

# EO 13423 – Putting it All Together at Pacific Northwest National Laboratory

June 20, 2008

Kim Fowler  
Mike Moran  
Kami Lowry

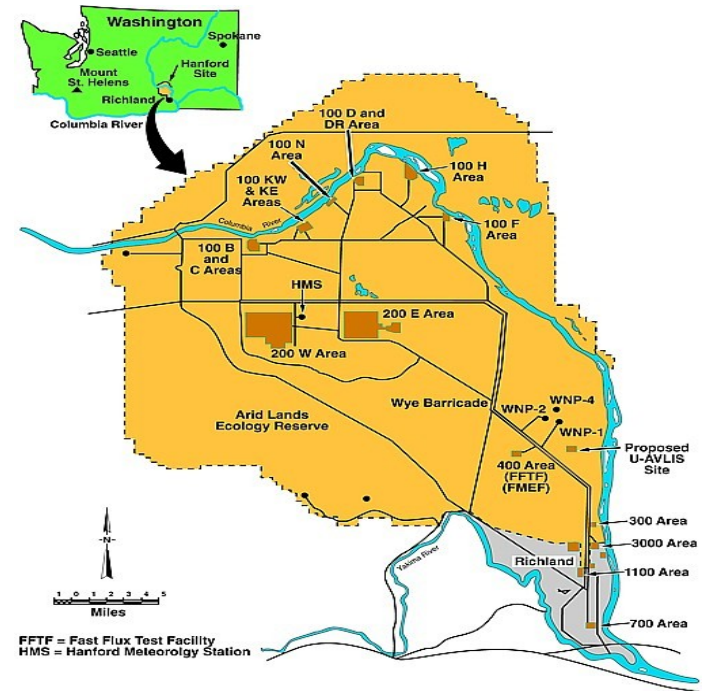
PNNL-SA-60874

# Overview

- ▶ PNNL introduction
- ▶ Barriers to integrating EO elements
- ▶ Our solution in progress
- ▶ Using the EMS elements
- ▶ Take-away message
- ▶ Questions

# Pacific Northwest National Laboratory (PNNL)

We are located in the South Central area of Washington State.



# Pacific Northwest National Laboratory



- \$760 million business volume
- >4,000 staff

# PNNL's Strategy:

## Delivering science, technologies, and leadership to....

### Mission outcome

### Examples

Strengthen U.S. scientific foundations for innovation

Biomarkers to detect early-stage environmental and health problems



Increase U.S. energy capacity and reduce dependence on imported oil

Converting hydrocarbons to fuels



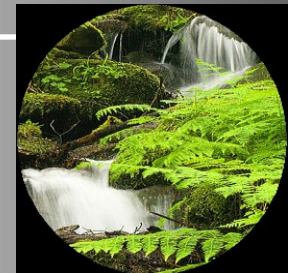
Prevent and counter acts of terrorism and the proliferation of weapons of mass destruction

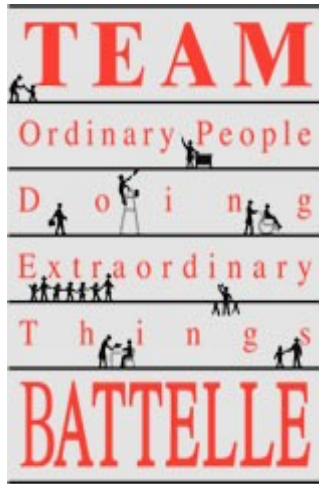
Detecting nuclear and radiological materials at borders, ports



Reduce environmental effects of human activity and create sustainable systems

Preventing and reducing contaminants in water supplies





- Battelle contributed more than \$1,097,000 in corporate funds to area philanthropic and civic organizations in fiscal year 2007.
- During the same period, staff from PNNL donated over 20,000 hours to community projects via the Team Battelle program.



# Status

▶ ISM since 1998



▶ VPP Star Status since 2001



▶ Registered to ISO 14001 since 2002

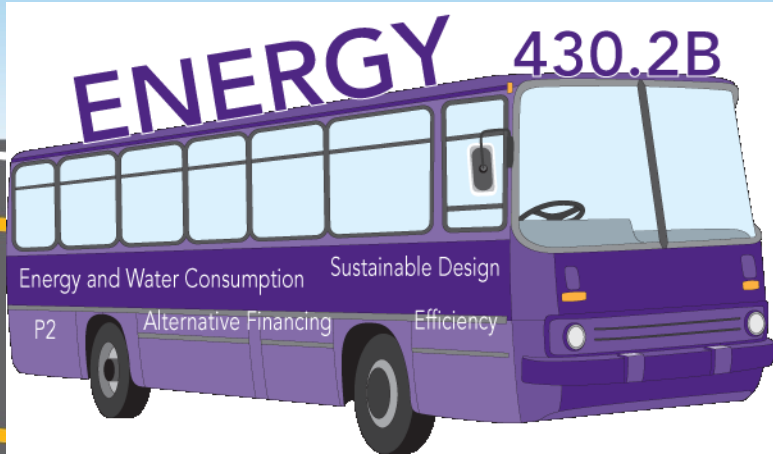


▶ Member of EPA National Environmental Performance Track since 2004



▶ Program Recognition

- Department of Energy Pollution Prevention
- Federal Energy Management Program Awards
- Departmental Awards
- Community and Industry Awards



EPA Performance Track • ISO 14001

# Elements of EO 13423

## ▶ 430.2B

- Energy Conservation
- Water Conservation
- Sustainable Design
- Fleet Vehicles

## ▶ 450.1A

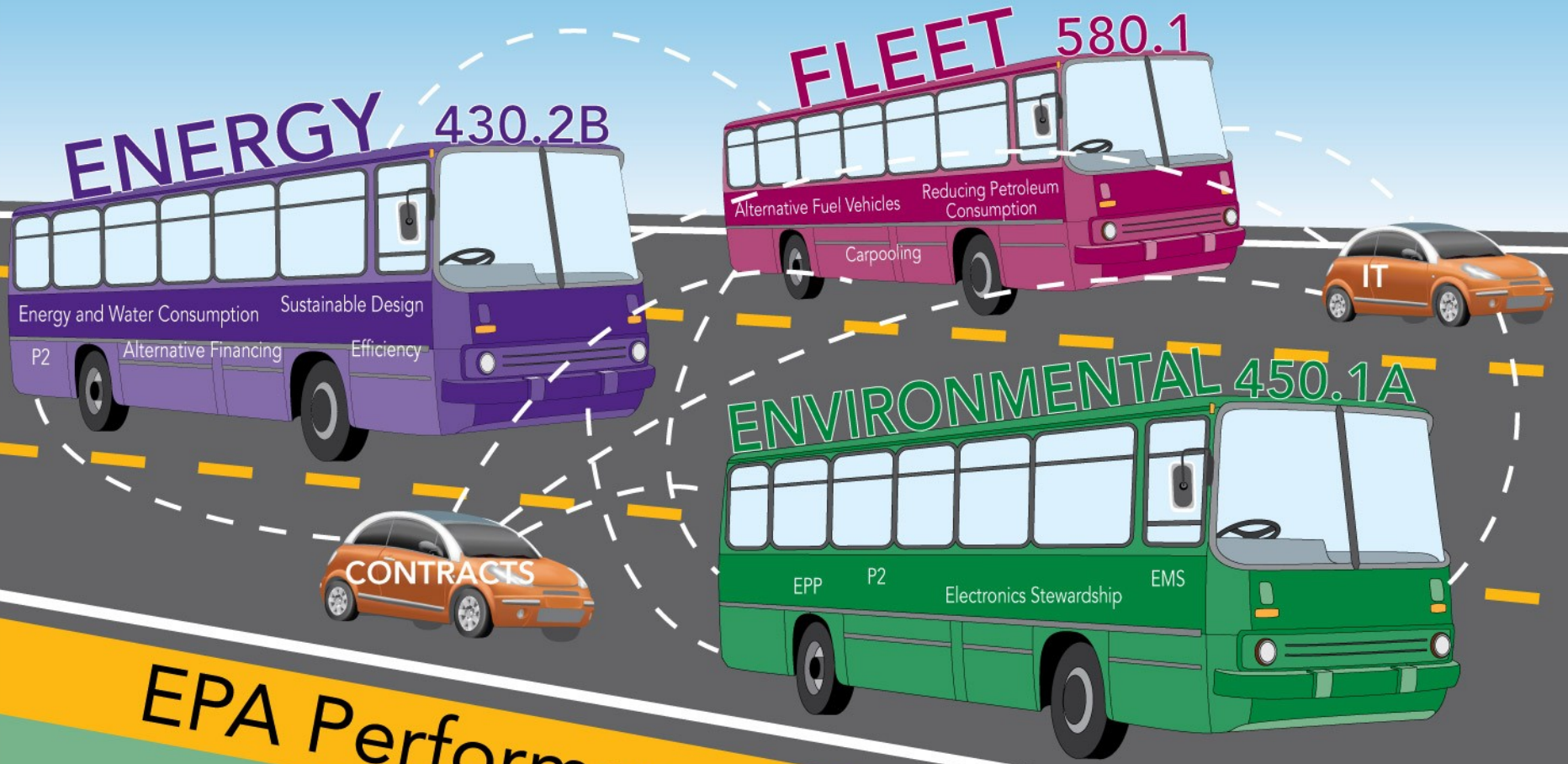
- Environmental Management Systems
- Environmentally Preferable Purchasing
- Pollution Prevention
- Electronics Management

EO Requires integration of individual organization

New requirements may be challenging to meet

More emphasis on utilization of Environmental Management System

# Elements of EO 13423



EPA Performance Track • ISO 14001



# Barriers Encountered

- ▶ No additional dollars
- ▶ Timing – missed opportunities (e.g. leases)
- ▶ Organizations are focused on actions within their own “vehicle”
- ▶ Rules change internally (e.g. shred paper recycling)
- ▶ Language barrier between vehicles (e.g. ISO speak)

# Solution in Progress

- ▶ Engaged with DOE-HQ, EFCOG, researchers
- ▶ Established cross-cutting EMS Core Team to:
  - Formalize key stakeholder relationships
  - Facilitate communication and identify opportunities for collaboration
  - Report single message to management and customer
- ▶ Approach:
  - Run like a project
  - Didn't reorganize

# PACIFIC NORTHWEST NATIONAL LABORATORY ENVIRONMENTAL MANAGEMENT SYSTEM



# Using the EMS Elements

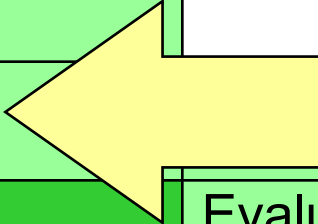
General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness
Legal & Other Requirements	Monitoring and Measure
Objectives and targets	Evaluation of Compliance
Resources, roles, responsibility and authority	Nonconformity, corrective/preventive action
Competence, training, awareness	Control of Records
Communication	Internal Audit
Documentation	Management Review

# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	O
Environmental Aspects	Align aspects with all of the EO elements (e.g., add fuel use)
Legal & Other Requirements	M
Objectives and targets	Evaluation of Compliance
Resources, roles, responsibility and authority	Nonconformity, corrective/preventive action
Competence, training, awareness	Control of Records
Communication	Internal Audit
Documentation	Management Review

# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness and Response
Legal & Other Requirements	Emergency Preparedness and Response
Objectives and targets	Evaluation
Resources, roles, responsibility and authority	Nonconformity, corrective/preventive action
Competence, training, awareness	Control of Records
Communication	Internal Audit
Documentation	Management Review

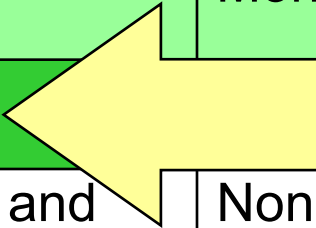


Add new requirement and parse to affected organizations responsible for programs and flow down of requirements

# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness
Legal & Other Requirements	Monitoring and Measurement
Objectives and targets	Nonconforming Product Control
Resources, roles, responsibility and authority	Control of Records
Competence, training, awareness	Internal Audit
Communication	Management Review
Documentation	

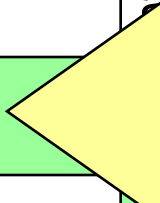
Identify all objectives in respective organizations that align with the EO elements and map to EMS



# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness
Legal & Other Requirements	Monitoring and Measure
Objectives and targets	Evaluation of Compliance
Resources, roles, responsibility and authority	Nonconformance
Competence, training, awareness	Internal
Communication	Management Review
Documentation	

Update training and general orientation to include all EO elements

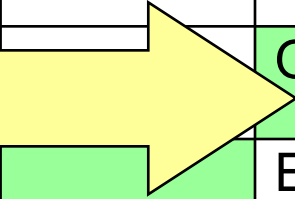


# Using the EMS Elements

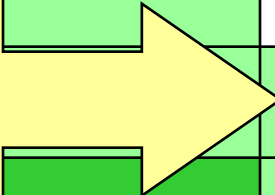
General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness
Legal & Other Requirements	Monitoring and Measure
Objectives and targets	Evaluation of Compliance
Resources, roles, responsibility and authority	Nonconformity, corrective/preventive action
Competence, training, awareness	Control of Records
Communication	
Documentation	

Update Program Description to include all EO elements

# Using the EMS Elements

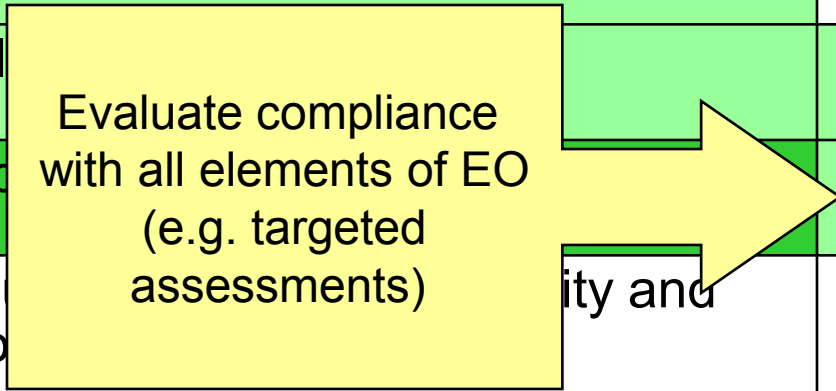
General	<p>Update/enhance operational controls to address all EO elements (e.g., purchasing requirements)</p> 	Control of Documents
Environmental		Operational Control
Environmental		Emergency Preparedness
Legal & Other Requirements		Monitoring and Measure
Objectives and targets		Evaluation of Compliance
Resources, roles, responsibility and authority		Nonconformity, corrective/preventive action
Competence, training, awareness		Control of Records
Communication		Internal Audit
Documentation		Management Review

# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Objectives and targets	Emergency Preparedness
Legal and other requirements	Monitoring and Measure
<div data-bbox="150 464 981 828" style="border: 1px solid black; padding: 10px; display: inline-block;"> <p>Monitor and measure EO performance on objectives</p>  </div>	Evaluation of Compliance
Resources, roles, responsibility and authority	Nonconformity, corrective/preventive action
Competence, training, awareness	Control of Records
Communication	Internal Audit
Documentation	Management Review

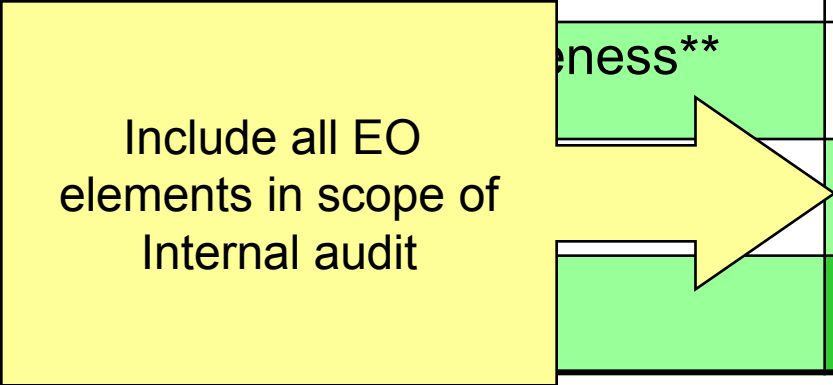
# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness
Legal Requirements	Monitoring and Measure
Objectives and targets	Evaluation of Compliance
Resource availability and authority	Nonconformity, corrective/preventive action
Competence, training, awareness	Control of Records
Communication	Internal Audit
Documentation	Management Review



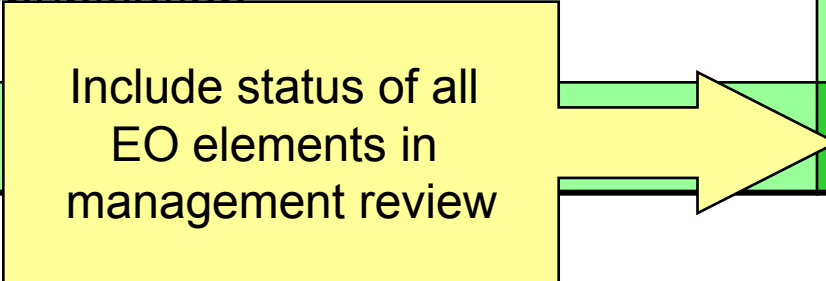
# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness
Legal & Other Requirements	Monitoring and Measure
Objectives and targets	Evaluation of Compliance
Resources, roles, responsibility and authority	Nonconformity, corrective/preventive action
Compliance**	Control of Records
Compliance	Internal Audit
Documentation	Management Review



# Using the EMS Elements

General Requirements	Control of Documents
Environmental Policy	Operational Control
Environmental Aspects	Emergency Preparedness
Legal & Other Requirements	Monitoring and Measure
Objectives and targets	Evaluation of Compliance
Resources, roles, responsibility and authority	Nonconformity, corrective/preventive action
Competence, training, awareness	Control of Records
Communication	Internal Audit
Documentation	Management Review



# PACIFIC NORTHWEST NATIONAL LABORATORY SUSTAINABLE OPERATIONS DASHBOARD

## ENVIRONMENTAL MANAGEMENT SYSTEMS

Environmental Management Systems 5.2.2	Compliance Management Plans	Reporting
---	-----------------------------	-----------

## POLLUTION PREVENTION

Chemicals 5.3.3c, 5.3.3d	Recycling 5.3.3d	P2 Program/ Recycling 5.3.3d
-----------------------------	---------------------	---------------------------------

## ENERGY AND WATER CONSERVATION

Energy Efficiency 5.3.3a, 7.1.2	Greenhouse Gases P2, 7.1.2	Renewable Power 5.3.3a, 7.1.2	Water Conservation 7.1.2
------------------------------------	-------------------------------	----------------------------------	-----------------------------

## SUSTAINABLE DESIGN

New Construction 5.3.3c, 7.1.2, 5.3.3d	Existing Capital Asset 7.1.2	Leased Facilities 7.1.2
---	---------------------------------	----------------------------

## ACQUISITION & GREEN PRODUCT DESIGNATIONS

Environmentally Preferable Purchasing 5.3.3b, 6.2, 5.3.3d	Recycled Paper 5.3.3b, 5.3.3d	EPEAT Products 6.2, 5.3.3d	Operations of Facilities or Vehicles	Contracts, etc. 6.2
--	----------------------------------	-------------------------------	--------------------------------------	------------------------

## FLEET VEHICLES

Fleet Vehicles P2, 7.1.2, 6.2.3	Reduce Petroleum Products P2, 7.1.2, 5.3.3c	Increase Alternative Fuel P2, 7.1.2, 5.3.3d
------------------------------------	--	--

## ELECTRONICS MANAGEMENT

Electronics Management

5.3.3d

# What Can You Do?

- ▶ Get involved (e.g., telecons, symposium, networks, pilot projects, EFCOG)
- ▶ Identify key contributors and create an EMS Core Team (reach across organization)
- ▶ Educate staff on value of EMS and how it can help them be successful (e.g., setting objectives and targets)
- ▶ Establish single EMS dashboard to identify all elements and assist in reporting and visualizing status

