

ASTM E1527-13

Transitioning from E1527-05 to E1527-13
and Vapor Intrusion Considerations

March 2014

E1527 Applicability

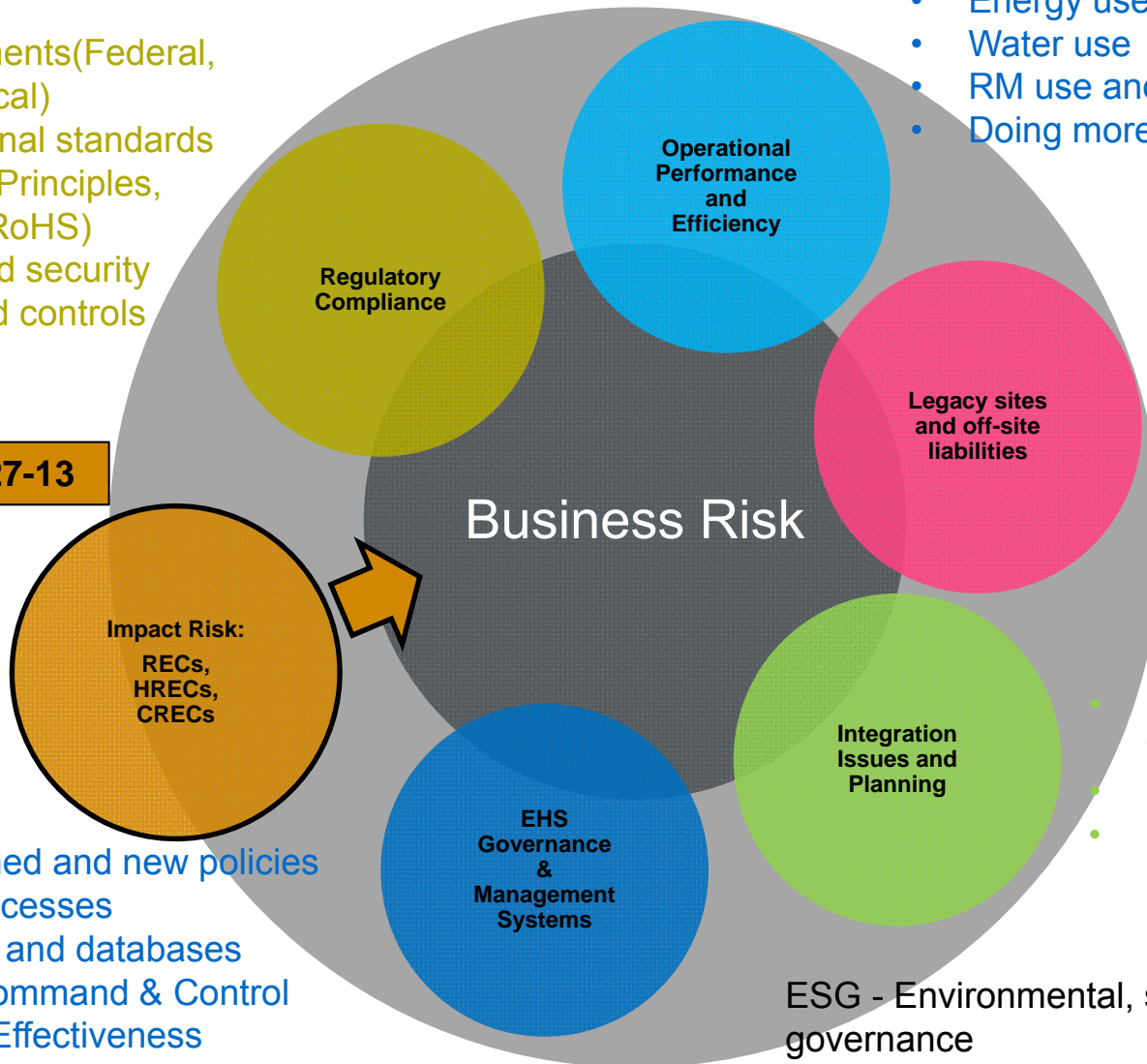
- Requirements(Federal, State, Local)
- International standards (Equator Principles, REACH/RoHS)
- Social and security
- Tasks and controls

- Energy use
- Water use
- RM use and substitution
- Doing more with less

- Formerly operated sites
- Off-site disposal liability/PRPs
- Changing clean-up standards

- EHS culture and transformation
- Personnel training
- Roles and responsibilities

ASTM E1527-13



- Combined and new policies and processes
- IT tools and databases
- EHS Command & Control
- Actual Effectiveness

ESG - Environmental, social & governance

ASTM E1527-13

Key Changes



ASTM E1527-13: Key Changes

- Published November 6, 2013
 - E1527-05 still (currently) meets AAI
 - EPA has referenced E1527-13 in its final rule

- What has changed?
 - General facelift and better alignment with CERCLA
 - Clarification/redefinition around REC and HREC definitions
 - Introduction of Controlled (CREC)
 - Addition of vapor in the definition of migration
 - Prescribed agency file review for the site (if listed) and listed adjacent properties

ASTM E1527-13 Revised REC Definition

■ Recognized Environmental Conditions (RECs)

Old:

- *“...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of the property.”*

New:

- *“...the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.”*

CERCLA: Release – “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discharging of barrels, containers and other closed receptacles containing any hazardous substance or pollutant or contaminant)...”

CERCLA: Environment – “...navigable waters...waters of the contiguous zone...ocean waters...water, groundwater, drinking water supply, land surface or subsurface strata...or ambient air”

ASTM E1527-13 New CREC Definition

- *“...a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g. property use restrictions, AULs, institutional controls, or engineering controls)...”.*

ASTM E1527-13 Revised HREC Definition

■ Historical Recognized Environmental Conditions (HRECs)

Old:

- *“...an environmental condition which in the past would have been considered a REC, but which ...may not be considered a REC currently...”*

New:

- *“...a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority **or** meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls). Before calling the past release an HREC, the EP must determine whether the past release is a REC at the time the Phase I ESA is conducted (**e.g., if there has been a change in the regulatory criteria**). If the EP considers this past release to be a REC at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a REC ”*

ASTM E1527-13 Vapor migration

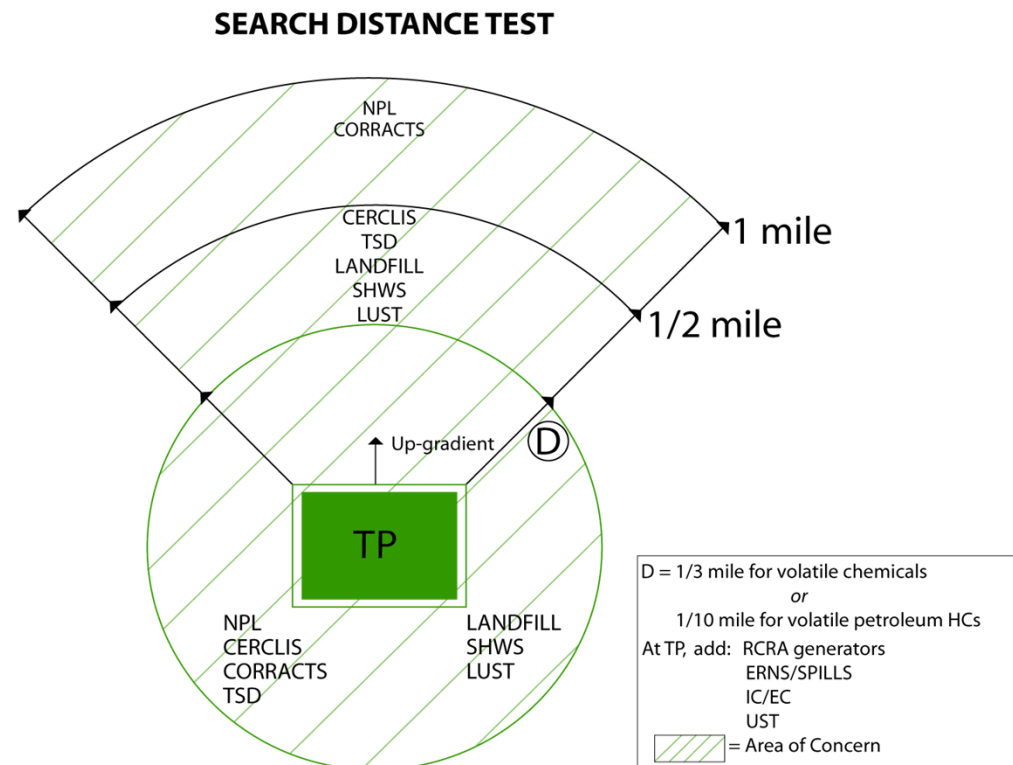
- CERCLA/AAL do not differentiate the form (e.g., solid, liquid, vapor) of the release to the environment (see definition of “release” and “environment”, above)
- Migrate/migration now defined in E1527 as
 - “...the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface.”
- E2600-10 (VE Standard) is a referenced document in E1527
- Addressed in revised AUL definition.
- Vapor migration is treated no differently to soil or groundwater issues
- Note: A full VE Assessment is not typically within the scope of a Phase I, but it can be added on for additional cost, or recommended.

ASTM E2600-10 Vapor Encroachment

Four tiers in E2600:

■ Tier 1

- Search Distance Test - *review of government and historical records at specific search distances to identify contaminated properties within the Area of Concern – a radius search*
- Chemicals of Concern Test - *determine whether or not there are chemicals of concern present*



ASTM E2600-10 Vapor Encroachment

- Tier 2
 - Non-invasive - *review of existing sampling results, if available, and critical distance test on plumes, if applicable. Compare contaminants to established risk-based criteria.*
 - Invasive – *conduct sampling*
- Tier 3
 - Vapor assessment, including higher resolution sampling, and quantitative risk assessment
- Tier 4
 - Mitigation

ASTM E1527-13 Agency File Review

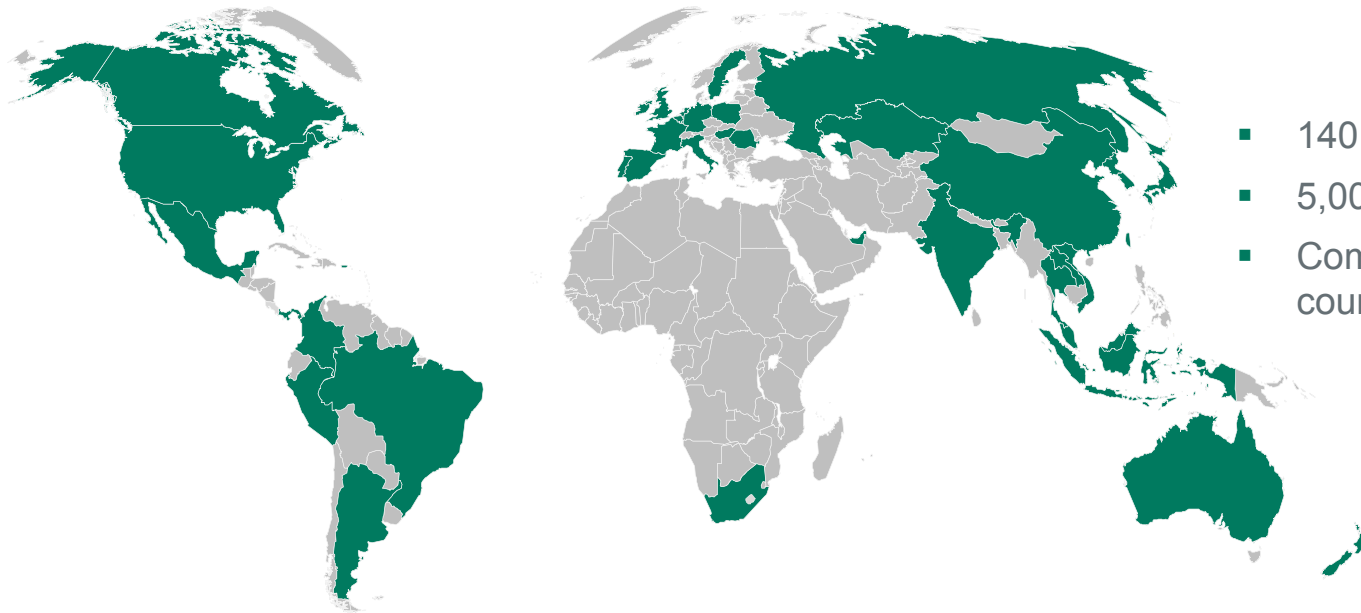
- New section 8.2.2 added on Regulatory Agency File and Records Review
- If the site or any adjoining property is identified in a government records search, “*pertinent regulatory files and or records associated with the listing should be reviewed*” at the discretion of the EP
- If in the EP’s opinion such a file review is not warranted, the EP must provide justification in the Phase I report
- EPs may review files/records from alternative sources such as on-site records, user-provided records, records from local government agencies, interviews with regulatory officials, etc.
- Summary of information obtained from the file review shall be included in the Phase I report and EP must include opinion on the sufficiency of the information obtained

ASTM E1527-13 Industrial/Manfg. Properties

- “additional standard historical sources shall be reviewed if they are likely to identify a more specific use and are reasonably ascertainable, subject to the constraints of data failure.”
- Standard historical sources include: aerials, fire insurance maps, property tax files, recorded land title records, topographic maps, street directories, building department records, zoning/land use records, and “other historical sources” such as newspaper archives, internet sites, etc.

About ERM

- Leading consultancy providing environment, health, safety, process safety and social services for over 40 years
- Delivers innovative solutions to enable our clients to maximize earnings, comply with regulations and improve their corporate reputation and public perception
- Sustainability is at the heart of the services we provide and how we operate our business



- 140 offices in 40 countries
- 5,000 + professional staff
- Completed projects in > 160 countries

ERM Contacts

John P. Hollar, PE

Partner

ERM

3200 Windy Hill Road, SE

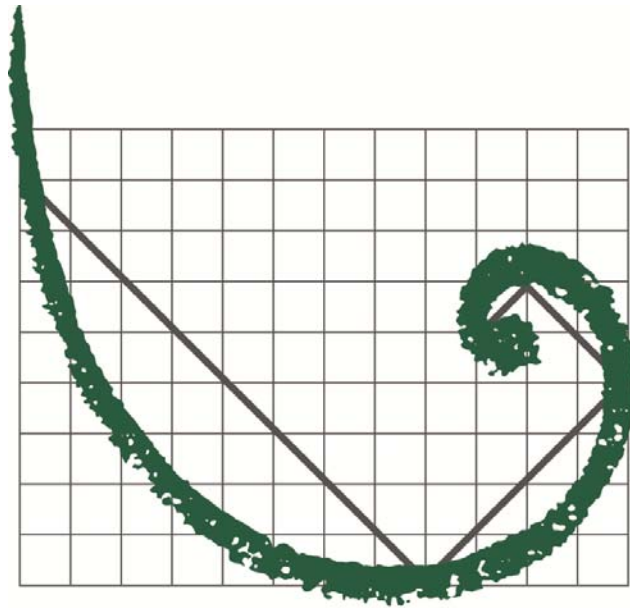
Suite 1500W

Atlanta, GA 30339

Direct: +1 678 486 2736

Cell: +1 404 642 6844

john.hollar@erm.com



ERM

www.erm.com