir considerably Walls have to side in order locations the completely re
- Vendor Infor**
[Pentek, Inc](#)

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT

Knowledge Management Information Tool

HOME
COLLABORATORS
CONTACT US
Welcome admin admin [Profile](#) [Log Out](#)

Technology Home
Search
Links
Help
Technology
Vendor
Technology Approval

Demonstration Information
Exit

Technology Name : [WallWalker 3D](#)

Demonstration Name : Coating Brick Wall **Demonstrated on** 8/21/1998

Demonstration Site : Applied Research Center (formerly HCET)


Demo Objective

Decontamination of Brick with an epoxy polyamine coating primer of 7 mils Ply-Mastic and 1.5 mils Ply-Thane 890 HS. Two adjacent coated brick walls with the dimensions of 231" x 119.5" and 238" x 119".


Demo Results

The WallWalker is remotely operated and therefore does not require intensive labor to operate. The unit is able to conduct aggressive removal on coated concrete walls and coating removal on brick walls. However, the demonstration of aggressive removal on the coated brick wall was unsuccessful.

Pictures



[3D_WallWalker](#)



[VAC-PAC used with WallWalker™](#)


Contact Information

Name : Marshall Allen
Phone : (305) 348-4238
Email : mallen@hcet.fiu.edu

Documents

Title: [WallWalk_yr2_Report.pdf](#) (Posted: 09/16/2002)
Description: Human Factors Assessment Report

Video



FIU
FLORIDA INTERNATIONAL UNIVERSITY

Hanford
ALARA
Center

Design and Development by
Applied Research Center at Florida International University
with funding provided by
U.S. Department of Energy - Environmental Management

Copyright 2009 D&DKMIT. [Disclaimer](#).

Developed by:

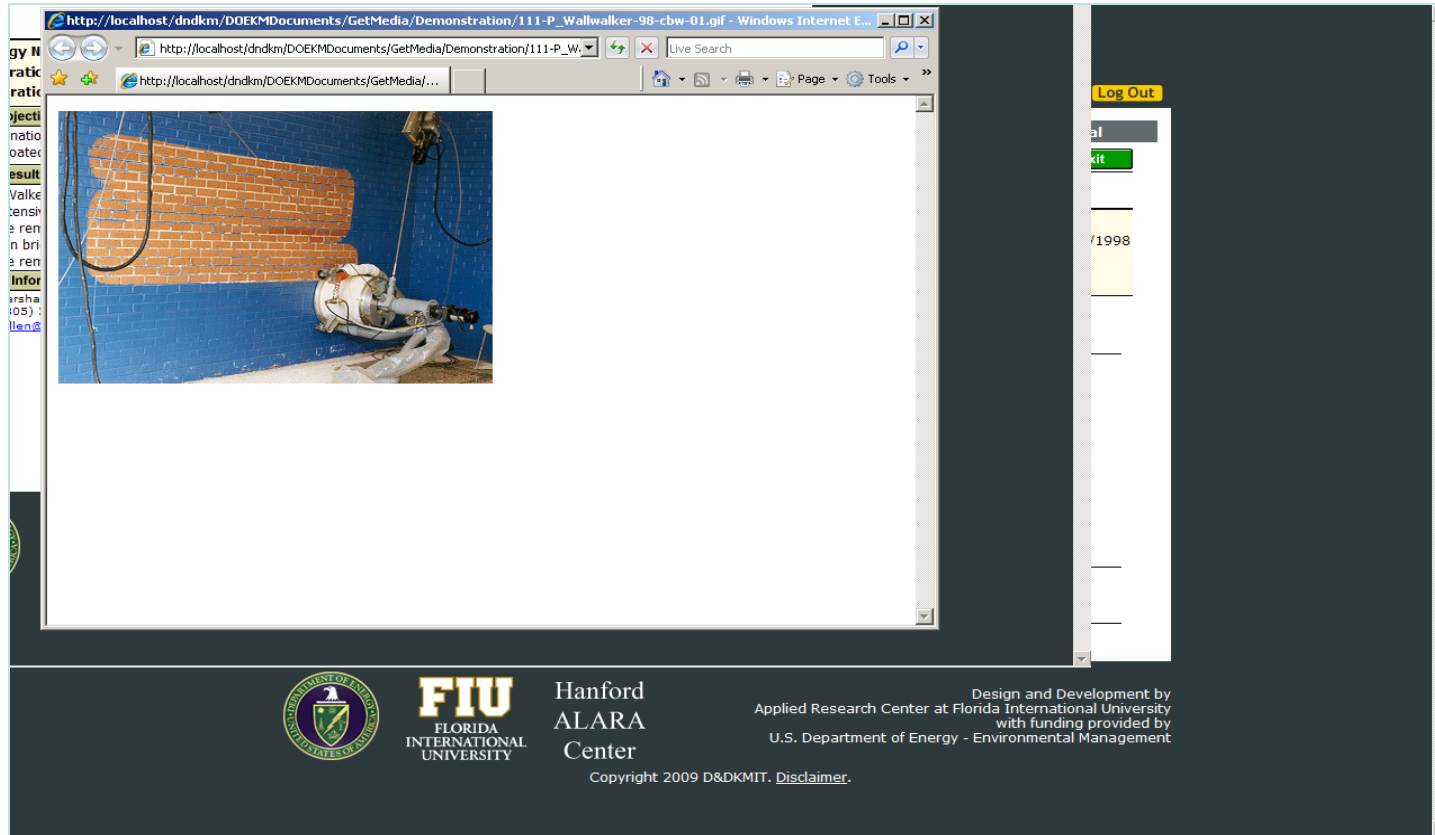


In Collaboration with:



ALARA
Centers





Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Technology Home | Search | Links | Help | **Technology** | Vendor | Technology Approval

[Technology](#) | [Upload Media File](#) | [Modify Media File](#) | [Manage Demo](#)

[Click Technology list box to add or modify technology.](#)

Select Technology: 2-D Linear Motion System

Vendor: Pentek, Inc

Model Number: 2-DLMS

Reference No: OST 1476 DOE/EM-0403

Group: Characterization

Technology Category: Monitors

Technology Sub Category: Radiation Monitors

Application Category: Masonry

Application SubCategory: Concrete

Technology Source: Hanford C-Reactor

Technology Name: 2-D Linear Motion System

Description: Two-dimensional linear motion systems can be used to semi-robotically operate tools or instruments on surfaces. A two dimensional system, the Pentek, Inc.

Benefits: More accurate and consistent scanning conditions for surveys
Improved production rates for large walls

Limitations: A variety of tool holders need to be developed. Pentek has a few designs completed
The technology is not well suited to

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Technology Home | Search | Links | Help | Technology **Vendor** | Technology Approval

Vendor Profile

Select Vendor: Pentek, Inc

Organization: Pentek, Inc

Address: 1026 Fourth Avenue

City: Coraopolis

Zip: 15108

Country: United States

State: Pennsylvania

Phone: 412-262-0725
Format: xxx-xxx-xxxxExtxxxx

Phone 800:
Format: xxx-xxx-xxxxExtxxxx

Fax: 412-262-0731

Email: pentekusa@aol.com

WebSite: www.pentekusa.com

Comments:

[Update](#) [Exit](#)

Developed by:



In Collaboration with:



ALARA
Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US | Welcome admin admin [Profile](#) [Log Out](#)

Technology Home | Search | Links | Help | Technology | Vendor | **Technology Approval**

Technology Name	Description	Entered On
150 Beacon Locating Equipment	The 150 Beacon Locating Equipment works with a wide range of Ditch Witch electronic locators to help	2/3/2010 View Approve
150R/T	The 150R/T can help up you locate underground utilities in order to avoid damage due to excavation.	2/3/2010 View Approve
2150GR Ground Penetrating Radar	The Ditch Witch 2150GR can detect both metallic and non-metallic pipes and cables to depths of up to	2/3/2010 View Approve
250R/T	The Ditch Witch 250R/T Locating System can be used for locating and avoiding buried telephone, CATV,	2/3/2010 View Approve
31" Shoulder-length Best@ Heavyweight Neoprene Work Gloves	Best's shoulder-length gloves are created for demanding applications involving a wide array of chemi	1/19/2010 View Approve
3M Face Protection	The 3M face protection are designed to be used with other 3M™ Safety Products. When properly used, t	11/3/2009 View Approve
3M Hearing Protection	3M's full-line of Hearing Protection Products feature solutions that help reduce noise exposures by	11/3/2009 View Approve
480B Pipe & Cable LocatorTM	The 480 B can be used for locating pipes and cables. The base model includes: transmitter, receiver	2/5/2010 View Approve
505 "GO-FER" Pipe and Cable Locator	This type of locator is widely used by gas distribution, pipeline and power companies to locate and	2/8/2010 View Approve
810 Classic Model 810 Pipe & Cable Locator	The 810 classic model is used for locating pipes and cables. This product includes a transmitter, re	2/8/2010 View Approve
850 Pipe and Cable Locator™	The 850 is a pipe and cable locator which includes a transmitter, receiver, conductor attachments, g	2/8/2010 View Approve
880B Ferromagnetic Metal Detector	The 880B Ferromagnetic Metal Detector is a pipe and cable locator which includes a receiver, soft ca	2/8/2010 View Approve
910R Pipe and Cable Locator	The 910R can be used for locating pipe, cable, or non-directional beacons. It comes standard with up	2/3/2010 View Approve
950R/T Pipe and Cable Locator System	The 950R/T system includes three modes and more than 20 frequencies, which help you to quickly locat	2/3/2010 View Approve
9860DLXT Dual Frequency Line Locator	The 9860DLXT Dual Frequency Line Locator is a pipe and cable locator, sonde locator, and fiber optic	2/8/2010 View Approve
Abrasive Blasting Technique	This technology consists of a portable blast cleaning system, normally used to prepare concrete surf	10/13/2009 View Approve

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT

Knowledge Management Information Tool

HOME
COLLABORATORS
CONTACT US

Welcome Guest [Profile](#) [Log Out](#)

Expert Search: [Search Experts](#) [Expert Registration](#)

FullName: Leo Lagos
Title: Sr. Research Scientist
Organization: Applied Research Center
OfficePhone: 305-348-1810
Email: lagosl@fiu.edu

[View Details](#)

Expertise Area:
 Cutting & Size Reducing,Deactivation Planning,Decontamination,Dismantlement,Fixatives & Coatings,High Pressure Cleaning,Mobile Platforms,Remote Pipe Decon,Robotics & Remote Technology,Sensor & Instrumentation,Video & Mobile Platforms,Large Scale Decon & Demolition

FullName: Jeff Hunter
Title: Hanford ALARA Center
Organization: CHPRC
OfficePhone: 509-373-0656
Email: jeffrey_j_hunter@rl.gov

[View Details](#)

Expertise Area:
 ALARA Controls,Characterization,Containment,Decontamination,Fixatives & Coatings,Gamma Cam Modeling,Grout Fill of Pipes Cells and Basins,HEPA & Special Filtration Systemms,Presonnel Protective Equipment,Portable Vaccum Systems,Radiation Controls,Remote Pipe Decon,Robotics & Remote Technology

FullName: Larry Boing
Title: Manager, Special Projects
Organization: ANL
OfficePhone: 630-252-6729
Email: lboing@anl.gov

[View Details](#)

Expertise Area:
 Asbestos Removal,Boring and Drilling,Characterization,Chemical Contaminant Cleanup,Computer Modeling,Concrete and Rubblization,Containment,Cutting & Size Reducing,Deactivation Planning,Decontamination,Demolition,Dismantlement,End Points Development,Entombment,Excess Equipment Disposition,Fixatives & Coatings,Gamma Cam Modeling,Grout Fill of Pipes Cells and Basins,Hazardous Material Disposal,HEPA & Special Filtration Systemms,High Pressure Cleaning,Manipulators,Mobile Platforms,Open Air Demolition,Orders: others,Presonnel Protective Equipment,Portable Vaccum Systems,Radiation Controls,Records Control,Regulations - other:,Remote Excavation,Remote Pipe Decon,Robotics & Remote Technology,Sampling,Secondary Waste

Developed by:



In Collaboration with:



ALARA Centers



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US

Welcome Guest [Profile](#) [Log Out](#)

SEARCH LESSONS LEARNED DOCUMENTS

[Upload Lessons Learned](#)

Lessons Learned Search

Category:

Search String:

[Search Documents](#)

Category	Source	Title	Description			
Decontamination	Information Bridge	LESSONS LEARNED AND BEST PRACTICES PROGRAM MANUAL	Lessons Learned and Best Practices Program within Lawrence Berkeley National Laboratory (LBNL) to ensure ongoing improvement of safety and reliability, prevent the recurrence of significant adverse events/trends, and determine implementation strategies that will help LBNL successfully meet the missions and goals set forth by the Department of Energy (DOE).	View	Reject	Delete
Dismantlement	FIU-ARC HIKER	LESSONS LEARNED WITH THE DISMANTLING OF THE KARLSRUHE REPROCESSING PLANT WAK	The WAK plant was closed down on June 30, 1991, after 20 years of hot operation. The dismantling of the plant started in 1994 with the decommissioning of obsolete systems and will be finished in 2009 with a green meadow. The dismantling activities are carried out by hands-on techniques, remote techniques, or a mixture of both, depending on radiological conditions. 5,500 tons of contaminated solid waste, 3,200 m3 of liquid waste, 130 canisters of HLW glass, and 75,000 tons of rubble will	View	Reject	Delete
Decontamination	ARC-FIU HIKER	PRELIMINARY LESSONS LEARNED FROM THE GUNITE AND ASSOCIATED	Make equipment as rugged as possible to avoid mechanical problems. · Consider personnel exposure consequences when designing systems and determining maintenance and procedures. · Maximize visibility with view ports and contamination covers, cameras, and lighting. · Design equipment interfaces	View	Reject	Delete
Dismantlement	FIU- ARC HIKER	San Onofre Unit 1 Lessons Learned	450 Mwe Westinghouse PWR w/3 Primary Loops · Commercial Operation 1968, Shutdown 1992 · Coastal Location, between Los Angeles & San Diego, CA · Shares physical site with SONGS 2 & 3 Units · Co-owned by SCE (80%) and SDG&E (20%) · SONGS 1 Fuel located in SFP, at SONGS 2 & 3 and at Morris, Ill · On Federal land/Lease requires removal of structures	View	Reject	Delete
Dismantlement	FIU- ARC HIKER	Technology Application and	Reduce / stabilize loose surface · Reduces worker exposure	View	Reject	Delete

Developed by:

In Collaboration with:



ALARA Centers



D&D KM-IT
Knowledge Management Information Tool

[HOME](#) | [COLLABORATORS](#) | [CONTACT US](#)
Welcome Guest [Profile](#) [Log Out](#)

SEARCH BEST PRACTICES DOCUMENTS [Upload Best Practices](#)


Best Practices Search

Category:

Search String:

[Search Documents](#)

Category	Source	Title	Description	
Dismantlement	ARC	Dismantlement Best Practices	Dismantlement Best Practices Document	View Reject Delete



FIU
FLORIDA INTERNATIONAL UNIVERSITY

Hanford
ALARA
Center

Design and Development by
Applied Research Center at Florida International University
with funding provided by
U.S. Department of Energy - Environmental Management

Copyright 2009 D&DKMIT. Disclaimer.



D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US

Welcome Guest [Profile](#) [Log Out](#)

UPLOAD BEST PRACTICES DOCUMENT

[Search Best Practices](#)

Terms and Conditions

Prior to uploading any Best Practices to the D&D KM-IT, the user must ensure that the Best Practices do not include any controlled-use information. Controlled-use information includes all information on which regulations and/or controls are placed that limit availability, access, or dissemination (e.g., ECI, UCNI, NNPI, and OOU information). Users from private industry should follow the guidelines and regulations of their organization in regards to sharing the Best Practices with D&D Community and making the information public.

[I have read Terms and Conditions](#)

Upload Best Practices Document

Category:

Source:

Title:

Description/Content:

[Read Lessons Learned Terms and Conditions](#) (Required)

Select File:

Maximum File Size 12 MB



D&D KM-IT
Knowledge Management Information Tool

[HOME](#) | [COLLABORATORS](#) | [CONTACT US](#)

Welcome Guest [Profile](#) [Log Out](#)

SEARCH PICTURES

[Upload Pictures](#)


Picture Search

Category:

Search String:

[Search Pictures](#)

Category	Source	Title	Description			
Characterization	FIU-ARC	ICM Robotic Climber 0	ICM Robotic Climber 0	View	Reiect	Delete
Characterization	FIU-ARC	ICM Robotic Climber 1	ICM Robotic Climber -1	View	Reiect	Delete
Characterization	FIU-ARC	ICM Robotic Climber 2	ICM Robotic Climber -2	View	Reiect	Delete
Characterization	FIU-ARC	ICM Robotic Climber 3	ICM Robotic Climber -3	View	Reiect	Delete
Characterization	FIU-ARC	ICM Robotic Climber 4	ICM Robotic Climber -4	View	Reiect	Delete
Characterization	FIU-ARC	ICM Robotic Climber 5	ICM Robotic Climber -5	View	Reiect	Delete



FIU
FLORIDA
INTERNATIONAL
UNIVERSITY

Hanford
ALARA
Center

Design and Development by
Applied Research Center at Florida International University
with funding provided by
U.S. Department of Energy - Environmental Management

Copyright 2009 D&DKMIT. Disclaimer.



D&D KM-IT Knowledge Management Information Tool

HOME
CONTRIBUTORS
CONTACT US
Welcome Guest
Login

Crawler Home
Search D&D KM-IT
Search WEB
Help

D&D KM-IT features two types of search capabilities. The first integrates a Google-type web search process into D&D KM-IT, which allows the user to search the web in a manner similar to a Google search without leaving the D&D KM-IT system. The difference is that this type of search only retrieves information from predefined D&D websites which helps to reduce irrelevant results. The second type of search capability provides a search of the entire D&D KM-IT repository across all of the modules (ALARA Reports, Technology, Lessons Learned, Best Practices and more).

**Search
D&D KM-IT**

**Search
WEB**

Crawler

Start using the Crawler Module

Search D&D KM-IT
Search WEB

Adobe PDF Reader

Please download the latest version of Adobe Reader because some of the documents may not open with previous versions.

The documents used on this website are available as PDF documents. Need Adobe Reader? Click on the Adobe Icon to download.

Links and Support

Technical Support
Please contact our technical team for questions regarding system features, access, functionality and more.

```

graph TD
    SE[Search Engine] --> WC[Web Crawler]
    SE --> GSI[Google Search Integration]
    WC --> LL[Lessons Learned 5.1]
    WC --> BP[Best Practices 5.2]
    WC --> DL[Document Library 5.3]
    WC --> GI[General Information 5.4]
    WC --> NA[News/Alerts 5.5]
    WC --> VPL[Video/Picture Library 5.6]
    GSI --> OIB[OSTI Info Bridge  
HSS Lessons Learned  
Science.gov  
NRC  
ORAU  
ORISE  
IAEA  
Science Accelerator]
    GSI --> PGSC[Provide Google Search Capability From D&D KM System]
            
```

Hanford
ALARA
Center

Design and Development by
Applied Research Center at
Florida International University
with U.S. Department of Energy
Environmental Management

Copyright 2011 D&DKMIT. [Disclaimer.](#)



D&D KM-IT
Knowledge Management Information Tool

[HOME](#) | [CONTRIBUTORS](#) | [CONTACT US](#) | [Prev Doc](#) | [Next Doc](#) | [Help](#)

[Crawler Home](#) | [Search D&D KM-IT](#) | [Search WEB](#)

Search for

applied and research and center all of the words ▾

Indexes to search

- 1-All D&D KM-IT Documents
- 2-ALARA Reports
- 3-Best Practices
- 4-Hotline
- 5-Lessons Learned
- 6-Technology

Stemming
 Fuzzy searching
 Phonic searching

Sort type hits ▾

Search Type

any of the words or all of the words
Finds a list of words or phrases

- use "quotation marks" around phrases
- add + in front of any word or phrase to require it
- add - in front of any word or phrase or to exclude it
- examples:
banana pear "apple pie"
"apple pie" -salad + "ice cream"

exact phrase
Finds a single phrase (quotation marks are optional)

boolean
Finds a structured group of words or phrases linked by *and*, *or not*, *w/*.

- examples:
tart apple pie - the entire phrase must be present
apple pie and pear tart - both phrases must be present
apple pie or pear tart - either phrase must be present
apple pie and not pear tart - only *apple pie* must be present
apple w/5 pear - *apple* must occur within 5 words of *pear*
apple not w/27 pear - *apple* must not occur within 27 words of *pear*
subject contains apple pie - finds *apple pie* in a *subject* field
- use () when a search includes two or more connectors:
apple and pear or orange juice could mean (*apple and pear*) or *orange*, or it could mean *apple and (pear or orange)*

Search Features

stemming
Finds grammatical variations on endings, like *applies*, *applied*, *applying* in a search for *apply*

fuzzy searching
Finds words even if they are misspelled. A search for *alphabet* with a fuzziness of 1 would also find *alphaqet*. With a fuzziness of 4, the same search would find both *alphaqet* and *alpkaget*

phonic searching



D&D KM-IT
Knowledge Management Information Tool

[HOME](#) | [CONTRIBUTORS](#) | [CONTACT US](#)

[Prev Doc](#) | [Next Doc](#) | [Help](#)

[Crawler Home](#) | [Search D&D KM-IT](#) | [Search WEB](#)

Search Results

Request: concrete
368 document(s) retrieved

Items 1 - 10 | [Next 10](#)

Score Document

100%	C:\Data Files\0Temp\ITSR\Swaiting\lstr1950.wpd ...DOE/EM-0397 Concrete Shaver Deactivation and Decommissioning Focus Area Prepared for U.S ... [DOE/KM/Documents/GetMedia/Technology] 9/25/2002
90%	Microsoft Word - SPALLER2.doc ...Concrete Spaller Deactivation and Decommissioning Focus Area Prepared for U.S ... [DOE/KM/Documents/GetMedia/Technology] 9/25/2002
78%	K:\IMAGES\JUODY\GRINDER.PDF ...DOE/EM-0374 Concrete Grinder Deactivation and Decommissioning Focus Area Prepared for U.S ... [DOE/KM/Documents/GetMedia/Technology] 9/25/2002
70%	Pentek_ConScab_Report.PDF ...Concrete Cleaning, Inc. Centrifugal Shot Blaster: Baseline Report OO PPEERRAATTIIINNGG EE ... [DOE/KM/Documents/GetMedia/Demonstration] 9/11/2002
70%	Pentek_ConScab_Report.PDF ...Concrete Cleaning, Inc. Centrifugal Shot Blaster: Baseline Report OO PPEERRAATTIIINNGG EE ... [DOE/KM/Documents/GetMedia/Demonstration] 9/11/2002
62%	C:\0Temp\ITSR\Swaiting\concrete.dust.wpd ...DOE/EM-0411 Concrete Dust Suppression System Deactivation and Decommissioning Focus Area Prepared for ... [DOE/KM/Documents/GetMedia/Technology] 9/25/2002
61%	C:\Data Files\0Temp\ITSR\Swaiting\Liquid Nitrogen Cooled Diamond Wire Complete.wpd ...DOE/EM-0392 Liquid Nitrogen- Cooled Diamond- Wire Concrete Cutting Deactivation and Decommissioning Focus Area Prepared for U.S ... [DOE/KM/Documents/GetMedia/Technology] 9/25/2002



HCET - Hydrodemolition Center for Environmental Technology
environment - energy - information technology

HCET-1996-D038-011-18

TECHNOLOGY ASSESSMENT PROGRAM (TAP)
Integrated Facility Assessments – Facility Dismantlement
Technology Assessment Summary

Conjet Robot 363: Hydrodemolition Concrete Ceiling

DEMONSTRATION OBJECTIVE

AK Services demonstrated the Conjet Robot 363 at HCET during hydrodemolition of concrete ceiling as part of the assessment for Integrated Facility Dismantlement on December 10-21, 2002 and January 7-14, 2002. The purpose of the demonstration was to evaluate the performance of the Conjet Robot 363 with respect to its ability to dismantle concrete structures following the HCET Test Plan especially designed for this purpose.

TECHNOLOGY DESCRIPTION



Figure 1. Conjet Robot 363 during ceiling hydrodemolition.

The Conjet Robot 363: It is a technology designed for concrete removal on walls, ceilings, and horizontal surfaces (Figure 1). The Multi Purpose Arm allows the cutting head to reach further up, further down than what has been possible in previous models.

The Conjet Robot 363 is classified as a selective hydrodemolition equipment, meaning a predetermined removal-cutting path and high speed. The robotic hydrodemolition system consists of a high-pressure waterjet system with a capacity of 62 gallons per minute (gpm) @ 17,500 psi. The waterjet is delivered via special hoses to a robotic applicator that is remotely operated. The robot is capable of performing hydrodemolition and decontamination activities through 360-degree work area. This allows the same applicator to be used for deck work, vertical surfaces, as well as overhead.

Computer Control Panel: Powered by 11kW electric motor, the Robot 363 can handle the rotary and the oscillation tool efficiently. All PCL functions are operated and controlled from a remote control panel. The control panel enables the operator to remotely

Developed by:

In Collaboration with:



PRIORITIZATION TOOL FOR S & M INVESTMENT IN EXCESS FACILITIES

The Prioritization Tool for S&M Investment in Excess Facilities is a flexible tool that can help Federal Project Directors and their contractors effectively prioritize maintenance expenditures. The Analytical Hierarchy Process used by the Tool calculates the weight of importance of defined risk criteria and general S&M activities by means of a pairwise comparison technique. Excess facilities can be evaluated against risk criterion, the outcome are combined with the weight of importance of S&M actions required by a facility, resulting in an overall rank of S&M activities that is based on the importance of the activity and the risk posed by a facility.

- [Prioritization Tool User Manual](#)
- [Prioritization Tool ORNL Example](#)
- [Prioritization Tool Template](#)



Prioritization Tool for Surveillance and Maintenance Investment in Excess Facilities

Problem Statement

Experiences often show that once buildings have been declared excess maintenance budgets are drastically reduced being justified by not spending money repairing a building that will be demolished.

Inadequate investment in S&M can cause excess facilities to deteriorate to the point they are unsafe for human entry. Too often this can mean tremendous increases in cost during D&D.

Structural deterioration of some inactive ORNL facilities such as 3028 CAD, 3008 complex and K20 building are proof of the long term consequences of inadequate S&M investment.

Objective

Provide Federal Project Directors and their Contractors with a decision support tool to aid in prioritizing S&M budgets across all facilities awaiting D&D so that the limited budget available can be used effectively.

Multi-criteria Decision Making Tool

The Analytical Hierarchy Process (AHP) was used to calculate the weight of importance of a defined list of risk criteria and general S&M activities by means of a pairwise comparison technique. A total of 10 facilities from ORNL, varying in perceived hazards and conditions were used to test the tool. These facilities were evaluated against each risk criterion, and the results were combined with the weight of importance of the S&M actions they require.

Results Obtained From The Tool

The final test result was a rank of S&M activities based on the importance of the activity and the risk posed by the facility. This method addressed the needs of all of the facilities without ignoring the S&M activities of the lower risk facilities and thus prevent them from becoming a higher risk in the future.

Conclusion

The results obtained from the decision tool can be used as a starting point for Federal Project Directors and their Contractors to decide where to spend their S&M money. The tool is flexible enough to be modified and used in other DOE sites.

The result of the study showed consistency and reflected the overall judgment of subject matter experts, based on the facilities used in the test.

Further sensitivity analysis will be the next step to improve the tool.

Developed by:



In Collaboration with:



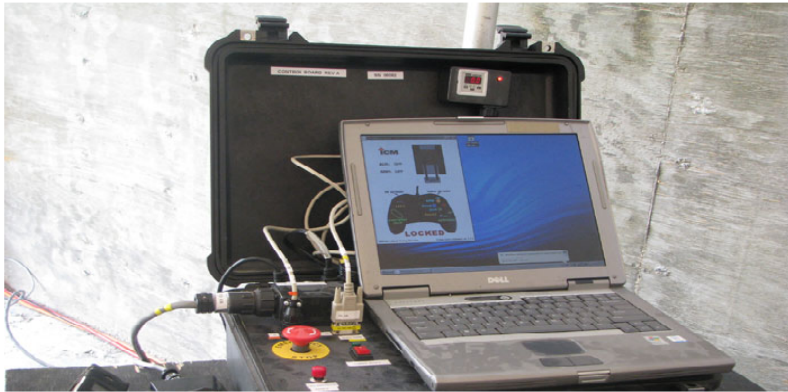

D&D KM-IT
Knowledge Management Information Tool

HOME | COLLABORATORS | CONTACT US

Welcome admin admin [Profile](#) [Log Out](#)

ICM CRAWLER DEMONSTRATION

ICM Climber with custom spray applicator. The technology evaluation demonstrated the ability of the remote system to spray fixative products on horizontal and vertical concrete surfaces. With the climbing machine positioned on the wall, the 4-foot boom attachment was capable of spraying the ceiling to a distance of 5 feet from the wall. The climbing machine also sprayed the top 4 feet of the wall while positioned on the wall. From the floor, the climbing machine was then able to coat the lower 6 feet of wall as well as the floor surface.



Developed by:

In Collaboration with:



**ALARA
Centers**

