ASTM INTERNATIONAL
Helping our world work better

ASTM Committee E50

Environmental Assessment, Risk Management, and Corrective Action

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ASTM E50 Recording Secretary

www.astm.org

Introduction to ASTM International

30,000+ global members from 148 countries participating in ASTM

145 Main Committees and 1,997 Subcommittees

12,500 standards 195 new standards 1,819 revised standards in 2014

Collaborative

Standards developed by consensus with participation in a transparent process; open to anyone, anywhere

Every member has equal say; members are volunteers; they are not paid

Members come from: government, manufacturers, end-users, academia, laboratories, professional societies and consumers.

51% of our members come from organizations with 250 employees or less

Wide range of topics and applications

Serving 90 industry sectors from traditional to cutting edge: from steel to sustainability

Ensuring safety, quality and reliability, and market access

Applied to manufacturing and materials, products and processes, systems and services

The choice of many global industries; 50% of standards sold outside the US

6,700+ citations by more than 75 nations worldwide, including citations by China

Dynamic Information

Member expertise drives the decision on what standards are written and the content of the standards

As a result, ASTM standards respond to new challenges, new technology and new markets

New standards developed in 16-18 months, revisions in 6-8 months.

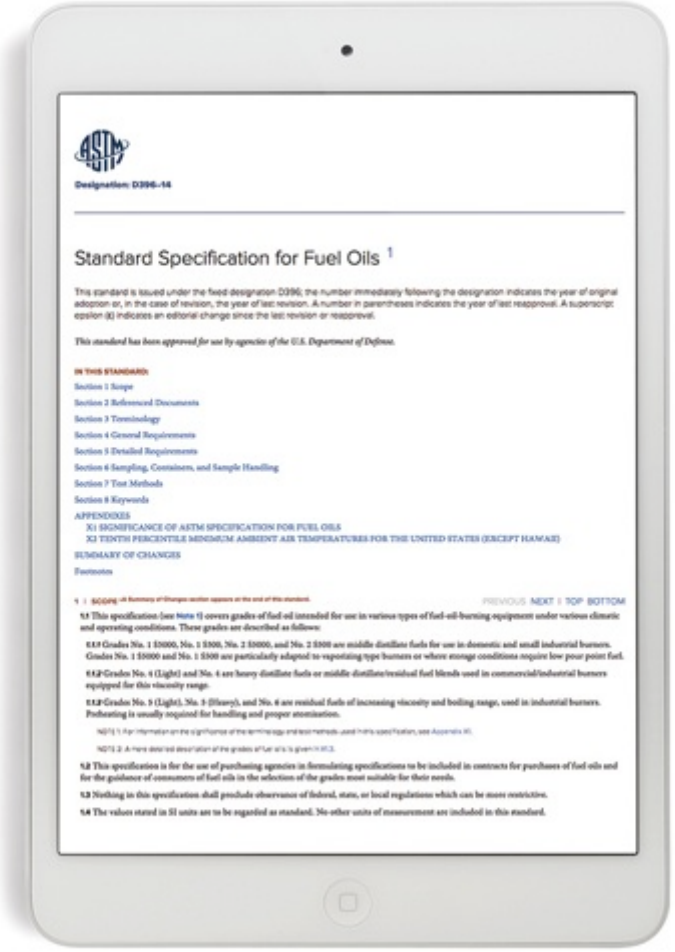
Mandatory review every 5 years; many reviewed and revised more frequently

Various electronic tools aid members: template, balloting, web conferencing; product distribution

Effective and Relevant Around The World

The Role of Standards

- We rely on our members' expertise and commitment – their good science, good engineering and good judgment
- Our voluntary consensus process gives everyone an opportunity to participate – ensuring standards are effective and relevant across diverse markets
- Our standards help everyone: consumers, businesses, manufacturers, innovators and governments
- Embracing all the principles of the World Trade Organization's Agreement on Technical Barriers to Trade
- Incorporated into contracts, regulations, codes, and laws, they support established and emerging economies and free and fair global trade



Designation: D396–14

Standard Specification for Fuel Oils [1]

This standard is issued under the fixed designation D396; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the U.S. Department of Defense.

IN THIS STANDARD:

Section 1 Scope
Section 2 Referenced Documents
Section 3 Terminology
Section 4 General Requirements
Section 5 Detailed Requirements
Section 6 Sampling, Containers, and Sample Handling
Section 7 Test Methods
Section 8 Keywords
APPENDIXES
X1 SIGNIFICANCE OF ASTM SPECIFICATION FOR FUEL OILS
X2 TENTH PERCENTILE MINIMUM AMBIENT AIR TEMPERATURES FOR THE UNITED STATES (EXCEPT HAWAII)
SUMMARY OF CHANGES
Footnotes

1. SCOPE

PREVIOUS NEXT | TOP BOTTOM

1.1 This specification (see Note 1) covers grades of fuel oil intended for use in various types of fuel-oil-burning equipment under various climatic and operating conditions. These grades are described as follows:

1.1.1 Grades No. 1 S0000, No. 1 S500, No. 2 S0000, and No. 2 S500 are middle distillate fuels for use in domestic and small industrial burners. Grades No. 1 S0000 and No. 1 S500 are particularly adapted to vaporizing type burners or where storage conditions require low pour point fuel.

1.1.2 Grades No. 4 (Light) and No. 4 are heavy distillate fuels or middle distillate/residual fuel blends used in commercial/industrial burners equipped for this viscosity range.

1.1.3 Grades No. 5 (Light), No. 5 (Heavy), and No. 6 are residual fuels of increasing viscosity and boiling range, used in industrial burners. Preheating is usually required for handling and proper atomization.

NOTE 1. For information on the significance of the terminology and test methods used in this specification, see Appendix X1.

NOTE 2. A more detailed description of the grades of fuel oil is given in X1.3.

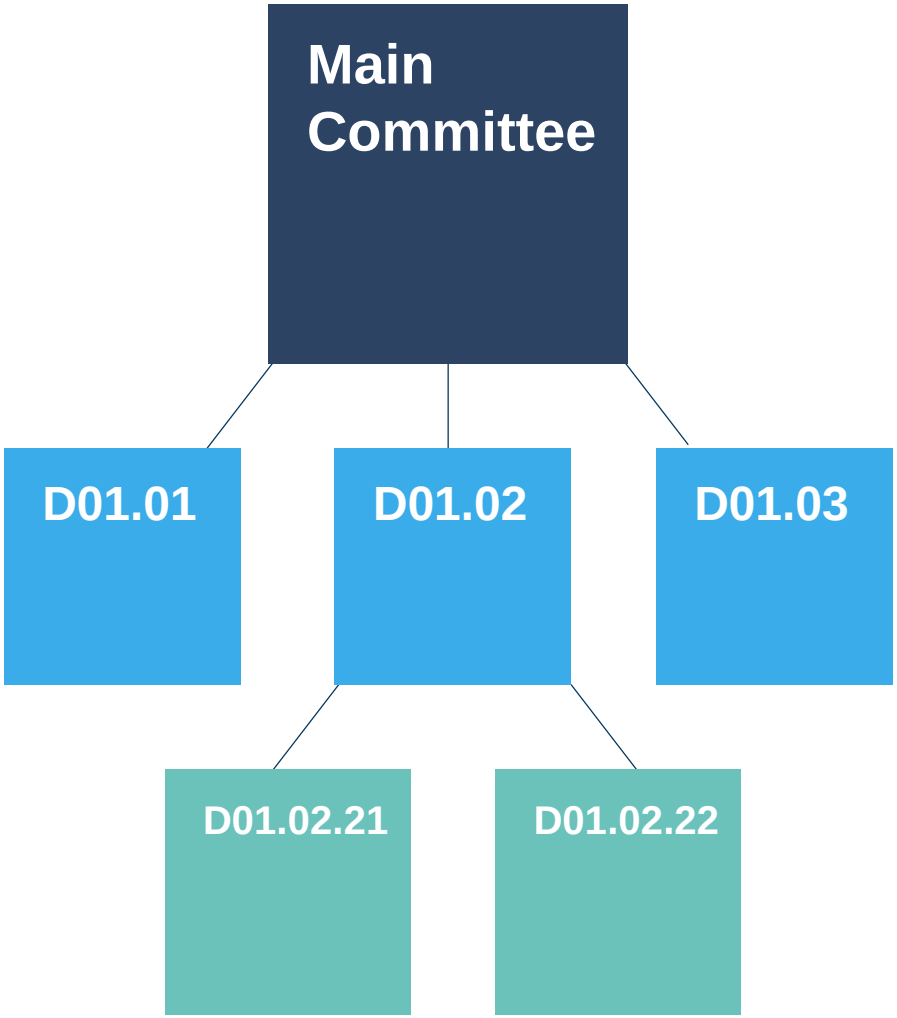
1.2 This specification is for the use of purchasing agencies in formulating specifications to be included in contracts for purchases of fuel oils and for the guidance of consumers of fuel oils in the selection of the grades most suitable for their needs.

1.3 Nothing in this specification shall preclude observance of federal, state, or local regulations which can be more restrictive.

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

Technical Committee Organization

- Technical Committees form to address specific industry needs
- Subcommittees are established to address subsets of specialized subject matter
- Subcommittees organize their expertise into Task Groups to write standards

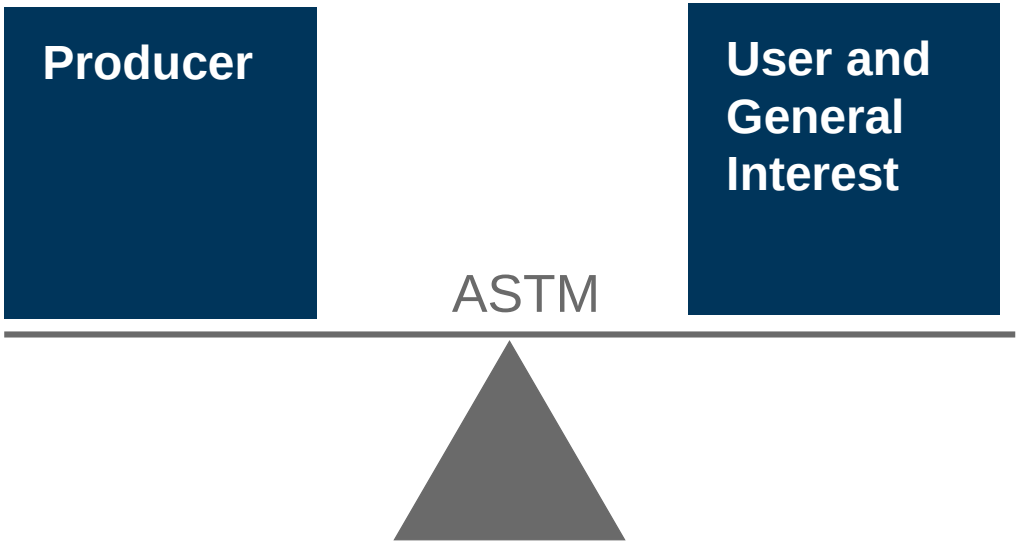


Balloting

- Documents are drafted and revised in the task group
- New standards are required to be balloted at the subcommittee level at least once
- After subcommittee approval, the main committee & entire Society

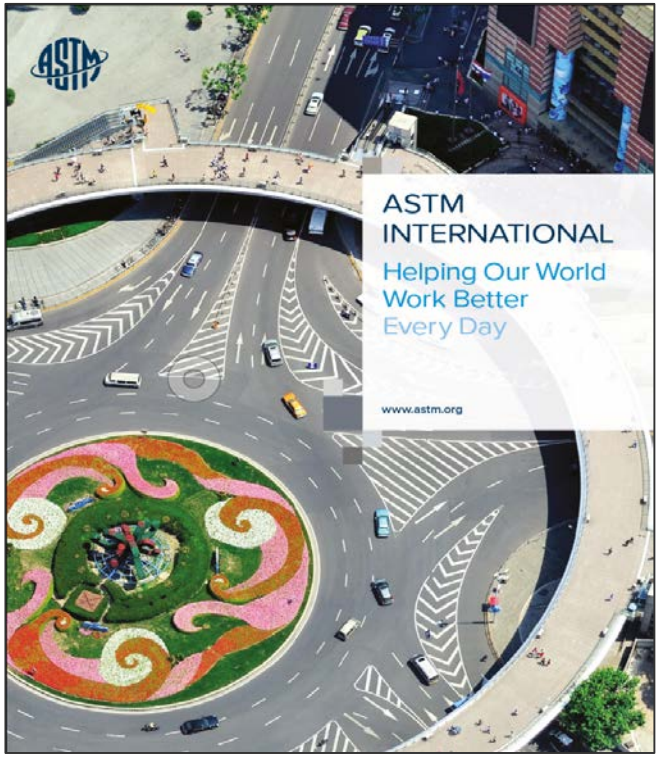
Voting Interests

- Technical committees are “classified” and “balanced”
- Committee Members are “classified” as one of the following:
  - Producer, User, General Interest, or Consumer
- “Balance” in ASTM means that committees have more User, General Interest, and Consumer members with votes than Producer members with votes
- Only one official vote is assigned per interest
- Every member receives ballots and should vote



ASTM's Activities and Relationships in China

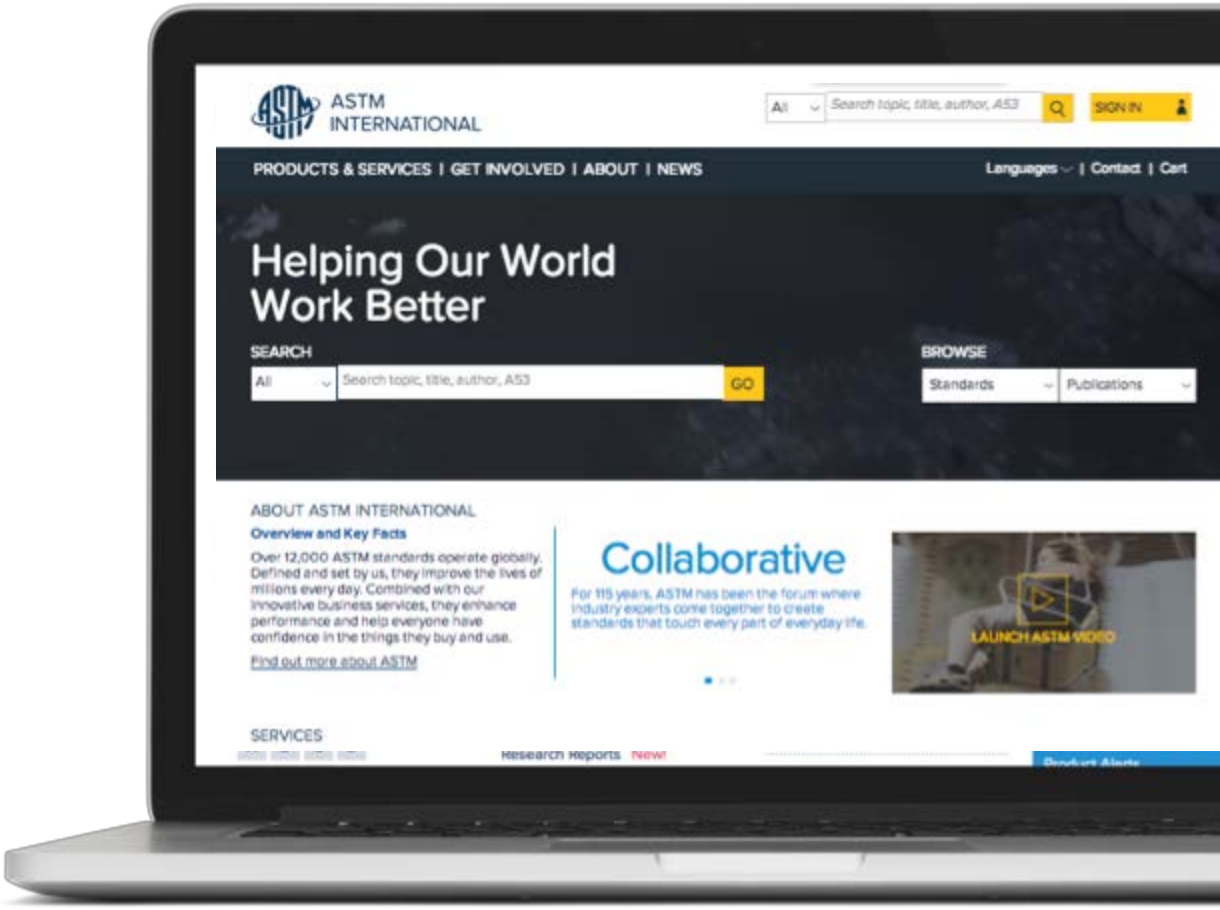
- Signed a MoU with Standards Administration of the People's Republic of China in 2004
- Provides Chinese national technical committees no-cost access to ASTM standards for consultation, reference, adoption, or use as the basis of Chinese national standards
  - 1045 ASTM standards cited by China
- Provides membership at no cost to technical experts from China
  - 628 experts from China active in various ASTM TCs
  - Highest number of government participants for any country outside the United States
- Representative office and two staff located in Beijing
- ASTM has hosted various types of training for Chinese visitors to ASTM and on-site, in China.



Introduction to Committee E50

General Information

- Committee was formed in 1990
- Meets twice/year in April and October with about 75 members in attendance
- 6 technical subcommittees
- 93 active standards and 8 draft proposed standards
- 850 members from 36 countries



Committee E50 Scope

The promotion of knowledge, stimulation of research, and development of standard guides, specifications, practices, test methods, classifications, and definitions relating to environmental assessment, risk management and corrective action. The scope of the Committee includes, but is not limited to multi-media environmental assessment and risk management issues including environmental assessment, environmental management, corrective action due diligence, and sustainability.

Committee E50 Subcommittees

E50.01 Storage Tanks

E50.02 Real Estate Assessment and Management

E50.02.01 Task Group for Phase I

E50.02.02 Task Group for Phase II Environmental Assessments

E50.02.04 Transaction Screen Group

E50.03 Beneficial Use

E50.04 Corrective Action

E50.05 Environmental Risk Management

E50.47 Biological Effects and Environmental Fate

Key Standards within Committee E50

- **E1527** Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
- **E1739** Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites
- **E1903** Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process
- **E2018** Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process
- **E2600** Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions
- **E2856** Standard Guide for Estimation of LNAPL Transmissivity
- **E2876** Standard Guide for Integrating Sustainable Objectives into Cleanup
- **E2893** Standard Guide for Greener Cleanups

Select ASTM Standards related to Property/ Site Assessment

- Standards for discussion:
  - E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessments Process
  - E 2600-10 Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions
  - E 2790-11 Standard Guide for Identifying and Complying with Continuing Obligations
- Discussion
  - Need for the standards
  - Basic components of the standard
  - Uses in context

A need for Site Assessment Industry Standards

- Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA" or "Superfund") 42 U.S.C. §§ 9601 *et. seq*.
- Potentially Responsible Parties:
  - Current owners or operators of the property;
  - Owners or operators of the property at the time of disposal;
  - Generators that arranged for disposal at the property;
  - Transporters who sent hazardous substances for disposal at the property
- Liability is Strict, Joint and Several

A need for Industry Standards -E1527

Under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), persons may be held **strictly liable** for cleaning up hazardous substances at properties that they either currently own or operate *or owned or operated at the time of disposal*. Strict liability in the context of CERCLA means that a potentially responsible party may be liable for environmental contamination based solely on property ownership and *without regard to fault or negligence*.

E1527: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessments Process

- A Phase I Environmental Site Assessment is an investigation of the property for preexisting environmental conditions or related problems related to the use or disposal of hazardous substances (and petroleum).
- Components:
  - Records Review
  - Site Visit/Site Walk
  - Interviews with current and former owners
  - Written Report
- Specific procedural requirements for each component in the standard
- Phase I reports Identify “RECs”, “HRECs”, and “CRECs” as defined by the standard.

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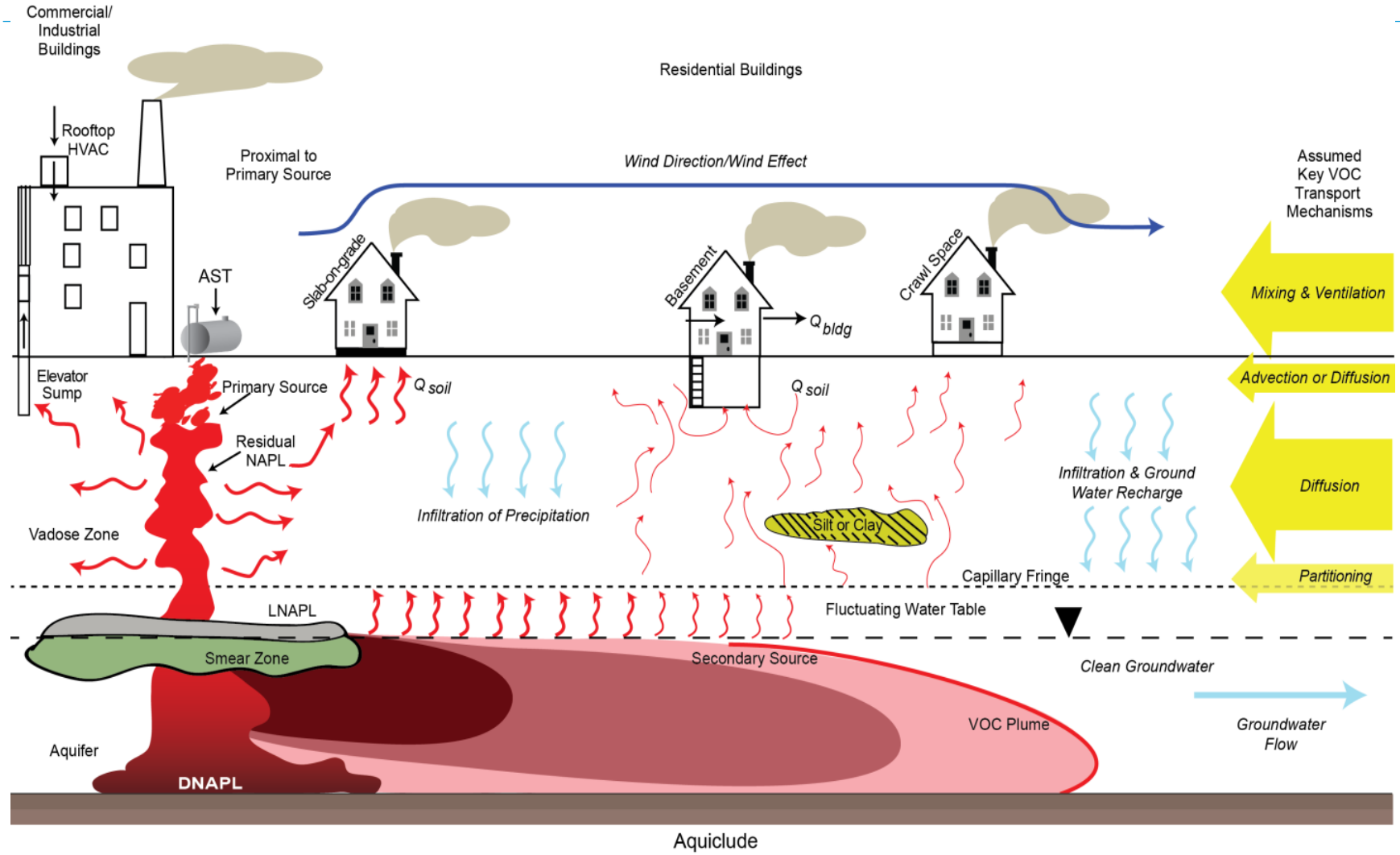
- Recognized Environmental Conditions (“RECs”): “the presence or likely presence of any hazardous substances or petroleum products in, on, or at the property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (2) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.”

- Phase I standard also Includes guidance on “non-scope” issues

E1527: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessments Process

- Users can use the conclusions in Phase I reports in different ways during private-party property transactions to allocate environmental risk.
- Some states review Phase I Reports in limited circumstances, but generally, these reports are performed as part of purely private transactions
- E1527 is standard procedure in most property transactions. It is used or required by banks, buyers, and sometimes sellers.
- E1527 was incorporated into EPA's "All Appropriate Inquiries" rule, which defines one of the elements of CERCLA defenses. The first version of EPA's rule became effective November 1, 2006.
- Under the rule, the current version of the Phase I Standard, ASTM E1527-13, is equivalent to federal rules on "all appropriate inquiry." 40 CFR § 312.11

A need for Industry Standards: E2600



E2600-10: Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions

- When to consider vapor risks?
- What data or public records to consider
- What site-specific factors may mitigate or exacerbate vapor risks
- Process:
  - Tier 1 Screen (similar to Phase I)
  - Tier 2 Screen (using new or previously collected data to screen against state-issued numerical screening values)
  - Report
- Process identifies “Vapor Encroachment Conditions” or VECs, which indicating the presence or likely presence of vapors in the sub-surface of the target property.
- Screening based on at least any available of the following:
  - Data/information collected from public records
  - Data collected from the environment;
  - Professional judgment;
  - Knowledge of known or suspected releases (e.g., chlorinated solvents or petroleum products);
  - Soil type
  - State-specific standards, screening levels and guidance
- Users can use these results to allocate risks in property transactions.

A need for Industry Standards: E2790

- CERCLA Liability Defenses
  - 2002 Law changes added and modified legal liability defenses. There are three primary defenses:
  - Bona Fide Prospective Purchaser
  - Innocent Land owner
  - Contiguous Property owner
- Basic Elements to three liability defenses:
  - All appropriate inquiries [e.g., Phase I ESA ASTM E1527]
  - Continuing obligations [ASTM E2790]
  - No affiliation with PRP

A need for Industry Standards E2790

- The Continuing Obligations
  - No “disposal” after property ownership
  - Cooperate with those conducting response actions
  - Comply with land use restrictions established or relied on in connection with the response action
  - Do not impede the effectiveness or integrity of any institutional control
  - Provide access to those conducting response actions
  - Provide all legally required notices
  - Take reasonable steps to:

    (a) stop any continuing release

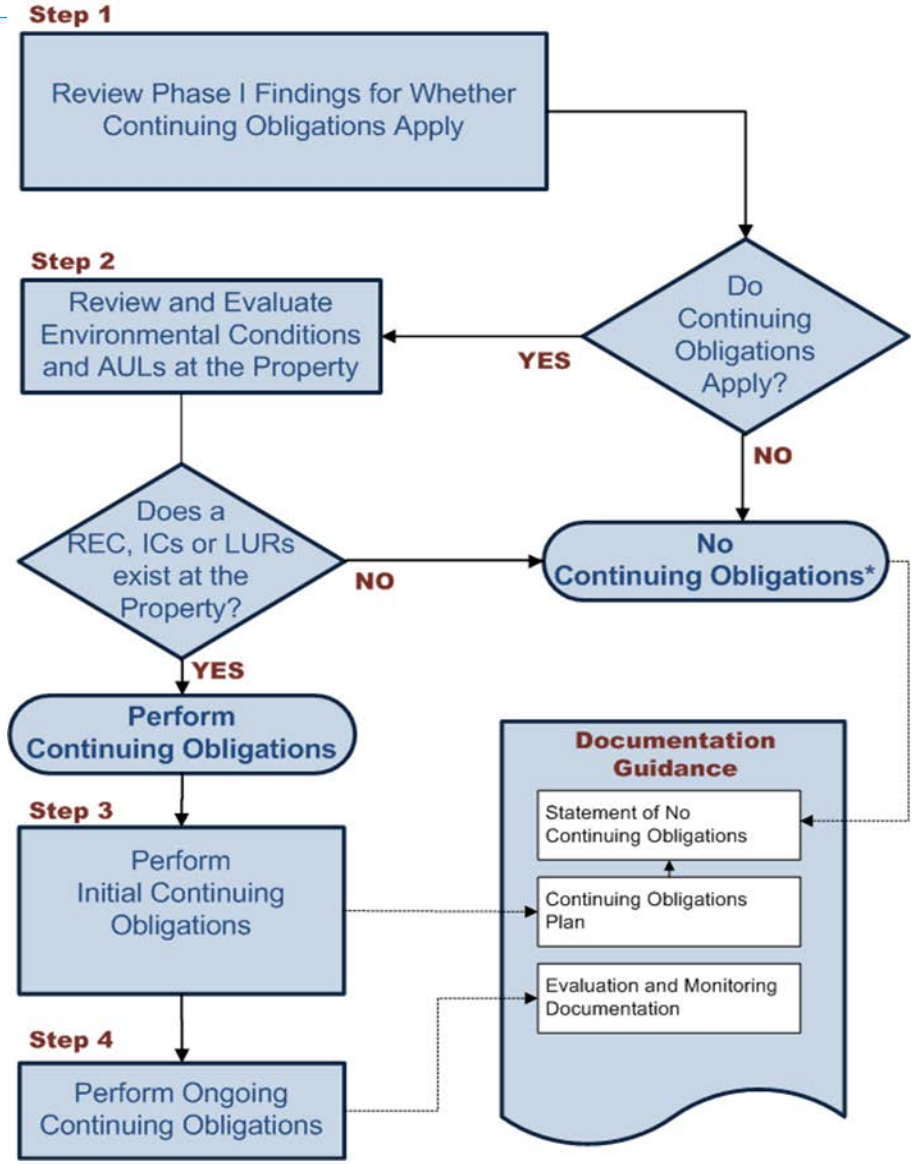
    (b) prevent any future threatened release; and

    (c) prevent or limit any human, environmental, or natural resource exposure to any previously released hazardous substance

E2790-11 Standard Guide for Identifying and Complying with Continuing Obligations

Evaluation Process assistance in E2790

- Evaluate known information
- Evaluate whether to seek additional information
- Recognize when no continuing obligations are required
- If required, identify options for compliance with continuing obligations, if any
- Implement continuing obligations, as necessary
- Maintain compliance over time, as necessary
- Guidance on documentation to help show proper analysis and implementation
- Site-specific guidance provided as well



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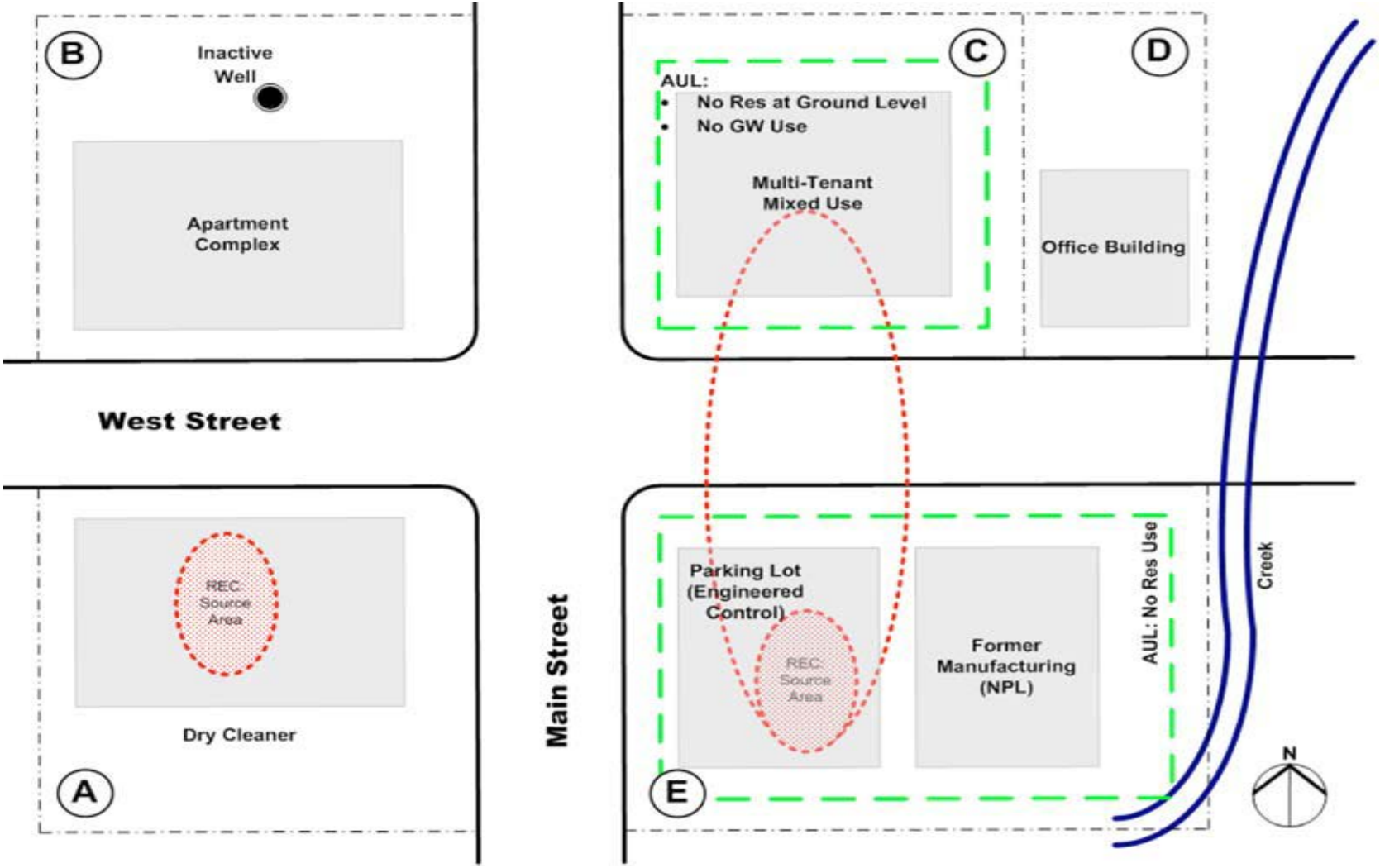
E2790-11 Standard Guide for Identifying and Complying with Continuing Obligations



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Specific questions on Standards discussed today:

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Thank you

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