

Construction staging areas and contractor yards would typically be located at existing developed areas (parking lots, existing ware yards), where the storage of construction materials and equipment, including fuels and lubricants, would not conflict with aquifer protection areas. WMECO and/or its contractor would perform due diligence on any yard site; WMECO's standards for spill prevention, control, and response, erosion/sediment control, and other best management practices would apply.

### **5.3.9 Environmental Screening - Potential Sites of Environmental Concern (OHM)**

The existing environment and impacts and mitigation measures for the Preferred Northern Route and the Noticed-Alternative Southern Route are in the following subsections.

#### **5.3.9.1 Existing Environment**

The soils along the routes consist of either virgin soils and rock or urban fill type materials due to the urban setting in select portions of the routes, and may not be suitable for unrestricted use. In addition to urban fill, some soils that potentially contain OHM may be encountered along segments of the routes.

WMECO retained Burns & McDonnell to prepare an *Environmental Screening* based on select portions of the American Society for Testing and Materials (ASTM) Standard E1527-05 as applied to a study area related to the GSRP. Burns & McDonnell utilized Environmental Database Resources Inc. (EDR) to conduct the database searches for data interpretation by Burns & McDonnell as to the relevance of each potential site in relation to the proposed routes. As a result, many sites that were identified in the EDR report were deemed to not be a potential source of contamination either due to its closure status with the regulatory agency or its lack of proximity to the proposed line routes.

The purpose of the *Environmental Screening* was to identify potential environmental impacts associated with the current and historical usage of the properties on the trace of the transmission line routes, adjoining properties, and nearby off-site sources. The results of the *Environmental Screening* are not intended to satisfy all requirements of ASTM Standard E1527-05 but will be used to direct future characterization. The objective of the *Environmental Screening* was to identify potential sampling locations for further identification and characterization prior to construction (Phase II Sampling). Following implementation of Phase II, the results will be used to prepare a Material Handling Guideline (MHG) to direct future management and disposition of solid and liquid Excess Materials generated during the construction of the planned transmission line.

The following 17 ASTM-referenced databases were reviewed as part of the *Environmental Screening*:

- Federal National Priorities List (NPL)
- Federal Delisted NPL Site List
- Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List
- Federal CERCLIS NPL NFRAP Site List
- Federal Resource Conservation and Recovery Act Treatment, Storage, and Disposal Facilities Listed on the Corrective Action Tracking System (RCRA CORRACTS TSD) Facilities List
- RCRA non-CORRACTS TSD Facilities List
- Federal RCRA Generators List
- Federal Institutional Control/Engineering Control Registries
- Federal Emergency Response Notification System (ERNS)
- State and Tribal Equivalent NPL
- State and Tribal Equivalent CERCLIS List
- State and Tribal Solid Waste Landfills and/or Solid Waste Disposal Site Lists (SWF/LF)
- State and Tribal Leaking Storage Tank Lists
- State and Tribal Registered Storage Tank Lists
- State and Tribal Institutional Control/Engineering Control Registries
- State and Tribal Voluntary Cleanup Sites
- State and Tribal Brownfield Sites

Additionally, the EPA's Federal Index System Database (FINDS) was reviewed. The FINDS database is a comprehensive listing of facilities regulated under a variety of EPA programs.

### **Reconnaissance Survey**

In addition to the database search, a reconnaissance survey was conducted of the Preferred Northern Route and the Noticed-Alternative Southern Route to confirm or refute the presence of sites of environmental interest. Generally, the database results appeared to be accurate in relation to sites of interest within a reasonable distance to the routes. Additionally, during the Phase II Sampling efforts, more specific site reconnaissance (visual observations) will be conducted when entering into a planned area for sampling. If additional sites of interest are identified, the planned sampling locations will be adjusted in the field or locations will be added to the program.

## Future Investigations

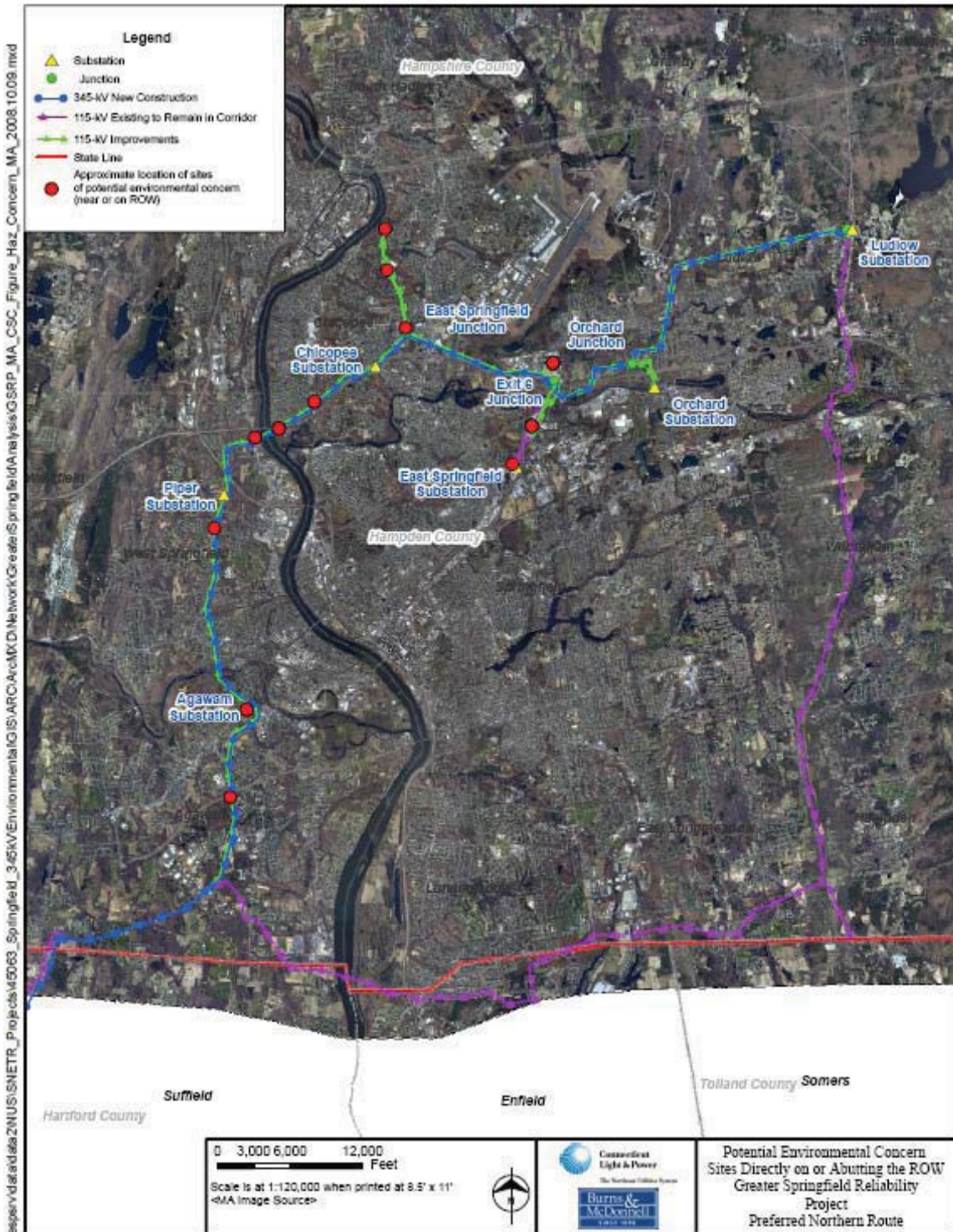
Pre-construction soil characterization (Phase II Sampling) is planned to occur potentially beginning in the fall of 2008 and ending by spring of 2009. This work will generally consist of completing soil probes within the existing right-of-way in the general vicinity of identified potential sites of concern identified either in the database search or site reconnaissance (site specific probes). Additionally, soil probes will be completed at pre-determined lateral intervals along the route to obtain background information on site soils (background probes). Soil samples will be obtained and analyzed for a full analytical suite consisting of common contaminants found in the environment pertaining to industrial site usage, petroleum storage, and agricultural usage, including heavy metals. The intent of the soil sampling is to characterize the soil through completing the site specific probes and the background probes at a frequency of 1 sample per 500 cubic yards of soil generated during construction. Additionally, groundwater samples are planned to be obtained for similar analysis parameters from sites of potential concern and at specified intervals. Following implementation of the sampling, the results will be used to prepare a Material Handling Guideline (MHG) to direct future management and disposition of solid and liquid Excess Materials generated during the construction of the planned transmission line.

The following summarizes the sites of potential contamination identified in the EDR database report that were in close proximity to the line routes and contained some potentially significant current or past environmental activity at the site (database hit). The sites have been broken out below by segments and by the Preferred Northern Route and the Noticed-Alternative Southern Route.

### 5.3.9.1.1 Preferred Northern Route

76 sites of potential environmental concern were identified along the Preferred Northern Route (or along the three “spurs” which connect to the Preferred Northern Route), of which seven were identified either directly on the ROW or directly abutting the ROW. These sites are identified below in **bold** type and are shown on Figure 5-2.

Figure 5-2: Potential Environmental Concern Sites Directly on or Abutting the ROW



### **Connecticut/Massachusetts State Border to South Agawam Switching Station**

Three sites with potential environmental concerns were identified along the Connecticut/Massachusetts state border to South Agawam Switching Station section of the Preferred Northern Route.

- 99 Abrams Drive, Agawam, MA. (DFF Corp) – RCRA-SQG, Violations exist.
- 720 Silver Street, Agawam, MA. (Governors America Corp) – FINDS
- 700 Silver Street, Agawam, MA. (Unifirst Corp) – RCRA-SQG, Violations exist, FINDS, Drycleaners

### **South Agawam Switching Station to Silver Substation**

Eight sites with potential environmental concerns were identified along the South Agawam Switching Station to Silver Substation portion of the Preferred Northern Route.

- 153 Bowles Road, Agawam, MA. (Olympic Manufacturing Group) – SHWS, Release of TCA from offsite property
- 467 Silver Street, Agawam, MA. – ERNS, Gasoline pump overflow
- 467 Silver Street, Agawam, MA. (Witch Equip of New England) – UST
- 307 Silver Street, Agawam, MA (Jet Industries Inc) – RCRA-SQG, Violations exist, FINDS
- 917 Suffield Street, Agawam, MA. (Residence) – SHWS (Diesel fuel)
- 938 Suffield Street, Agawam, MA (Ben Franklin Design & MFG Co) – FINDS
- 1000 Suffield Street, Agawam, MA (Armstrong-Blum MFG Co) – FINDS
- 1000 Suffield Street, Agawam, MA. (Spartan Sawworks) – RCRA\_SQG, Violations exist, UST
- 1036 Suffield Street, Agawam, MA (Custom Marble Designs) – FINDS
- 1123 Suffield Street, Agawam, MA (Ace Precision Inc) – RCRA\_SQG, Violations exist, FINDS

### **Silver Substation to Agawam Substation**

20 sites with potential environmental concerns were identified along the Silver Substation to Agawam Substation portion of the Preferred Northern Route.

- **45 Tennis Road, Agawam, MA (Tennis Rd property) – SHWS**
- 820 Suffield Street, Agawam, MA. (Getty Station) – LUST
- 650 Suffield Street, Agawam, MA (Scotts Citgo) – RCRA-SQG, Violations exist, FINDS

- 300 Springfield Street, Agawam, MA (Goody's Convenience Store) – LUST
- 276 Springfield Street, Agawam, MA (Sliech Auto Body) – RCRA-SQG, Violations exist, FINDS
- 245 Springfield Street, Agawam, MA (Sarat Ford Sales) – FINDS
- **198 Springfield Street, Agawam, MA (WMECO Station) – Unknown release**
- 109 Ramah Circle, Agawam, MA (New England Burring Co) – RCRA-SQG, Violations exist, FINDS
- 101 Ramah Circle S, Agawam, MA (Moren Signs) – FINDS
- 44 Russo Circle S, Agawam, MA (Aerospace Support Inc) – FINDS
- 87 Ramah Circle S, Agawam, MA (Western Mass Equipment) – RCRA-SQG, Violations exist, FINDS
- 74 Ramah Circle S, Agawam, MA (Christy's Auto Body) – RCRA-SQG, Violations exist, SHWS, FINDS
- 61 Ramah Circle S, Agawam, MA (Langonet Auto Body) – FINDS
- 11 Ramah Circle S, Agawam, MA (National Aerospace Inc) – RCRA-SQG, Violations exist, FINDS
- 21 Ramah Circle S, Agawam, MA (Emerson and Cuming) – RCRA-SQG, Violations exist, SHWS, FINDS, CERC-NFRAP
- 380 Walnut Street Ext, Agawam, MA (Walnut Street Cleaners) – RCRA-SQG, Violations exist, Drycleaners, FINDS
- 28 Ramah Circle N, Agawam, MA (United Rentals) – FINDS
- 38 Ramah Circle N, Agawam, MA (Unknown name) – SHWS
- 76 Ramah Circle N, Agawam, MA (Springfield Foreign Car Repair) – RCRA-SQG, Violations exist, FINDS
- 51-57 Springfield Street, Agawam, MA (Cunliffe Property) – LUST (Oil)

#### **Agawam Substation to Piper Substation**

Seven sites with potential environmental concerns were identified along the Agawam Substation to Piper Substation portion of the Preferred Northern Route.

- 27 River Street, Agawam, MA (River Street Auto Clinic) – FINDS, MA-EPICS
- 63 Ashley Street, Agawam, MA (Unknown name) – LUST
- Amoston Road/Morton Street, West Springfield, MA (Near Islamic Center) – Unknown Chemical Release

- 2 Windpath West, West Springfield, MA (South Ashmere Water Association Inc) – FINDS, SDWIS
- Morgan Road/Piper Road, West Springfield, MA (Punderson Oil Truck) – Fuel Oil Release
- 428 Morgan Road, West Springfield, MA (Elks Lodge) – Spill, remediation unknown
- **476 Morgan Road, West Springfield, MA (Unknown Name) – Spill, remediation unknown**

### **Piper Substation to Chicopee Substation**

11 sites with potential environmental concerns were identified along the Piper Substation to Chicopee Substation portion of the Preferred Northern Route.

- **1800 Riverdale Street, West Springfield, MA (Balise Collision Repair Center) – RCRA-SQG, Violations exist**
- 128 Althea Street, West Springfield, MA (Unknown Name) – LUST (gasoline)
- 1688 Riverdale Street, West Springfield, MA (Colonial Roto Engraving Inc) – RCRA-SQG, Violations exist, FINDS
- 1680 Riverdale Furniture, West Springfield, MA (Bare Furniture) – FINDS
- 1615 Riverdale Street, West Springfield, MA (Century Auto Service) – RCRA-SQG, Violations exist, FINDS
- **80 Median Street, Chicopee, MA (Chicopee Water Treatment Facility) – LUST, Spill (NFRAP)**
- 141 Paderewski Street, Chicopee, MA (Paderewski Pump Station) – UST
- **148 East Meadow Street, Chicopee, MA (A-Truck Collision Service, Inc) – RCRA-SQG, Violations exist, FINDS**
- 86-88 Chicopee Street, Chicopee, MA (Conway Bedding Company) – US Brownfields (cleanup complete)
- 162 Chicopee Street, Chicopee, MA (Walters Auto Body) – RCRA-SQG, Violations exist, FINDS
- 875 Meadow Street, Chicopee, MA (Hallahan Property) – SHWS

### **Chicopee Substation to East Springfield Junction**

Three sites with potential environmental concerns were identified along the Chicopee Substation to East Springfield Junction portion of the Preferred Northern Route.

- 447 Montgomery Street, Chicopee, MA (Central Transport) – USTs (Removed)
- 502-520 Montgomery Street, Chicopee, MA (A Plus Mini Market/Sun Station) – SHWS
- 1204 Granby Road, Chicopee, MA (7 Eleven Store) – LUST

### **East Springfield Junction to Exit 6 Junction**

Eight sites with potential environmental concerns were identified along the East Springfield Junction to Exit 6 Junction portion of the Preferred Northern Route.

- 505 Memorial Drive, Chicopee, MA (Chicopee Cheverolet Olds Cadillac) – RCRA-SQG, Violations exist, LUST, FINDS
- 455 Memorial Drive, Chicopee, MA (Speedee Oil Change & Tuneup) – FINDS
- 451 Memorial Drive, Chicopee, MA (Monro Shop) – FINDS
- 555 Memorial Drive, Chicopee, MA (TWG Construction Inc) – FINDS
- 544 Memorial Drive, Chicopee, MA (Sherwin Williams) – FINDS
- 615 Memorial Drive, Chicopee, MA (BJs Wholesale Club) – RCRA-SQG, Violations exist
- 350 Burnett Road, Chicopee, MA (Exxon) – USTs (Removed)
- **161 New Lombard Road, Chicopee, MA (Chicopee Sanitary Landfill) – CESQG, Oil Release**

### **Exit 6 Junction to Shawinigan Switching Station**

No sites with potential environmental concerns were identified along the Exit 6 Junction to Shawinigan Switching Station portion of the Preferred Northern Route.

### **Shawinigan Switching Station to Orchard Junction**

10 sites with potential environmental concerns were identified along the Shawinigan Switching Station to Orchard Junction portion of the Preferred Northern Route.

- 750 Worcester Street, Springfield, MA (Plovhar) – SHWS (Ammonium Hydroxide – Cleaned up)
- 10 Hummingbird Drive, Chicopee, MA (Bluebird Acres) – LUST (Kerosene)
- 29 Hummingbird Drive, Chicopee, MA (Bluebird Acres) – LUST (Kerosene)
- 43 Hummingbird Drive, Chicopee, MA (Bluebird Acres) – LUST (Kerosene)
- 38 Lark Drive, Chicopee, MA (Bluebird Acres) – LUST (Kerosene)
- 42 Lark Lane, Chicopee, MA (Bluebird Acres) – LUST



- 48 Lark Lane, Chicopee, MA (Bluebird Acres) – LUST (Oil)
- 18 Mockingbird Drive, Chicopee, MA (Bluebird Acres) – LUST (Kerosene)
- 28 Mockingbird Drive, Chicopee, MA (Bluebird Acres) – LUST (Kerosene)
- 50 Mockingbird Drive, Chicopee, MA (Bluebird Acres) – LUST (Kerosene)

### **Orchard Junction to Ludlow Substation**

Six sites with potential environmental concerns were identified along the Orchard Junction to Ludlow Substation portion of the Preferred Northern Route.

- 203 West Street, Ludlow, MA (Elite Consumer Products) – RCRA-SQG, Violations exist, SHWS, FINDS, TRIS
- 442 Holyoke Street, Ludlow, MA (Grez Automotive) – RCRA-SQG, Violations exist, UST (Removed), FINDS
- 473 Holyoke Street, Ludlow, MA (Red barn Speed) – FINDS
- 407 West Street, Ludlow, MA (Barry Linton Co) – SHWS
- 150 Rood Street, Ludlow, MA (Unknown Name) – SHWS
- 206 Church Street, Thorndike, MA (Oak Tree Packaging Corp) – SHWS

### **5.3.9.1.2 Noticed-Alternative Southern Route**

Nine sites of potential environmental concern were identified along the Noticed Southern Route, but none of the nine were identified either directly on the right-of-way or directly abutting the right-of-way.

### **South Agawam Switching Station to Franconia Junction**

Three sites with potential environmental concerns were identified along the South Agawam Switching Station to Franconia Junction portion of the Noticed-Alternative Southern Route.

- Kanaha Avenue, Suffield, CT (Sewage Treatment Plant) – CT LWDS
- 214 Brainaroad Road, Enfield, CT (Saint Martha School) – FINDS
- 773 Maple Road, Longmeadow, MA (Exxon Mobile Corp) – RCRA-SQG, Violations Exist, FINDS

### **Franconia Junction to Hampden Junction**

Four sites with potential environmental concerns were identified along the Franconia Junction to Hampden Junction portion of the Alternative Route.

- 135 Denslow Road, East Longmeadow, MA (Mark Service Center) – FINDS
- 82 Deer Park Drive, East Longmeadow, MA (Suddekor LLC) – FINDS
- 515 Shaker Road, East Longmeadow, MA (Northeast Circuits, Inc) – RCRA-SQG, Violations exist, FINDS
- 50 Parker Road, East Longmeadow, MA (Baptist Village Academy) – FINDS

### **Hampden Junction to Ludlow Substation**

Two sites with potential environmental concerns were identified along the Hampden Junction to Ludlow Substation portion of the Noticed-Alternative Southern Route.

- 2382 Boston Road, Wilbraham, MA (Cyn Environmental Services) – RCRA-SQG, FINDS
- 2420 Boston Road, Wilbraham, MA (Construction Service Inc) – RCRA-SQG, Violations exist, SHWS, FINDS

### **5.3.9.2 Impacts and Mitigation**

The impacts and mitigation for OHM sites of the Preferred Northern Route and the Noticed-Alternative Southern Route are summarized below. It is important to note that although many sites of potential environmental contamination concern were identified along the routes, many of the sites identified were listed in an environmental database (therefore of some environmental concern) due to minor environmental issues such as permitting violations, generating OHM from a manufacturing process, or minor fuel or chemical spills which typically are of very low concern. At sites where actual contamination is identified (through sampling of soil and/or groundwater during the Phase II Investigations) the installation of wood pole H-frame structures or steel monopoles will have a minimal disruption and generation of contaminated media and the excess material generated from installing the foundations will be properly characterized and disposed.

#### **5.3.9.2.1 Preferred Northern Route and Related Facilities**

76 OHM sites were identified along the Preferred Northern Route. No impacts related to the spread of OHM are anticipated to occur as a result of the GSRP.

#### **5.3.9.2.2 Noticed-Alternative Southern Route**

Nine OHM sites were identified along the Noticed-Alternative Southern Route. No impacts related to the spread of OHM are anticipated to occur as a result of the GSRP.

### **5.3.9.2.3 Comparison of OHM Impacts**

A comparison of the Preferred Northern and Noticed-Alternative Southern Routes revealed a significant difference in the number and density of sites with potential OHM concerns located along both routes. 76 sites with potential OHM concerns were identified along the Preferred Northern Route. In contrast, only nine sites with potential OHM concerns were identified along the Noticed-Alternative Southern Route. Due to use of proper soil and groundwater management techniques, impacts related to the spread of OHM are not anticipated to occur regardless of which route is selected. Nevertheless, the difference in these OHM site numbers speaks to the overall nature of historic pollution along the two routes: the Preferred Northern Route is generally less favorable than the Noticed-Alternative Southern Route. However, since the Preferred Northern Route will in all events be the site for the upgrading of the 115-kV lines, no advantage is gained by selecting the Noticed-Alternative Southern Route from the point of view of OHM. The two routes are therefore roughly comparable on this basis.

### **5.3.9.2.4 Mitigation Measures**

During the construction of the Project, the effective management of soils and groundwater will be a key consideration. As part of the final Project design, WMECO will develop specific plans for characterizing the soils and groundwater along the routes (i.e., presence/absence of OHM) and subsequently for handling and managing such materials. Such plans will be developed based on the results of agency file reviews, pre-construction sampling and analyses along the approved Project routes, and the incorporation of applicable permit requirements.

### **5.3.10 Electric and Magnetic Fields**

This section characterizes background electric and magnetic field (EMF) levels and provides calculations to compare the levels of EMF associated with existing and proposed transmission lines along the Preferred Northern Route and the Noticed-Alternative Southern Route.

In addition, a summary of the latest assessment of research on EMF by the World Health Organization (WHO) and its relevance to past practices and EFSB guidance in Massachusetts is provided in Exhibit 5.3.

### **Background Levels of Electric and Magnetic Fields**

Electricity used in homes and workplaces is transmitted over considerable distances from generation sources to distribution systems. Electricity is transmitted as alternating current (AC) to all homes and over the electric lines that deliver power to neighborhoods, factories and commercial establishments. The