Asbestos Contaminated Soils

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Asbestos

Photo: Tarbuck and Lutgens
6 CCR 1007-2, Part B, Section 5.5

- Colorado’s asbestos-contaminated soil (ACS) regulations apply to the owner or operator of any property with asbestos-contaminated soil at which soil-disturbing activities are occurring or planned for any area containing asbestos-contaminated soil.
  - Effective date: April 30, 2006
6 CCR 1007-2, Part B, Section 5.5

Requirements are triggered when the owner or operator “has reason to know of asbestos-contaminated soil at a site, or has reason to believe that visible asbestos may be encountered.”
Reason to Know or Believe ACS is Present

What do you know about the property?

– Known ACS present
– Previous building demolition on property
– Visible evidence of PACM
– Subsurface construction debris
– Evidence of historical landfilling
– Current or historical utility corridors
When Might You Have to Deal with Asbestos in Soil?

• Land/Brownfields Development
  – Soil-disturbing activities are planned
  – Utility installation or upgrade

• Land Purchase or Sale
  – Due diligence issue

• Litigation
Land Development

Key: plan, plan, plan

– It is critical to deal with potential asbestos in soil up front
– Unplanned ACS management much more cumbersome than planned asbestos management
  • Work stoppages/delays
  • Cost overruns
  • Heightened regulatory scrutiny
– Planned ACS more predictable for budgeting and scheduling purposes
– Proactive vs. reactive relationship with regulators
Land Purchase or Sale

• ACS need not be a deal-breaker
  – Typically, ACS adds an incremental increase in excavation costs

• Most of the time, the seller is under no regulatory requirement to deal with ACS
  – Soil-disturbing activities usually undertaken by buyer

• Can buyer’s development plans be adjusted to avoid disturbing ACS?
Land Purchase or Sale

ACS is a due diligence issue, just like any other potential environmental issue

- Contractual indemnity
- Contractual cost allocation
- Insurance
- Purchase price adjustment
Litigation

ACS may be an element of damages in toxic-tort action

– Property damages can be estimated by qualified consultant
– Damages may include ACS investigation, characterization, transportation, disposal
PRACTICAL ISSUES RELATING TO ASBESTOS CONTAMINATED SOILS
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Why is Asbestos Contaminated Soil Such an Important Issue?

- Evolving and Increased Obligation for All Appropriate Inquiry/Environmental Due Diligence
- When is Due Diligence Required?
Why is Asbestos Contaminated Soil such an Important Issue? (con’t)

- Stigma and Devaluation of Property associated with this contaminant, substantial costs for clean-up and impact to construction/redevelopment.
- Unforeseen discovery can cause cost and schedule overruns during site development.
- Health Risks Posed by this Contaminant in Soil Media Not Yet Clearly Understood.
Pre-ACS Due Diligence

• Phase I Environmental Site Assessment
• Asbestos Building Survey
• Universal Waste and Regulated Building Material Survey
What Changed?

- Buckley Air Force Base
- Lowry Air Force Base
  - Dispute over base closure (BRAC) and state closure
  - Dispute over state agency jurisdiction
  - Unclear determination of health risk
- Perceived need for more regulation
Regulations

Previously

- Colorado – 5 CCR 1001-10, Part B, (Air Quality Control Commission)
- EPA - NESHAP – 40 CFR Part 61 - “Regulated ACM”, ACWM, => 1.0% - landfills active & inactive

New Solid Waste

- 6 CCR 1007-2, Section 5.5, Amended April 2007 ACS,
Key Provisions & Definitions

• What is Asbestos Contaminated Soil?
• Asbestos-Contaminated Soil (ACS): is soil containing detectable asbestos.
  • Visible ACM triggers Colorado ACS regulatory requirements; Although any detectable asbestos is considered ACS
• Asbestos-Containing Material (ACM): for the purposes of ACS regulations, ACS is a material containing detectable asbestos; for purposes of existing air quality regulations, ACM is 1% by weight, volume or surface area.
Key Provisions & Definitions

- **What is an Area of Interest (AOI):** is an area known or presumed to contain ACS or ACM.

- **Facility Component:** Means any part of a facility including equipment. For the purpose of this definition, “facility” means (as defined in Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B))
Determine Regulatory Ownership

ASBESTOS-CONTAMINATED SOIL GUIDANCE DOCUMENT
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment
DRAFT April 2006
Revised April 2007
Requirements of Solid Waste Regulations

Key Provisions
• Remediation of ACS Not required under Section 5.5, but if performed, requirements must be followed.
• Soils with non-friable ACM or trace (<1%) asbestos are Solid Wastes, not Special Wastes

Key Exemptions
• Non-friable exemption – If debris is solely non-friable – debris may be removed without surrounding soils
• Spill Response under Regulation 8
• De-minimus – 1 CY of soil, or residential
• Facility Components
What are Possible Sources of ACS?

- Often the result of past renovations or demolitions
- Former disposal areas, inactive or non-permitted landfills, MSW landfills
- Utility System Upgrades
- ACS is not naturally occurring asbestos / mine tailings
What Types of Asbestos Might be Found?

- 20,000 types of manufactured products – partial ban & phase out 1980-1987 – products still in use today
- Pipe and boiler insulation – thermal system insulation, Asbestos cement and floor tiles, Drywall, plaster, ceiling tiles and roofing
How is ACS Identified?

- Inspection: CDPHE Certified Asbestos Inspector + Six months of ACS experience
- Sampling: Debris or SACM Sampling Discrete and Composite Soil Sampling
- Historical Aerial Review: Areas of Interest = Soil Disturbance, historical demolition, indications of burning or burials
- Intrusive Investigation: Geoprobe™, Backhoe – Potholes, trenches, observation during construction
- Ground Penetrating Radar
Unplanned ACS Response

- **Immediate actions**
  - Stop soil-disturbing activities
  - Control site access
  - Stabilize surface soil

- **24-hour notification**
  - Property and project information

- **Interim Actions**
  - Take appropriate measures to control emissions
  - Submit a Soil Characterization and Management Plan, or implement approved standard procedures
Planned ACS Response

• Ten working-day notification
  – Property and project information

• Soil Characterization and Management Plan
  – Site Information
  – Any proposed characterization
  – The proposed soil-disturbing activities
  – Proposed exposure mitigation and asbestos fiber control measures
    • Site access control
    • Air monitoring plan
    • Emissions control plan
    • Exposure mitigation plan for asbestos left in place
    • Disposal plan
Key Points in the Process

- Determine Regulatory Program
- Assess level of and findings of Due diligence.
  - Likelihood of unplanned discovery even after due diligence is conducted
- When to write the SCMP – after the “right” amount of due diligence is performed
  - “C” should be in terms of findings, not what will be done
- Locations and extent of Areas of Interest or Concern
  - Planned Intrusive Activity?
- Final Site Use – consolidate, cap or cover?
- Site-Specific risk Analysis
  - Presence of receptors, exposure pathways, release mechanisms
Cost and Schedule Factors

- Due Diligence 1 to 100 acre site – Preliminary Site Inspection
  - Historical Research - $2,000 - $10,000 – 2 to 4 weeks
- Phase II Investigation & Sampling and Analysis –
  - 1 to 100 acre site = $10,000 to $250,000 – one to two month
- SCMP, Regulatory Coordination & Permitting
  - 1 to 3 months
- Excavation,
  - T&D of Trace Soils/non-friable - $30-$50/CY
- Excavation,
  - T&D of non-friable - $70-$100/CY
- Case Studies Denver Area - Fitzsimons
- ACS costs vs. non-ACS cost
How do You Protect Your Client?

• Manage Risk
  – Proper due diligence (historical research)
  – Discuss site development process
    • Are you excavating soil?
    • Is there demolition involved?

• Preparation

• Understand the Process
Regulatory Programs

- How is regulatory “clean closure” accomplished?
- RCRA Corrective Action Plan
- Compliance Order on Consent – RCRA
- Unilateral Compliance Order
- Voluntary Cleanup Program

Why Choose One Path over Another?

- Existing Program in place?
- Desire for “NAD”?
Where are Things Headed?

• Developments in analysis of the potency factors for asbestos diseases from serpentine vs. amphibole asbestos

• Continued development of sampling protocols to provide Presumptive Certainty that assessments will meet CDPHE assessment expectations.

• Improvements in asbestos measurements in soils –
  – Superfund Method. Standards and remedial requirements based on the Superfund Method (Modified Elutriator Method) rather than an arbitrary 1% composition limit.
Where are Things Headed?

- Developments in protocols for quantitative assessment of the potential for emissions from ACS - Emission and Dispersion Modeling – dust modeling to predict asbestos emissions.
- Streamlined consistent and coordinated approach ACS related releases and the new/existing regulations.
- Development of risk-based and cost-effective approaches to remediation.
Pending Asbestos In Soil Regulations in Other States

- Massachusetts in process of developing new “asbestos-in-soil” regulations
  http://www.mass.gov/dep/service/regulations/newregs.htm#ais

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- California
- New Hampshire
  www.des.state.nh.us/asbestosguidance
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