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IMPLEMENTING INSTITUTIONAL CONTROLS IN FLORIDA AND EXAMPLES OF CONTINUING OBLIGATIONS

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OUTLINE

- Use of ICs in Florida
- Selection Considerations
- FDEP Guidance on Implementing ICs
- Examples of Closure Scenarios and Continuing Obligations

- Definitions used:
  - Institutional controls (ICs)
  - Engineering controls (ECs)
  - Continuing Obligations (CO)

FLORIDA'S DEFINITION OF INSTITUTIONAL CONTROLS

- Section 376.301(22) "Institutional controls means the restriction on use or access to a site to eliminate or minimize exposure to petroleum products' chemicals of concern, dry cleaning solvents, or other contaminants. Such restrictions may include, but are not limited to, deed restrictions, use restrictions, or restrictive zoning"
- Section 376.79(10) Brownfield Redevelopment Act also incorporates restrictive covenants and restrictive easements

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HOW ARE ICs USED?

- Authorized to eliminate potential exposures to contaminants of concern by affecting human activities
- ICs are non-engineering measures
- Typically, but not always, legal controls
- Incorporated in Chapter 62-780 (Contaminated Site Cleanup Criteria) and 62-785 (Brownfields Cleanup Criteria Rule)
  - Site Rehabilitation Completion Order with conditions (e.g., Risk Management Options Levels II and III)
  - Typically in the form of a restrictive covenant
  - Alternative soil cleanup target levels allowed in lieu of defaults in Chapter 62-777

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THINGS TO CONSIDER

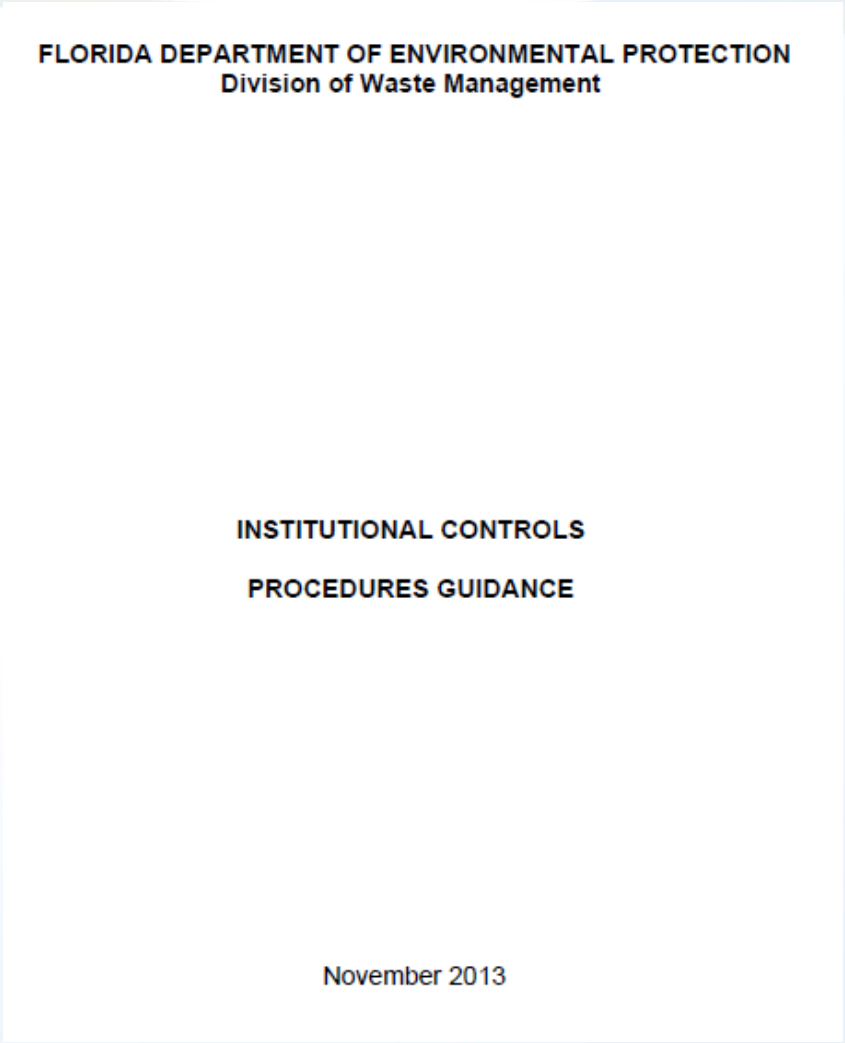
- Site media above applicable cleanup levels
- Defined receptors (types, location, exposure`)
- Current and projected use of contaminated property – soil, groundwater, surface water
- Probability of contamination spreading
- Inclusion of engineering controls to physically prevent exposure
- Potential impediments to successful implementation and long-term enforcement

USE OF MULTIPLE ICs

- Benefits of Layered ICs
  - Provide alternate controls if one should fail/missed
  - Provide different types of controls that operate on different populations or in different time frames
  - Alter implementation schemes, such as passive vs. active controls

FDEP Guidance, 2013

- Co-authored by DWM, OGC, and District Office Waste Cleanup Programs
- Not policy or rule
- Summary of DEP's experiences
- Under revision
- Recent public workshop by SW District


FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Waste Management

INSTITUTIONAL CONTROLS

PROCEDURES GUIDANCE

November 2013

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RESTRICTIVE COVENANTS

- Most common form of ICs used in DEP
- Types of ICs commonly used in RCs
  - Engineering control component
  - Interim ICs
  - ICs on non-source property
  - Partial site restrictions

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ENGINEERING CONTROLS

- Designed to limit/prevent exposure and eliminate further migration
- Caps, covers, physical barrier systems, containment systems – P.E. certification
- Future owners must comply with IC including maintenance/repair of ECs, documentation
- Scale of EC may require financial assurance (e.g., methane collection system, O&M)
- If EC necessary, IC must be too

INTERIM ICs

- "Interim" because imposed prior to remediation of all media to cleanup levels
- Required by cleanup agreement, consent order for implementation prior to cleanup
  - Ex.: engineered cap over soil prior to groundwater remediation
- Terminated if no longer needed post-remediation or modified to permanent IC

ICs ON NON-SOURCE PROPERTIES

- When offsite contamination also meets requirements for conditional closure
- Permissible with non-source property owner consent (Risk Management Option III)
- Conditions
  - FDEP/OGC preliminary review and approval
  - No changes to submittal package requirements than source property
  - Local government notice
  - Modification of standard restrictive covenant and SRCO documents

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PARTIAL SITE RESTRICTIONS

- Concerns restrictions on only a portion of site where contamination exists
- Dependent upon nature of contamination, media, and how it will be addressed for future land-use
- Area defined by legal description and survey
  - Form B of Guidance Document
- Grants FDEP permanent access for auditing purposes – easements common (must be surveyed)

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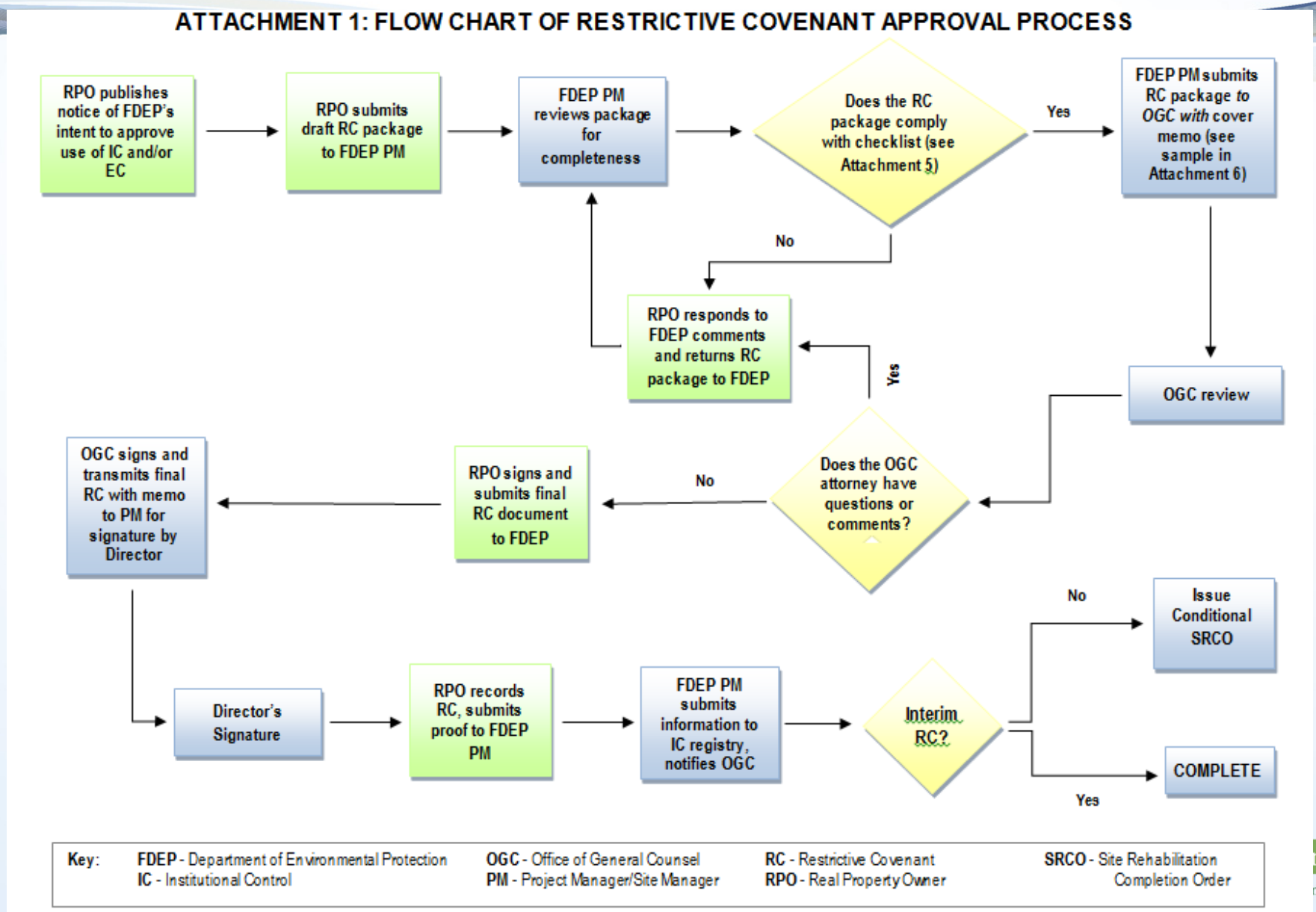
PROCESS



AUDITING AND ENFORCEMENT

- Auditing performed by DEP/contractors – non-petroleum sites only
- Verify provisions of ICs are in place
  - Property appraiser
  - County records
  - Agency file review
  - Interview owner
  - Site inspection

- FDEP's enforcement power same as that for other issues

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HOW DO I DETERMINE WHAT ARE CONTINUING OBLIGATIONS?

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ASTM

Designation: E2790 – 11

Standard Guide for Identifying and Complying With Continuing Obligations[1]

ASTM E2790-11 – 4 Step Process

- **Step 1** – Screening to determine if CO apply
  - All Appropriate Inquiry/Phase I ESA/REC review (Jerry's presentation)
- **Step 2** – Evaluate if activity use limitations affect property prior to planning for CO
  - transactional disclosures
  - gov't records on assessment/remediation
  - personal knowledge
  - IC/EC registry
  - land title records and land-use ordinances

ASTM E2790-11 – 4 Step Process

- **Step 3** – Selecting actions that satisfy CO and maintain compliance
  - Continuing obligations plan
- **Step 4** – Develop monitoring requirements for CO
  - Type, frequency
  - Level of documentation and record-keeping
  - Agency submittals

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EXAMPLES OF CLOSURE SCENARIOS AND CONTINUING OBLIGATIONS





ENGINEERED CAP

What	Why	CO
• Low permeability cap (soil, concrete, asphalt)	• Prevent direct exposure • Limit infiltration	• Cap inspection and maintenance plan (ECMP) • Document cap integrity and repairs • Agency notification – repairs and modifications

ENGINEERED BARRIER

What

- Low permeability barrier such as slurry wall
- Usually includes engineered cap

Why

- Contain soil and groundwater impacts
- Eliminate direct exposure
- Reduce migration potential to receptors

CO

- ECMP that incorporates cap inspections and routine hydraulic monitoring around barrier to monitor for leaks
- Requirements for maintenance and repair of barrier
- Documentation and reporting
- Agency notification requirements

RESIDENTIAL USE RESTRICTION

What

- Restricts usage to prevent exposure
- NAICS
- agricultural, mining, lodging, recreational uses (amusement parks, parks, camps, museums, zoos, or gardens); residential uses, educational uses

Why

- Caused by residual soil concentrations above residential soil cleanup target levels

CO

- Maintain zoning and current non-residential land use
- Notification requirements to agency for zoning changes and land-use modifications
- Re-opener for new cleanup and closure plan

VAPOR BARRIER/VAPOR MITIGATION SYSTEM

What

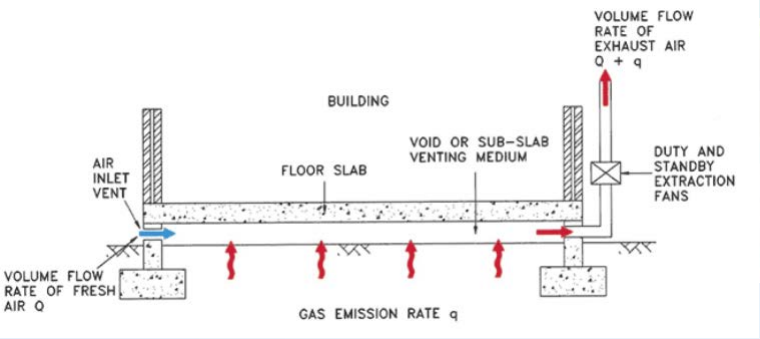
- Impermeable vapor barrier below foundation and sub-slab ventilation or depressurization system (active or passive)

Why

- EC for vapors emanating from residual soil and/or groundwater contamination beneath a structure and into indoor air

CO

- Maintain building foundation, inspections
- Operate/maintain
- May require routine indoor air monitoring
- Communication plan with tenants
- Documentation and agency notification per ECMP



EXCAVATION RESTRICTION

What

- Restriction to prevent soil exposure

Why

- Contaminated soil above applicable standards left in place below certain depth (e.g., 2 ft)

CO

- Soil Mgmt Plan
  - Dimensions of restricted area
  - Communication plan with tenants
  - Notification requirements to Agency if work to be performed
  - Proper assessment, handling, disposal of soil
  - Worker protections in place

STRUCTURAL IMPEDIMENT

What

- A building or a portion of a building (e.g., footer, column) obstructs full assessment and cleanup (typically soil)

Why

- Remedy relies on impediment to prevent exposure

CO

- Impeding structure must be maintained
- Notification requirements to agency if structure to be demolished or modified in manner that could affect contamination
- Re-opener potential for new cleanup and closure plan

GROUNDWATER USE RESTRICTION

What

- Restricts potable and non-potable usage (including irrigation)
- Restricts stormwater detention
- Monitoring wells require pre-approval from Agency

Why

- Contaminant concentrations in groundwater are above GCTLs

CO

- Abandon wells
- Site inspections
- Communication plan with tenants
- Stormwater mgmt plan
- Notification requirements to agency
- Dewatering plan addressing handling, treatment, disposal of GW must be approved by FDEP if needed for redevelopment

SUMMARY OF CONTINUING OBLIGATIONS

- Require routine inspection and documentation
- O&M is the norm
- Communication plans are vital to success
- Agency interaction must continue
- 5-year EC/IC review conducted by FDEP
- Land-use changes may often result in re-openers

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QUESTIONS?

THANK YOU FOR YOUR ATTENTION!

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