

Evaluating and Monitoring IC Effectiveness

USEPA Office of Site Remediation Enforcement
Institutional Controls and Long-Term Stewardship
Series

March 15, 2017

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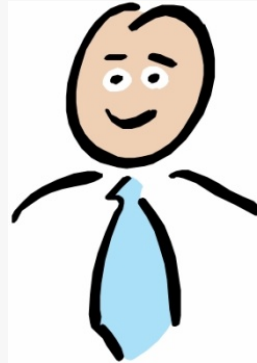
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Presentation Overview

- What is “IC Effectiveness”
- Approaches to Assure IC Effectiveness
- Legal Issues



You will be able to better design, implement, or negotiate IC compliance assurance strategies.

What is "IC Effectiveness"

GAO Report

ASTM

Five Year Review
Guidance

CERCLA 12(c)

Brownfield
Amendments

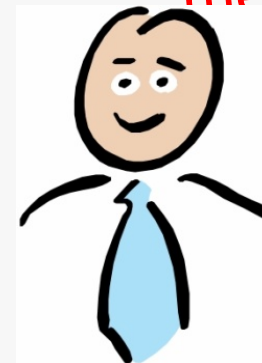
PIME

CERCLA Balancing
Criteria

ICIAP

UECA

RCRA



IC Effectiveness is
repeatedly
mentioned but never
defined.

IC Effectiveness Requires IC Monitoring

Often the most useful post-implementation approach to ensuring the **long-term effectiveness of ICs** and maintaining the integrity of the cleanup is **rigorous periodic monitoring** and reporting. USEPA, [A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls](#) (2012), p. 28.

We recommend that **institutional controls be monitored over the duration of their use**. EPA, Effective & Reliable ICs at RCRA Facilities, p. 6.

A **regular monitoring and oversight program** seems to be a key to assuring that land owners remain cognizant of the restrictions and helps to ensure compliance [of ICs]. ASTWMO, State Approaches to Monitoring and Oversight of LUCs, p. 11.

[S]tates also reported the need for IC management program improvements. States specifically identified a need for improved IC monitoring. ITRC, [Long Term Contaminant Management Using Institutional Controls](#) (2016).

What is IC Monitoring?

- ▶ **IC Monitoring** refers to the collection of data and information
 - About the use or activities at property at which an IC exists.
 - To learn whether the use or activity might violate the IC Requirements.

IC Monitoring



This is not conventional environmental monitoring – IC monitoring is different!

- **Common IC requirements**

- No groundwater use
- No (or limited) excavation
- No residential use
- No schools or daycare
- No new structures without vapor intrusion protections



Record covenant and be done?

AFTER RECORDING RETURN TO:

Settlements Department /JMH
Linowes and Blocher LLP
7200 Wisconsin Avenue, Suite 800
Bethesda, Maryland 20814-4842

LIBER 15062 PAGE 414

10445.0001
~~10445.0001~~
(1 of 1)

ENVIRONMENTAL COVENANT

HOLDERS: Maryland Department of the Environment (“Department”); Duke Baltimore LLC (“Owner”).

PROPERTY ADDRESS: 6000 Holabird Avenue, Baltimore, MD 21224—Area A (the “Property”).

This Environmental Covenant (“Environmental Covenant”) is executed pursuant to the provisions of Subtitle 8, Title 1 of the Environmental Article, Ann. Code of Md. (2007 Repl. Vol.). This Environmental Covenant subjects the Property identified in Paragraph 1 to the activity and/or use limitations in this document. As indicated later in this document, this Environmental Covenant has been approved by the EPA and the Department.

1. **Property Affected.** The Property is located in the City of Baltimore, Maryland. The Property is a located on the Former General Motors Corporation (“GM”), Baltimore Assembly Plant Facility (“Facility”). The street address of the Property is: 6000 Holabird Avenue, Baltimore, MD 21224.

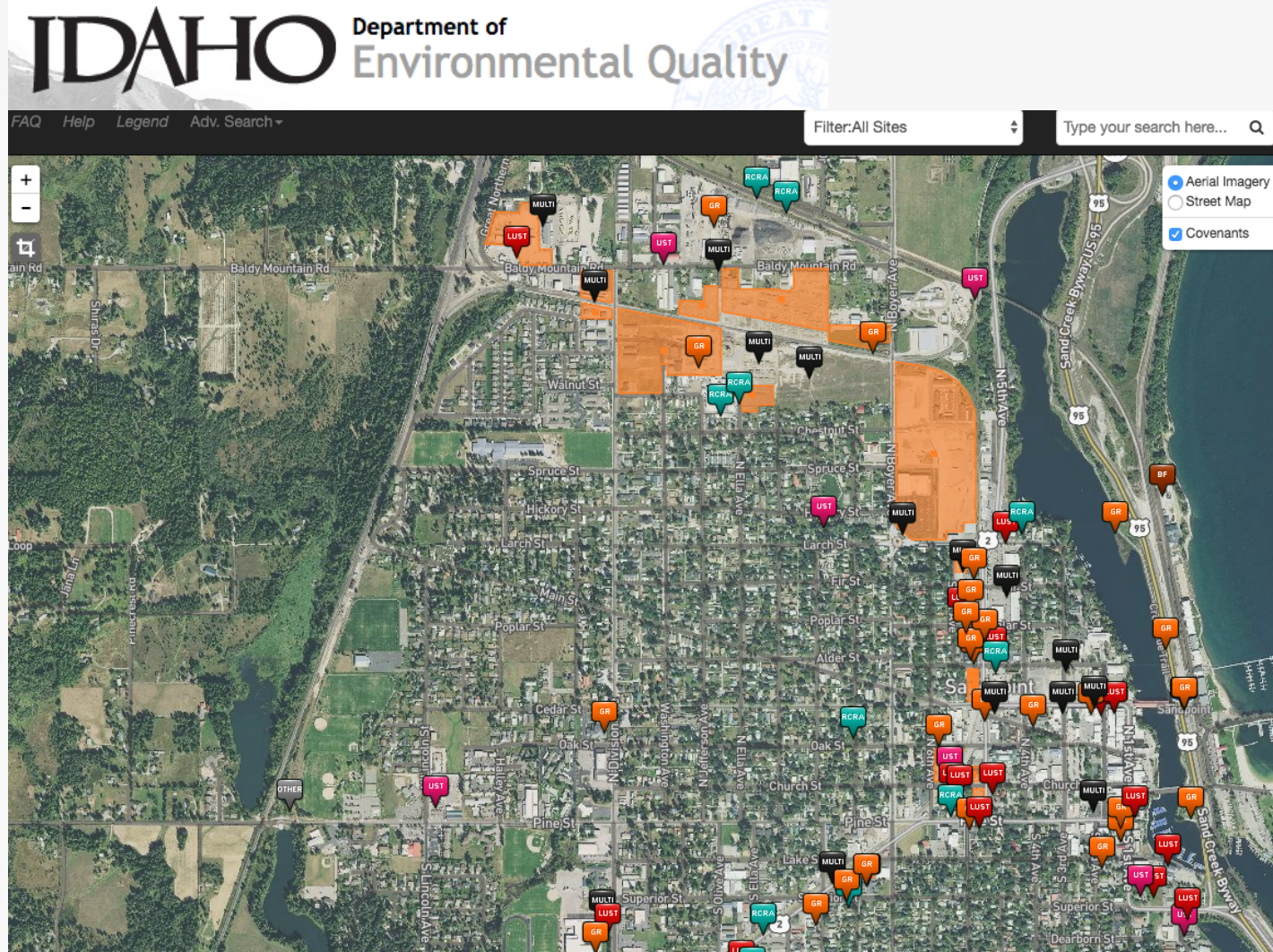
The Land Records Deed Reference: Liber FMC 7313, Folio 272.

1
6871

The latitude and longitude of the center of the Property affected by this Environmental Covenant is: N39.27439 W76.54525 (Datum: World Geodetic System 84).

This is Not a Webinar on GIS

Mapping of ICs



Source: Idaho DEQ, Waste Facility Mapper (avail. at <http://www.deq.idaho.gov/waste-mgmt-remediation/remediation-activities/facility-mapper/>).



IC Monitoring Approaches

IC Monitoring Approaches: Six Approaches for IC Monitoring

- Agency Inspections/Record Reviews
- Owner Inspections & Certifications
- Excavation Monitoring via One Call
- Land Activity Monitoring
- Local Government Coordination
- IC Permit Program

How do they work?

Examples of the approaches in practice?

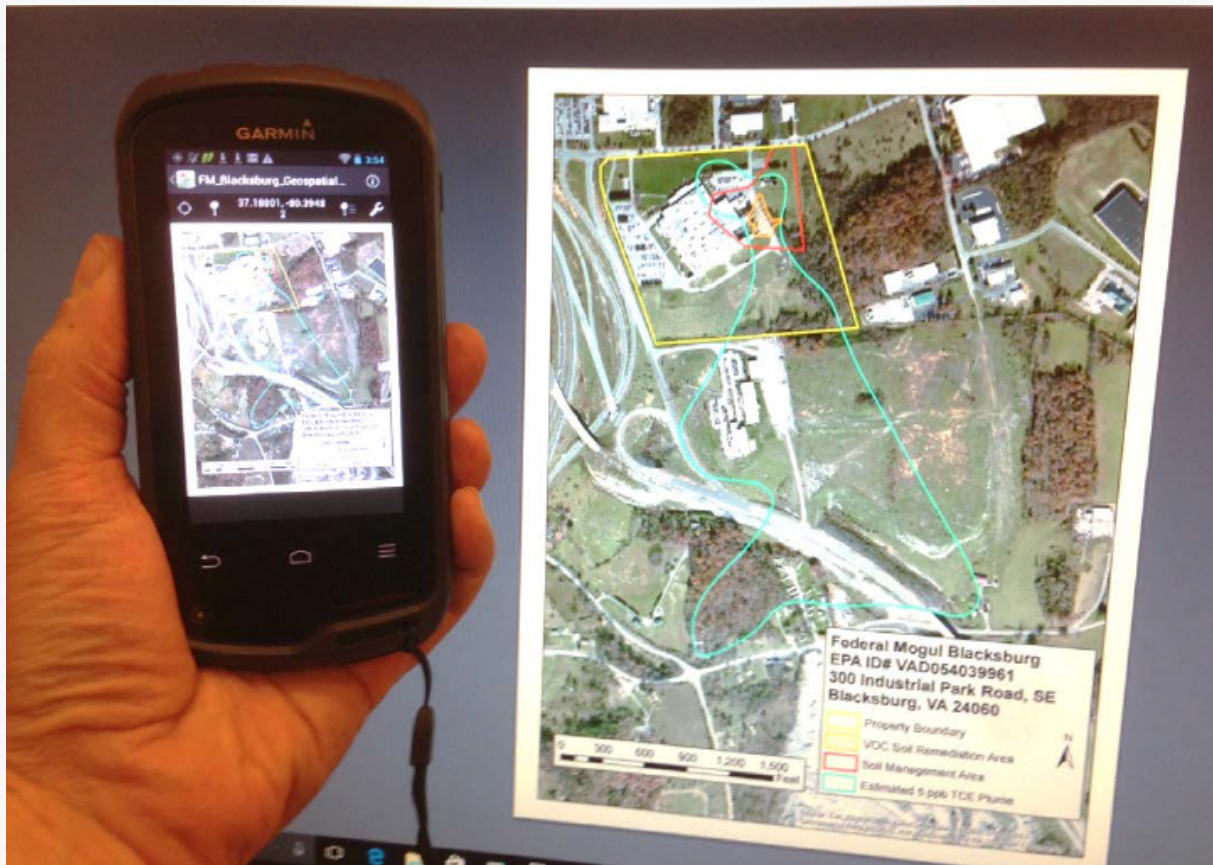
Advantages and dis-advantages?

IC Monitoring Approach #1: Agency Inspections

Environmental Covenant Inspection Staff Form			
Property Name Summitville Mine Site		Covenant Date 4/8/2002	
Covenant Property Address See legal description		HMWMD ID COD983778432	
City Del Norte	State CO	Covenant ID HMCOV00003	Last Modification 4/8/2002
Zip 81132	HMWMD Contact SF - Mark Rudolph		
County Rio Grande		Restrictions1: No construction of any building	
LegalDesc: See Covenant		Restrictions2: No disturbance of ground surface, including digging, drilling, grading, excavation or mining	
Major Contaminants heavy metals, iron, copper, zinc, manganese, cyani		Restrictions3: No action that disturbs vegetation	
Media WS <input type="checkbox"/>	Media Air <input type="checkbox"/>	Media Other <input type="checkbox"/>	Restrictions4: No actions that interferes with any portion of the superfund remedial action
Media WG <input type="checkbox"/>	Media Soil <input type="checkbox"/>	Self Reporting <input type="checkbox"/>	Restrictions5:
Owner/Corp Aztec Minerals Group	Contact Address 824 Sun Ridge Lane		
Contact and Phone # Brad Morse 000-000-0000		Chagrin Falls, OH 44022	
Inspection Compliance Data		CDPHE Staff Mark Rudolph	
Inspection Frequency Annual	Inspection Due by 12/31/2017	Completed on	InspectionType
Problems Noted		In Compliance? <input type="checkbox"/>	Followup Required? <input type="checkbox"/>
		Resolution Date	
Notes			

- ▶ Inspection schedule set and managed by agency.
- ▶ Standard form created.
- ▶ Agency staff visits site.
- ▶ Inspection date and findings recorded in state internal database.
- ▶ Copies of inspection reports saved.

IC Monitoring Approach #1: US EPA Region 3 Example



- ▶ Reviews Remedy/IC Docs and Create Site-Specific Inspection Form
- ▶ Mobile App to Help ID Location of IC/Features On Site
- ▶ Complete Inspection Report.
- ▶ Post to Web for Public Viewing!

Source: Joel Hennessy, U.S. Environmental Protection Agency (Region 3)

IC Monitoring Approach #1: US EPA Region 3 Example (cont.)

Documents, Reports and Photographs of E.I. DuPont DeNemours Experimental Station in Wilmington, Delaware

Some of E.I. DuPont DeNemours Experimental Station's key Resource Conservation and Recovery Act (RCRA) corrective action documents and reports are accessible online:

You may need Adobe Reader to view files on this page. See EPA's [About PDF page](#) to learn more.

- [Corrective Action Long Term Stewardship Report E.I. DuPont DeNemours Experimental Station in Wilmington, Delaware \(PDF\)](#) (10 pp, 2 MB, 8/25/2016)
RCRA Corrective Action Long-Term Stewardship Assessment Report



Source: U.S. Environmental Protection Agency, "Corrective Action Programs Around the Nation" (<https://www.epa.gov/hwcorrectiveaction/hazardous-waste-cleanup-dupont-experimental-station-wilmington-de-documents-and>)

IC Monitoring Approach #1: US EPA Region 3 Example (cont.)

SOLID AND HAZARDOUS WASTE MANAGEMENT SECTION LONG-TERM STEWARDSHIP INSPECTION

FACILITY: DuPont Experimental Station
200 Powder Mill Road
Wilmington, DE 19803

EPA ID: DED003930807

DATE OF ASSESSMENT: August 25, 2016

SHWMS REPRESENTATIVES: Benjamin Mack - Environmental Scientist (SHWMS) *BM 9/9/16*
Lindsey Douglas - Environmental Scientist (SHWMS) *LD 9-9-16*

EPA REPRESENTATIVES: Joel Hennessy - Region 3, Land and Chemicals Division
John Hopkins - Region 3, Land and Chemicals Division

SITE REPRESENTATIVES: Rick Drazich - Senior Environmental Engineer
Susan Sandbothe - Environmental Engineer
Mary Glowacki - Environmental Compliance Manager
Jacob Larsen - Remediation Project Director
Ray Brown - Thermal Waste Treatment Manager
Mike Liberati - Project Director

REPORT SUBMITTED TO: Jason Sunde, Program Manager *JS 9-14-16*


REFERENCE: DuPont Experimental Station, File Code: 70
16 0825 70 Experimental Station LTS Report

BACKGROUND:

The DuPont Experimental Station (DuPont) is the corporate-wide central research and development

Source: U.S. Environmental Protection Agency, "Corrective Action Programs Around the Nation" (https://www.epa.gov/sites/production/files/2016-09/documents/dupontexperimentalstation_itsaug2016.pdf)

IC Monitoring Approach #2: Owner Inspection/Certification

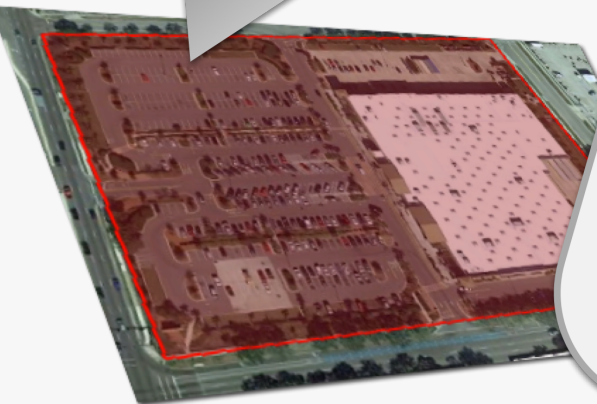
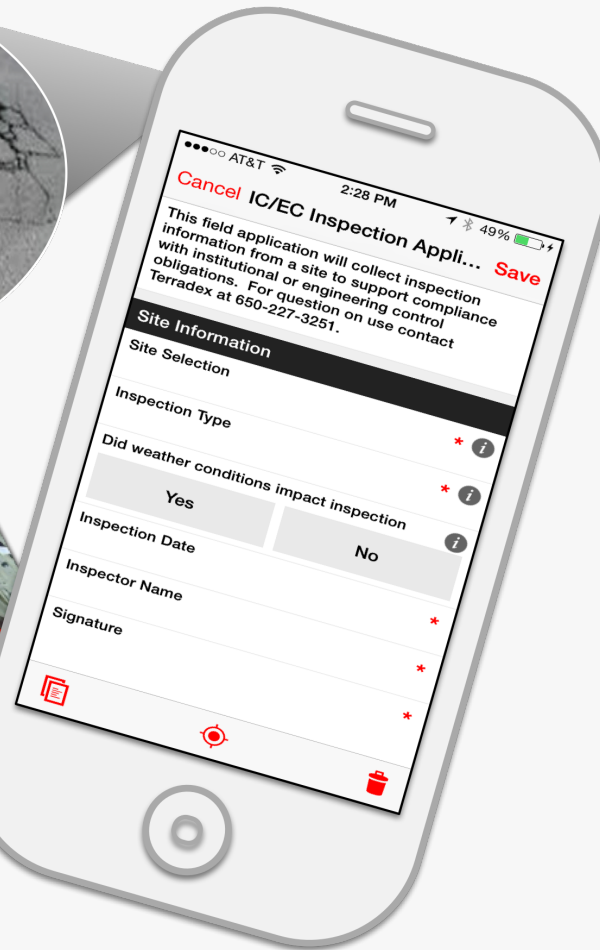
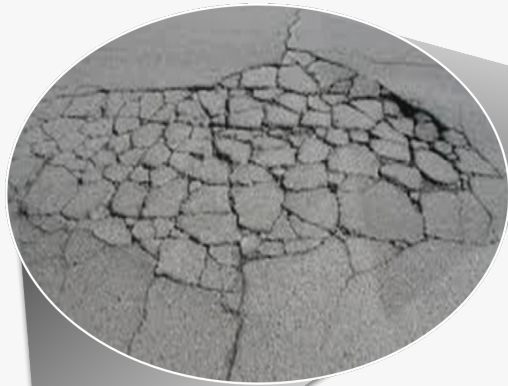
 <p>Kansas Department of Health and Environment Environmental Use Control Program Bureau of Environmental Remediation 1000 SW Jackson St., Suite 410 Topeka, KS 66612-1367 Telephone: (785) 296-1660</p>		ENVIRONMENTAL USE CONTROL OWNER INSPECTION FORM					
SECTION I: PROPERTY INFORMATION ON FILE							
PROJECT NAME:		PROJECT CODE:					
EUCA NUMBER: -EUC-	PROPERTY OWNER(S) ON FILE:	OWNER PHONE NUMBER:					
PROJECT ADDRESS:							
CITY:	COUNTY:	SEC, TWP, RANGE OR LAT/LONG:					
EUCA CATEGORY DESIGNATION:	INSPECTION FREQUENCY:	PROPERTY ZONING ON FILE:					
PROGRAM : (Circle all that apply)							
Voluntary Cleanup State Cooperative EUC Brownfields State Water Plan Underground Storage Tanks <small>Other: (Please specify)</small>							
PROTECTIVE STRUCTURE ON PROPERTY? Yes <input type="checkbox"/> or No <input type="checkbox"/>							
SECTION II: VERIFICATION OF RESTRICTIONS							
<small>ANSWER THE QUESTIONS ACCORDINGLY BY MARKING "YES", "NO", OR "N/A". IF THE PROPERTY IS OUT OF COMPLIANCE, PLEASE EXPLAIN IN THE REMARKS SECTION PROVIDED BELOW. ATTACH ADDITIONAL SHEETS IF NEEDED. "N/A" INDICATES THIS RESTRICTION DOES NOT APPLY TO THE PROPERTY.</small>	1. Has the protective structure(s) retained its functional integrity?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
	2. Is the protective structure(s) free of erosion, cracks or other evidence of degradation?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
	3. Have water wells been drilled, constructed, or used on the property for unauthorized purposes?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
4. Has unauthorized construction or excavation occurred?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
5. Is vegetation present and kept in acceptable condition?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
6. Are all permanent survey markers, benchmarks, and monitoring stations in place as designed?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
7. Are local ordinances included in the EUCA being enforced?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
8. Are site security measures in place and in working condition?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
9. Site security measures include: (mark all that apply)		Signs <input type="checkbox"/>	Fences <input type="checkbox"/>	Gates <input type="checkbox"/>	Security Guard <input type="checkbox"/>		
10. Is the property used for non-residential purposes only?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
11. Is the property being used for unauthorized agricultural activities as defined in the EUCA?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>			
12. Land use type: (mark all that apply)		Residential <input type="checkbox"/>	Recreational <input type="checkbox"/>	Agricultural <input type="checkbox"/>	Commercial <input type="checkbox"/>	Industrial <input type="checkbox"/>	Vacant <input type="checkbox"/>
13. Surrounding land use type: (mark all that apply)		Residential <input type="checkbox"/>	Recreational <input type="checkbox"/>	Agricultural <input type="checkbox"/>	Commercial <input type="checkbox"/>	Industrial <input type="checkbox"/>	Vacant <input type="checkbox"/>

- ▶ Requirement ordinarily set within Environmental Covenant.
- ▶ Some states create standard forms.
- ▶ Agency sends annual reminder letters.
- ▶ Agency tracks receipt of certifications.
- ▶ Non-receipt can trigger agency inspection.
- ▶ Ownership changes captured.

Source: Kansas Department of Health and Environment (http://www.kdheks.gov/remedial/euc/download/eucapp_form.pdf)

IC Monitoring Approach #2: Field Inspection Mobile Apps

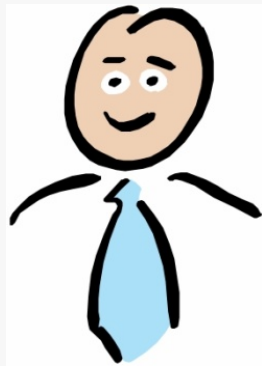
- ▶ Field inspection form fillable in field via mobile app.
- ▶ Geo-tagged photos supplement report.
- ▶ Field inspection report gets generated.





Q & A Discussion

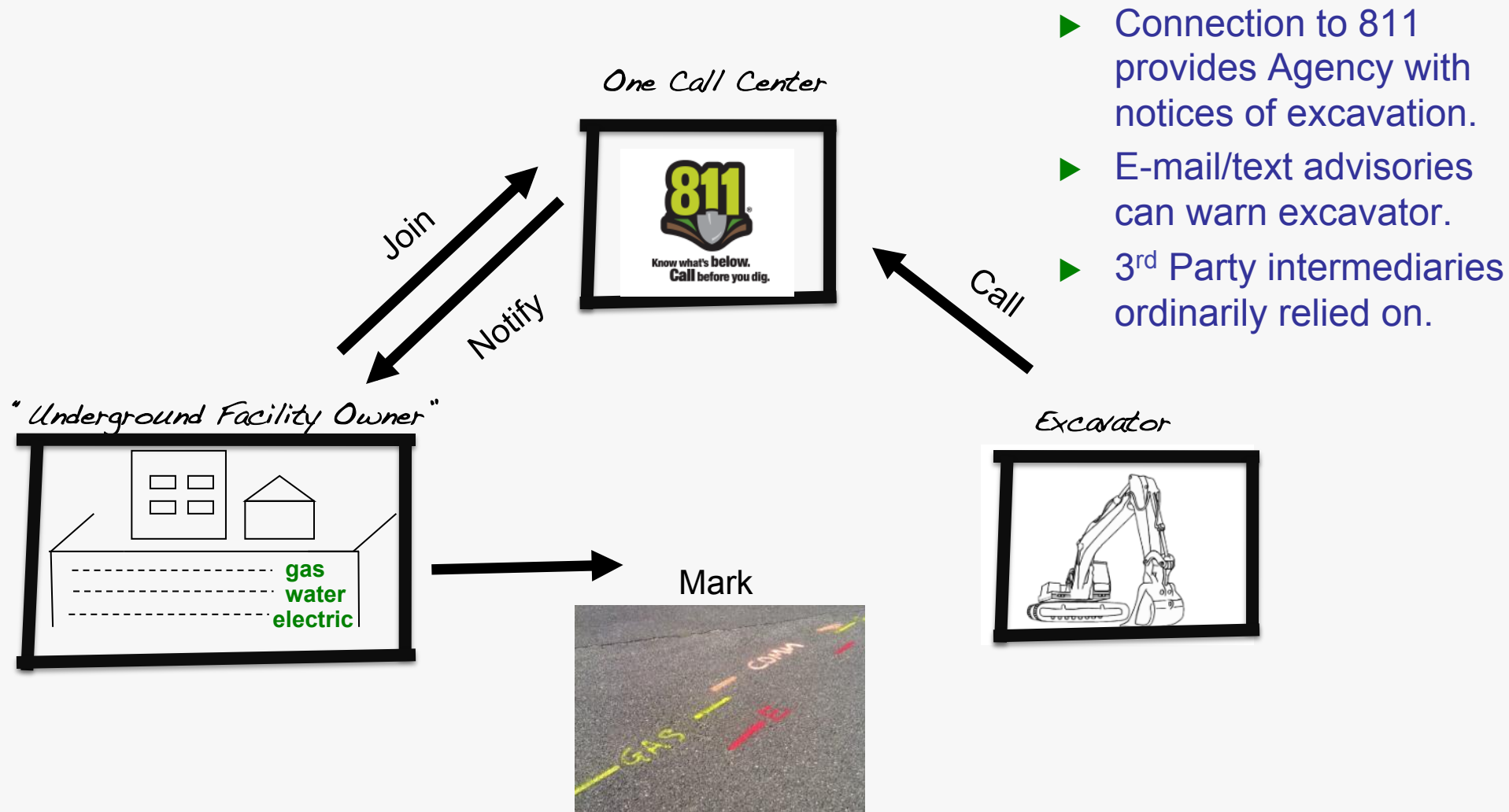
IC Monitoring Approach #3: Excavation Monitoring via One Call



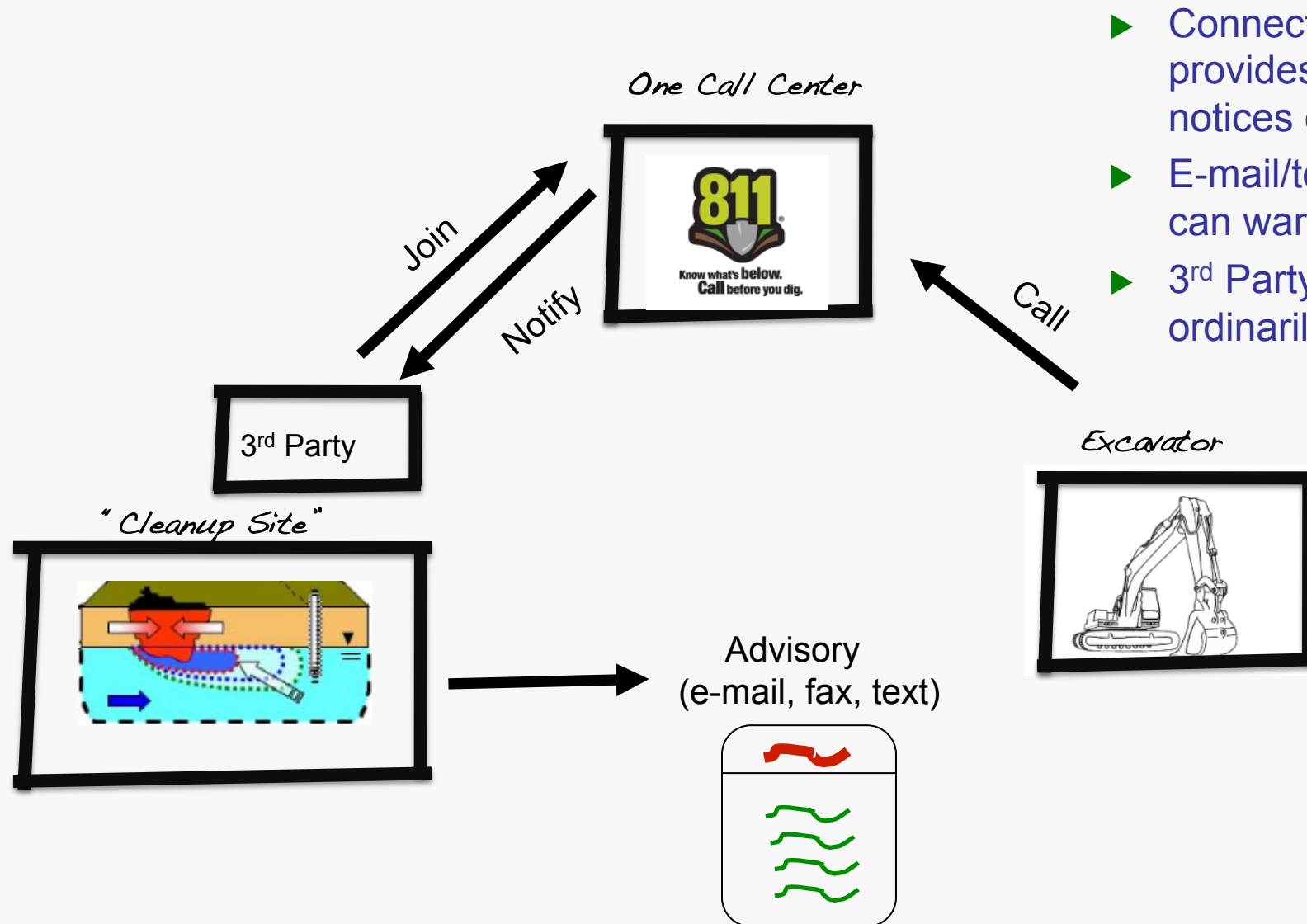
The majority of land
activity involves
excavation.



IC Monitoring Approach #3: Excavation Monitoring via One Call



IC Monitoring Approach #3: Excavation Monitoring via One Call



- ▶ Connection to 811 provides Agency with notices of excavation.
- ▶ E-mail/text advisories can warn excavator.
- ▶ 3rd Party intermediaries ordinarily relied on.

Colorado Law on Membership

Colorado:

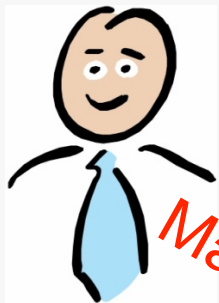
§ 9-1.5-105. Notification association--structure and funding requirements--duties of owners and operators--report

Must join.

(1) There is hereby created a nonprofit corporation in the state of Colorado, referred to in this article as the “notification association”, which shall consist of all owners or operators of underground facilities. **All such owners and operators shall join the notification association** and shall participate in a statewide program which utilizes a single toll-free telephone number which excavators can use to notify the notification association of pending excavation plans.

...

(2.5) The notification association **may accept any organization, person, or** entity which has an interest in the purposes and functions of the association as a member whether specifically enumerated in this article or not. Any such member shall comply with the bylaws of the association.



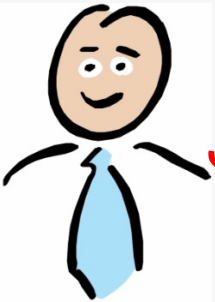
May join.

California Law on Membership

§ 4216.1. Participation in center by operators of subsurface installations

Must join.

Every operator of a subsurface installation, except the Department of Transportation, shall become a member of, participate in, and share in the costs of, a regional notification center. Cal. Govt. Code 4216.1.



Silent on may join.

Delaware Law on Membership

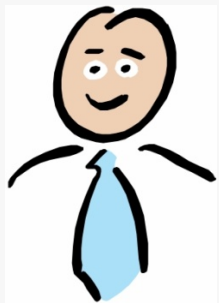
§ 807 Approved notification center.

(b) The approved [One Call] notification center shall:

...

Amendments expressly
address Environmental
Agency

(10) **Promptly transmit to the appropriate contact of DNREC**
the information contained in the notice by excavators or
designers of intended excavation or demolition activity as to any
DNREC Regulated Site.



Underground Pump And Treat Piping Triggers One Call Membership

“The EPA also failed to register the underground water lines with the One Call Center utility locate program, as required by state law. Minn. Stat. § 216D.01 (2002).”

United States v. Qwest Corp., 353 F. Supp. 2d 1048, 1050 (D. Minn.) (2005) (utility contractor not liable as operator for damaging pump and treat line)

One Call Monitoring Example: Delaware Dept. of Natural Resources And Environmental Control

DNREC Excavation Advisory

1 Excavator can learn a point-of-contact for any contaminated site.

2 Agency staff sees timing and description of excavation

3 Excavator learns summary hazards, and can be linked to soil manage-

4 Map delineates site boundary and location of excavation.

5 Excavator can plan for health and safety using hyperlinks to site chemical health and safety information.

6 Excavator finds alternative ways to share and find the information in the advisory.



TO: JIMMY REED, UTILITY LINES CONSTRUCTION

Phone: (302)245-
Fax: (302)337-
email: jreed@.com

FROM: Delaware Department of Natural Resources and Environmental Control



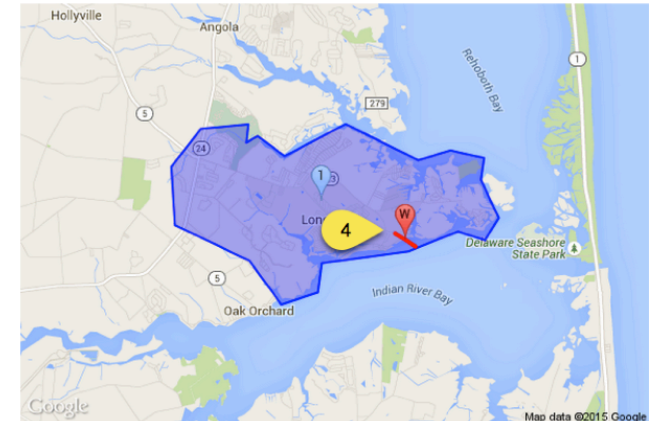
Primary Contact: Wendy March
Phone: 302 395 2600 ext.302 395 2601
email: Wendy.March@state.de.us

RE: Dig Clean Safety and Land Use Advisory Ticket: 152360088

Ticket Priority: STANDARD
Work Address: 35758 E RIVER DR, MILLSBORO
Near Intersection: WEST RIVER DR
Work Description: LOCATE/MARK: INSTALL 90FT FROM POLE 16141 TO MP: WO1605657 . Work Type: INST ELEC SVC
Work Date: 08/27/15
Work Done For: DEC
Location Details:

Dig Clean Safety and Land Use Advisory

Please be advised that the work location may be at or near sites where hazardous substances including petroleum are likely present in the soil or groundwater. Sites are shown on the map below relative to the extent of the planned excavation. Known contaminants of concern are also listed with a hyperlink to health and safety information (if available), and whether soil or groundwater is impacted. DNREC has prepared a generic Contaminated Material Management Plan (CMMP) at <http://shortlinks.terradex.com/DREC-CMMP> to properly handle contaminated soil and groundwater. If further guidance is needed please contact DNREC with the contact information listed on this form. DNREC does not provide excavation field maps, and does not attend site meetings unless a request is made to the listed DNREC Primary Contact.



W (red) and line indicate your work area as provided to Miss Utility Delaware.
Numbered and shaded polygons (blue) are the areas of the site(s) of concern.
Note, on occasion the area is outside of the map view.

SITES WITH ENVIRONMENTAL RESTRICTIONS SHOWN ON MAP:

Site 1: LONGNECK MERCURY STUDY (DE-1388)

Chemical: Mercury [View ATSDR 7439-97-6 View Agency for Toxic Substances & Disease Info](#)

ALTERNATIVES TO VIEW INFORMATION:

View on the Web: <http://www.digclean.com>, enter 152360088
Call: 650-209-4229, when prompted enter 276062
Send Text Message: Message: 276062 To: 650-209-4229

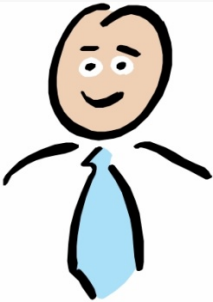
Sent By Terradex, Inc. on behalf of Delaware Department of Natural Resources and Environmental Control

Terradex at: operations@terradex.com Phone 650-227-3250, Fax 3255 Terradex Reference Number: 276062 1: 13528 0m
0.00312913area 750 length779
Date: 2015-8-26

Source: Timothy Ratsep, Delaware Dept. of Env. Prot.
"One Call Systems to Protect the Remedy" presented
at Brownfields 2015

One Call Monitoring Example: Delaware Dept. of Natural Resources And Environmental Control

Material Management
Guidance is also
provided



Contaminated Material Management Plan (CMMP) For Utility Installation and Repair at DNREC Sites

Delaware Department of Natural Resources and Environmental Control (DNREC)

The purpose of this CMMP is to provide general guidance to utility companies for safe handling of contaminated materials (soil and groundwater) at DNREC sites contaminated or potentially contaminated with hazardous substance and/or petroleum. The CMMP addresses the management of material related to soil excavation activities to be performed for installation or replacement of underground utilities by workers under their own utility company contract.

Background

There are hundreds of sites contaminated or potentially contaminated with hazardous substances that are being addressed by DNREC Site Investigation and Restoration Section (SIRS) and thousands of sites contaminated or potentially contaminated with petroleum releases from underground and aboveground storage tanks that are being addressed by DNREC-Tank Management Section (TMS). These sites are at different stages of investigation and cleanup process and the amount of information regarding contamination at these sites varies. Some sites are at the beginning of the investigation and have only limited information whereas at other sites the remedy is in place such as a cap. Sites with remedy in place such as engineered cap might have special instructions on the advisory ticket to contact DNREC prior to excavation.

Intrusive Activities

Intrusive activities are defined as activities penetrating the existing ground surface which include, but are not limited to:

- Excavation and proper material management (soil and groundwater) associated with trenches for utility excavation due to utility installations or utility system repairs.

tifiable by characteristic petroleum odors or staining.

- If these signs are identified during excavation, and the soil is not immediately scheduled to be reused in the excavation, soil should be stockpiled on top of double 6 mil thick polyethylene sheeting and be covered with a similar material at the end of each work day and secured by weights to minimize removal of the cover by wind. If the soil is stored in the staging area for more than 14 days after stockpiling, the excavator will install silt fencing around the stockpile and temporarily stabilize using DNREC approved best management practices.
- If the purpose of the excavation is to install or replace a water supply line, organic impacted soils (i.e. petroleum, chlorinated solvents, etc.) cannot be reused in the excavation without DNREC approval. Clean imported soil and the use of non-permeable materials including water mains and organic-resistant gaskets are standard practices in these cases.
- Any non-reusable soils generated that are not going to be used to fill the excavation should not be considered as "clean fill". These soils need to be characterized prior to off-site disposal. Contact DNREC person listed on your ticket for coordination on testing and soil disposal requirements.
- In the event that soil is heavily contaminated with petroleum compounds to a point that there is free product mixed with the soil or grossly contaminated with other contaminants indicated by heavy staining or strong odor, backfilling activities cannot proceed without DNREC approval.

Source: Timothy Ratsep, Delaware Dept. of Env. Prot. "One Call Systems to Protect the Remedy" presented at Brownfields 2015.





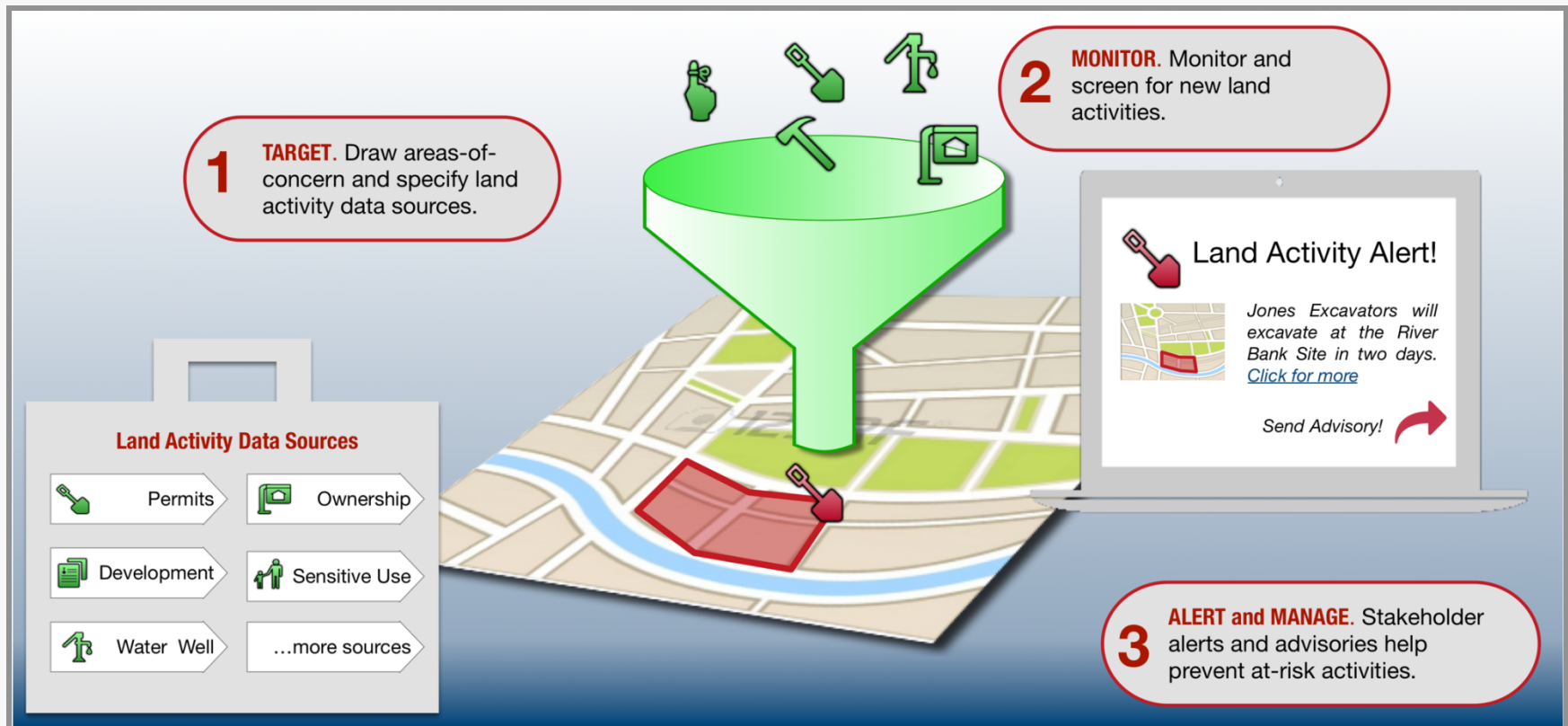
Q & A Discussion

IC Monitoring Approach #4: Land Use & Activity Monitoring

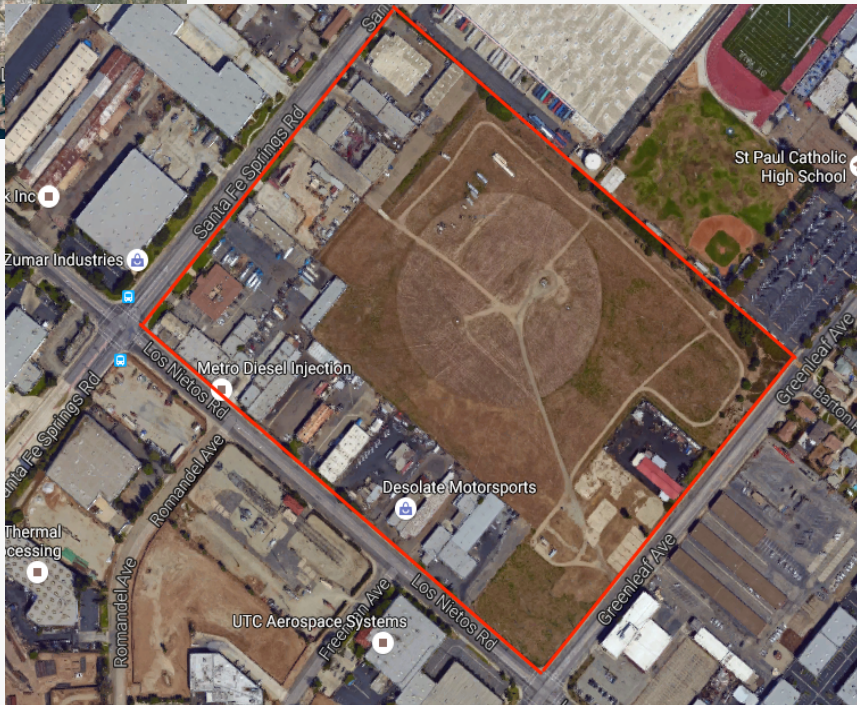
▶ Connection to electronic feed of land activity info.

▶ e-Alerts sent to agency.

▶ 3rd Party intermediaries are ordinarily relied on.



IC Monitoring Approach #4: WDI Example



- ▶ PRP-Performed Physical Inspections/ Records Review.
- ▶ Land Use and Activity Monitoring*
- ▶ Summary Reports from PRPs to EPA.
- ▶ FYR (and Publishing of FYR on EPA Web).



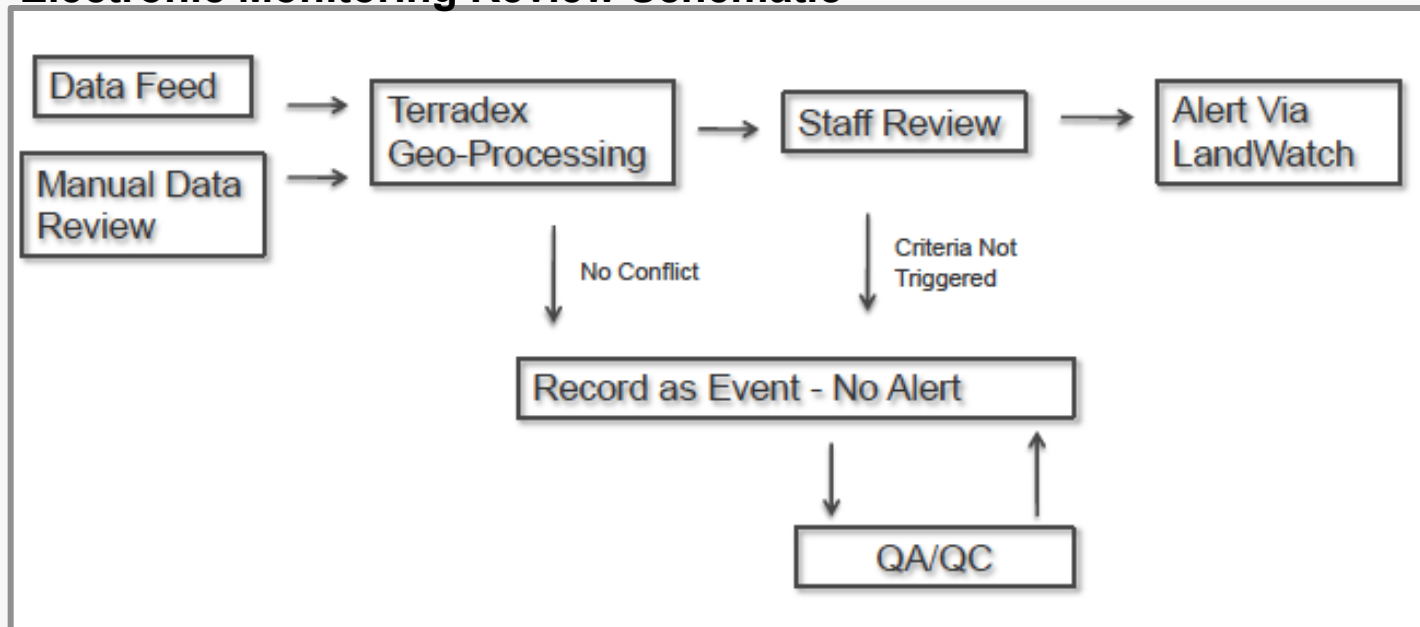
The Remedy relies heavily on ICs.

IC Monitoring Approach #4: WDI Example

“WDIG and their contractors **electronically review** building permits, land use, construction, financial, and title records on an ongoing basis to monitor potential changes in land use, title, or upcoming construction... EPA has concluded that the WDIG’s ICs program has been effective.”

[EPA, Second FYR for WDI \(Sept. 2014\)](#)

Electronic Monitoring Review Schematic



Source: [EPA, Second FYR for WDI \(Sept. 2014\)](#)



Q & A Discussion

IC Monitoring Approach #5: Coordination with Local Government

Minimum “Coordination”

- State agency informs local government (LG) as to location of ICs

“Eyes and Ears” Approach

- LG informs agency as to permits impacting IC

OR

Local Government Lead

- LG enacts ordinance that operates as an IC (or existing ordinance is relied on).

Colorado “Eyes and Ears” Statute

[GO TO COLORADO STATUTES ARCHIVE DIRECTORY](#)

C.R.S. 25-15-324 (2015)

25-15-324. Coordination with affected local governments

(1) For purposes of this part 3, "affected local government" means every county, city and county, or municipality in which land subject to an environmental covenant or restrictive notice is located. The department shall provide each affected local government with a copy of every environmental covenant and restrictive notice within such local government's jurisdiction and shall also provide a copy of any documents modifying or terminating such environmental covenant or restrictive notice.

(2) Whenever an affected local government receives an application affecting land use or development of land that is subject to an environmental covenant or restrictive notice and that may relate to or impact such covenant or restrictive notice, the affected local government shall notify the department of the application. The department shall evaluate whether the application is consistent with the environmental covenant or restrictive notice and shall notify the affected local government of the department's determination in a timely fashion, considering the time frame for the local government's review of the application.

Denver Example “Eyes and Ears”

Station to I

Development polygons



PERMIT	PERMITTYPE	PERMITSTATUS	STATUSDATE	ADDRESS	DATEENTERED	STATCODE1	CLASSOFWORK	X_COORD	Y_COORD
BUILDING	COMMERCIAL CONSTRUCTION	PERMIT FINALED	1/5/2017 7:18:1	200 N QUEBEC ST DENVER CO 80230	5/4/2012 0:00:00		NEW NON-BUILDING STRUCTURE	3167900	1687695
BUILDING	COMMERCIAL CONSTRUCTION	PERMIT FINALED	1/5/2017 7:12:0	200 N QUEBEC ST DENVER CO 80230	1/6/2012 0:00:00		NEW NON-BUILDING STRUCTURE	3167991	1688019
BUILDING	COMMERCIAL CONSTRUCTION	PERMIT FINALED	1/5/2017 7:16:2	200 N QUEBEC ST 800-113 DENVER CO 80230	3/8/2013 0:00:00		ALTERATION/TENANT FINISH	3167991	1688019
BUILDING	COMMERCIAL CONSTRUCTION	PERMIT FINALED	1/5/2017 7:20:0	200 N QUEBEC ST DENVER CO	7/1/2013 0:00:00		NEW NON-BUILDING STRUCTURE	3167909	1687879
BUILDING	COMMERCIAL CONSTRUCTION	PERMIT FINALED	1/5/2017 7:09:0	200 N QUEBEC ST 111 DENVER CO 80230	10/29/2014 0:00:00		NEW NON-BUILDING STRUCTURE	3167858	1687899
BUILDING	COMMERCIAL CONSTRUCTION	IN PROGRESS	12/27/2016 0:00:0	200 N QUEBEC ST DENVER CO 80230	12/22/2016 0:00:00	022 - ADDITION, ALTERATION, AND CONVERSION S-COMMERCIAL	ALTERATION/TENANT FINISH	3167991	1688019
BUILDING	DEMOLITION	PERMIT FINALED	11/11/2016 12:00:0	2140 S ALBION ST DENVER CO 80222	9/28/2016 0:00:00		6 - WRECK	3157818	1672266
BUILDING	SEWER USE AND DRAINAGE	ISSUED	12/2/2016 12:50:0	5800 E JEWELL AVE DENVER CO 80224	11/30/2016 0:00:00			3163414	1673515

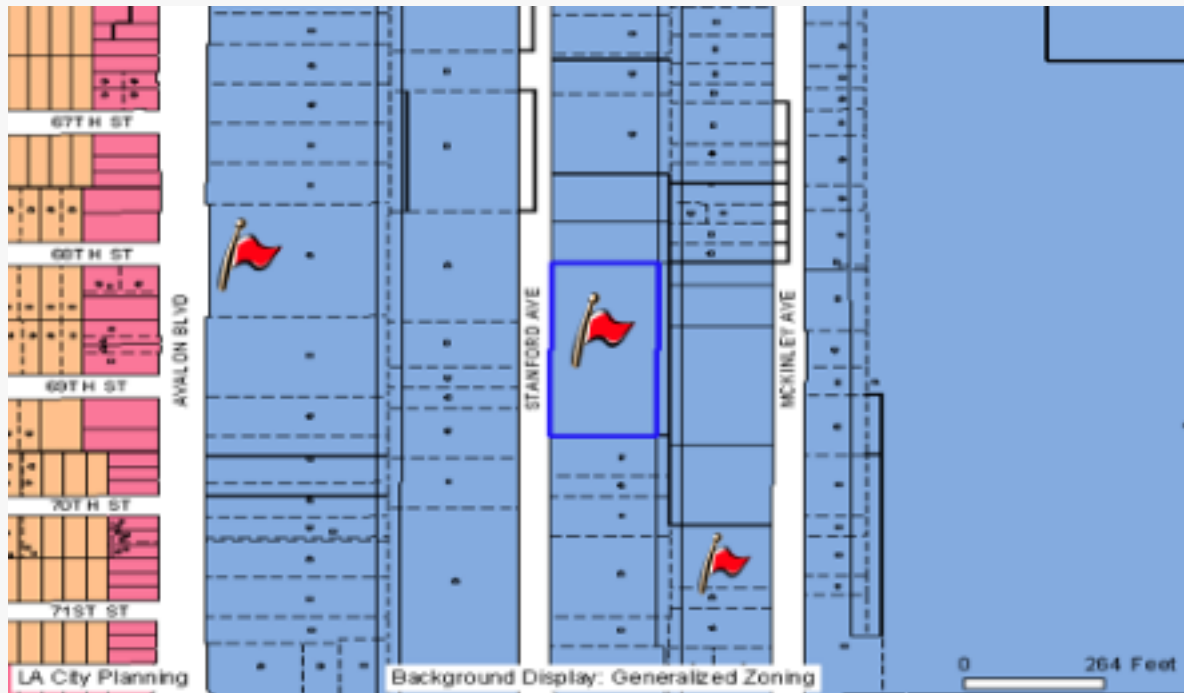


Del Amo Example - “Eyes and Ears”



Record of Decision
Del Amo Facility Superfund Site
Soil and NAPL Operable Unit

Los Angeles, CA
September 30, 2011

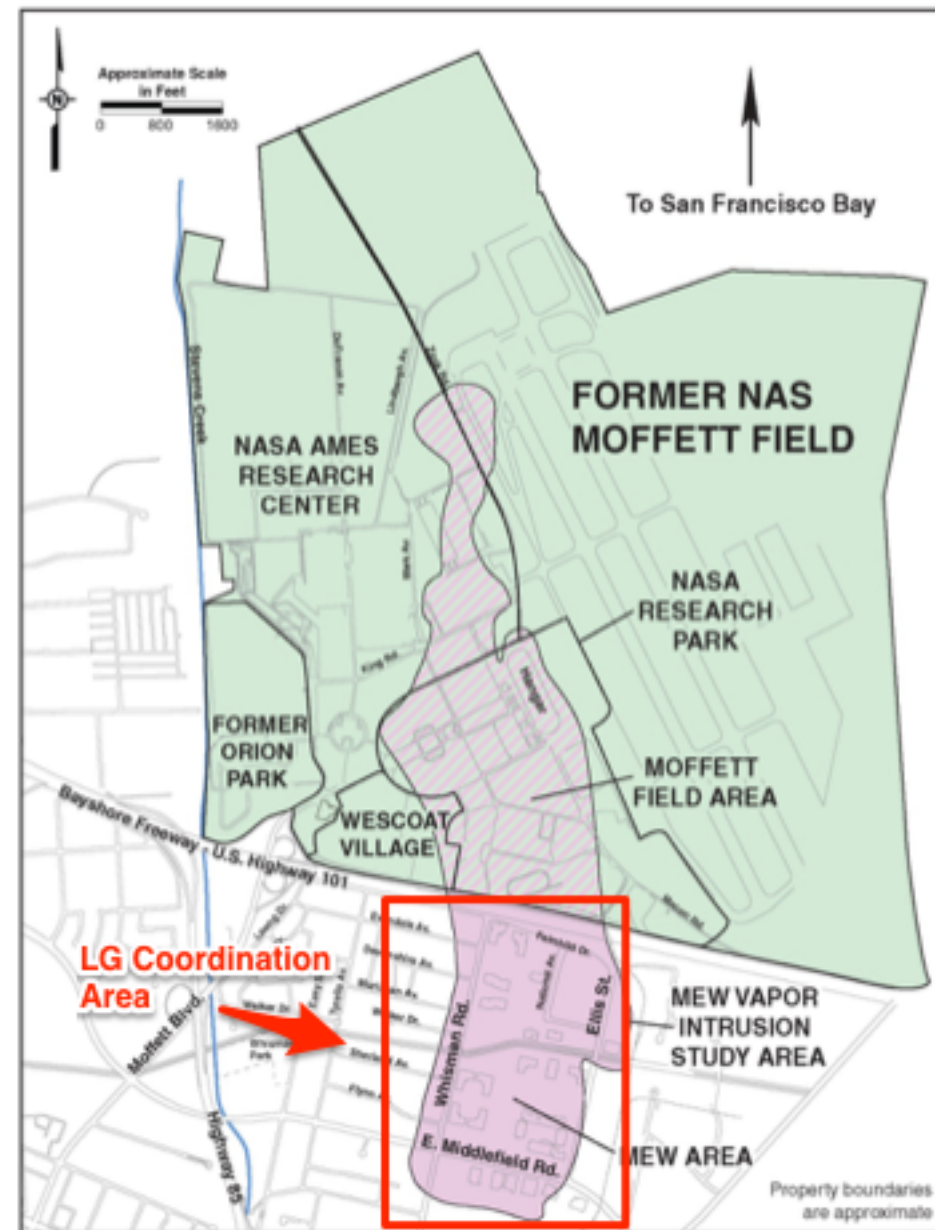


- ▶ EPA/City of Los Angeles Coordination.
- ▶ Building Department alerts applicant of need to contact “Environmental Review Team”
- ▶ Possible PRP/EPA Intervention if Activity Conflicts with IC (deep soil contamination).
- ▶ See Del Amo ROD (2011), p. 109.

Source: City of Los Angeles

MEW Example - "Eyes and Ears"

MEW Superfund Site
Example, Mountain
View, CA.



MEW Example - "Eyes and Ears"

CITY OF MOUNTAIN VIEW MEMORANDUM

DATE: January 30, 2011

TO: Community Development Department Staff

FROM: Randal Tsuda, Community Development Director



SUBJECT: CITY PERMIT PROCESS FOR MEW PROJECTS

This document describes the development review process for new construction and certain remodeling projects in the Middlefield-Ellis-Whisman Study Area. This document has been prepared to clarify, and reinforce, these processes in light of the United States Environmental Protection Agency's (EPA) Record of Decision (ROD) for the Middlefield-Ellis-Whisman (MEW) Study Area.

Timelines vary depending on the type and scope of each project.

MEW Example - “Eyes and Ears”

Excavation
monitoring led to EPA
interventi



Sent via E-mail Only

June 21, 2016

Dear [redacted],

It has come to EPA's attention that the former residence at [redacted] N. Whisman Road in Mountain View, California, a home within the Vapor Intrusion Study Area of the MEW Superfund Site, has been demolished and a new residence with a concrete slab foundation is planned at that same location. EPA has been in contact with the property owner, [redacted], and the City of Mountain View to learn more about the planned construction and schedule. As you know, new construction within the Vapor Intrusion Study Area is designated as Tier A under the Vapor Intrusion Remedial Design and Remedial Action Statement of Work (SOW) under the MEW Consent Decree and Unilateral Administrative Order. For Tier A new building construction, Section 2.4 of the SOW provides for the installation of an engineered vapor intrusion control system remedy along with monitoring and institutional controls.

The SOW provides for the MEW Parties to submit to EPA a remedial design for a system within 60 days of EPA notification. Because construction of the new residence is currently planned beginning June 27, 2016, the property owner requests EPA and the MEW Parties work together to expedite that timeframe. EPA is available to work with the MEW Parties and the property owner to ensure that the appropriate vapor intrusion control system is installed at the appropriate point in construction.

Please contact me to discuss this matter at your earliest convenience.

Thank you for your continued cooperation.

Alana Lee
Project Manager
Superfund Division

Reliance on Existing Ordinances: Zoning



Reliance on Existing Ordinances: Health & Safety



Citizens

Business

Government

Educators

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Groundwater Ordinance Status

Search Groundwater Ordinance Status Chart

The Groundwater Ordinance Status Chart is an informal listing of the groundwater ordinances reviewed for suitability as environmental institutional controls under 35 Ill. Adm. Code 742.1015.

The ordinances have been submitted to the Illinois EPA Bureau of Land as components of corrective action plans and reviewed by the Division of Legal Counsel. The status chart indicates whether each ordinance submitted has been approved, rejected, or approved subject to conditions.

The list is intended to be used for informational purposes only. The status of any ordinance shown on this chart is subject to change based on new information. All persons wishing to use an ordinance as an environmental institutional control must submit a newly certified copy of the ordinance along with the corrective action plan whether or not the ordinance previously has been approved. The only exception is where the local unit of government has entered into a Memorandum of Understanding with the Illinois EPA under Section 742.1015(i). Questions about the status chart or the use of ordinances as institutional controls may be directed to the Division of Legal Counsel at (217) 782-5544.

Source: Illinois EPA (avail. at <http://epadata.epa.state.il.us/land/gwordinance/>)

New IC Ordinance:

Soil Ordinance – Jasper County, MO

ENVIRONMENTAL CONTAMINATION ORDINANCE

AN ORDINANCE ESTABLISHING PUBLIC HEALTH PROTECTION RELATED TO LEAD, CADMIUM, TRICHLORO-ETHYLENE AND OTHER IDENTIFIED CONTAMINANTS

SECTION 1. PURPOSE. The purpose of this ordinance is to provide for regulation of use, and mandatory testing of soil on designated properties located within the County. Certain Regulated Contaminants, as herein defined, have been identified in soil and in groundwater on both residential and commercial properties within the County. Most, if not all of these residential properties known to have been contaminated have been remediated to site-specific standards. Very few commercial properties have been remediated. New residential construction continues in areas of possible contamination.

SECTION II. AUTHORITY. This ordinance is enacted pursuant to Section 192.300, R.S.Mo., and is not in conflict with any rules or regulations authorized by the State Department of Health & Senior Services.

Source: Jasper County (avail. at http://health.jaspercounty.org/environmentalservices/contamination_ord_environmental.html).

IC Monitoring Approach #6: IC Permit (NJ Example)

- ▶ When GW/Soil IC is Required
- ▶ Remedial Action Permit Required
 - Monitoring/Reporting by “Obligated Party”
 - Fees
- ▶ Financial Assurance Required if EC Exists.



New Jersey Department of Environmental Protection
Site Remediation Program

REMEDIAL ACTION PERMITS FOR GROUND WATER GUIDANCE



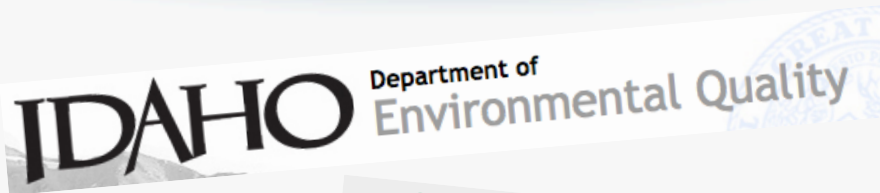
New Jersey Department of Environmental Protection
Site Remediation Program

REMEDIAL ACTION PERMITS FOR SOILS GUIDANCE



Q & A Discussion

IC Monitoring Approach Mix: State Examples



	PA	CO	ID	CA
Landowner Certifications	✓	✓	✓	✓
State Agency Inspections	✓	✓	✓	✓
Excavation Monitoring via One Call			✓	✓
Land Use and Activity Monitoring			✓	✓
Coordination with LG		✓		✓

Assessment of IC Monitoring Approaches

State Agency Inspections/Record Reviews	<ul style="list-style-type: none">• Periodic “snapshot”• Comprehensive• Agency staff/resources required
Owner Certifications	<ul style="list-style-type: none">• Periodic “snapshot”• Greater reliance on landowner• Agency must still administer
Excavation Monitoring via One Call	<ul style="list-style-type: none">• Daily frequency• Comprehensive coverage of digging• 3rd party services
Land Activity Monitoring	<ul style="list-style-type: none">• Daily frequency• Tailored coverage of land use/activity• 3rd party services
Coordination with Local Governments	<ul style="list-style-type: none">• Various approaches.• Can leverage the existing practice of local govt.• Requires non-conventional coordination
IC Permit	<ul style="list-style-type: none">• Similar to owner certification• But formalizes the approach and includes ongoing fee

What's the "Best" IC Monitoring Approach: It Depends



*The approach needs to
match the needs of the
ICs.*

IC Reliance

IC Monitoring



- Agency Inspections/Record Reviews
- Owner Inspections & Certifications
- Excavation Monitoring via One Call
- Land Activity Monitoring
- Local Government Coordination
- IC Permit Program