

CHAPTER 2 – METHODOLOGY AND COORDINATION

2.1 Regulatory Framework

Vermont has primacy for hazardous waste regulation and administers the federal regulations through the Vermont Hazardous Waste Management Regulations (Vermont Environmental Protection Rules, Chapter 7). Vermont also regulates underground storage tanks through the Underground Storage Tank Regulations (Vermont Environmental Protection Rules, Chapter 8). The Vermont hazardous waste quantity thresholds for large and small quantity generators are lower, i.e., more stringent, than the federal thresholds. Vermont also treats waste petroleum products as hazardous waste.

A hazardous site is any property where a process, spill, leak or other action has resulted in the release of hazardous materials or petroleum products, causing levels of these contaminants in soil, groundwater, surface water or indoor air at the site to be greater than the applicable enforcement standards. An active site is one where the Vermont State Department of Environmental Conservation (DEC) is currently overseeing the investigation and/or cleanup of the property. A closed site refers to a property at which the DEC considers the release to have been adequately managed so as to not pose a significant risk to property users or surrounding media. In closing a site, DEC will issue a Sufficient Management Activity Complete (SMAC) letter, stating that the site no longer poses unacceptable risk to human health or the environment.

A hazardous waste generator is a facility (excluding households) in which a process results in a waste product that has the qualities of a hazardous material. There are three categories of hazardous waste generators: conditionally exempt, small quantity, and large quantity. As conditionally exempt generators produce (up to 220 pounds per month) and store (up to 2,200 pounds) the least amounts of material, they are subject to the fewest regulations. Small quantity generators may produce up to 2,200 pounds of hazardous wastes per month and store up to 13,200 pounds of hazardous wastes at any time. Large quantity generators may produce and store unlimited quantities of hazardous wastes for up to 90 days.

Underground storage tanks (USTs) must be permitted if they have a capacity for more than 1,100 gallons of chemicals or petroleum product, with the exception of fuel oil for on-premises heating and farm or residential tanks that store motor fuel. USTs that are no longer in use do not require a permit. Hazardous waste generators and tanks below registration/permitting thresholds are not typically identified in DEC's database.

2.2 Data Collection

This section presents a summary of the data collected and material reviewed to identify potentially hazardous materials that may be present within the two alternative corridors (VT 2A and Circ A/B). Various sources were available for all or part of the two corridors. These source documents were published over many years, offering a historic overview of land use, land form, material features and other relevant aspects of the corridors and their environs.

2.2.1 Historical Records Review

Historical Maps and Atlases

The *Map of Chittenden County, Vermont* (Walling, H.F., 1857) and the *Atlas of Chittenden County, Vermont*, (Beers, F.W., 1869) depict the extent, and in some cases, the type of

development in the county, indicating natural and manmade features on the landscape at the time of publication.

United States Geological Survey Maps

United States Geological Survey (USGS) 15 minute and 7.5 minute topographic quadrangle maps, dating from 1906 to 1987, illustrate natural and manmade features on the landscape. Maps from 1906, 1906 revised in 1943 (1906/1943), 1948, 1948 revised in 1972 (1948/1972) and 1987 were reviewed. These maps provide approximate dates of development in the area of coverage and help indicate where further investigation is warranted.

Sanborn Maps

Historical fire insurance maps (Sanborn) are available for Essex Junction for periods between 1894 and 1962. No Sanborn mapping was identified, and none is known to exist, for those portions of the two corridors located outside Essex Junction. Information from the Sanborn maps is used to identify the location of historic land uses that may present the potential for environmental contamination. The review included examination of Sanborn maps dating from 1894, 1899, 1904, 1910, 1922, 1928, 1944 and 1962.

Aerial Photographs

Black and white and color infrared aerial photographs of the two alternative corridors and surrounding area were obtained from the U.S. Department of Agriculture, Natural Resources Conservation Service. The review included examination of black and white photographs from 1937, 1941, 1942, 1962, 1974, 1980, 1992 and 2004. Color infrared photographs were available for the years 1977, 1986 and 1992.

2.2.2 Governmental Records Review

A regulatory agency records database was purchased from a commercial search firm (EDR Inc., February 2006). The database included federal records such as the National Priorities List (NPL); Proposed NPL; Delisted NPL; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); and Resource Conservation and Recovery Act Information (RCRA). Vermont Agency of Natural Resources (VANR) records found in the database included the Vermont Active Hazardous Sites List, Vermont Permitted Underground Storage Tank List, the Solid Waste Facilities/Landfill sites list and the Vermont Spills database.

Records from the commercial database were cross-checked with DEC records available on the department's Internet web site. The Waste Management Site Locator website was consulted as an additional source for the locations of Vermont Hazardous Waste Sites, underground storage tanks, and generators of hazardous waste. In addition, the website contains documents that characterize sites and describe management activities and, if pertinent, document SMAC or site closure. Such documents were used to further characterize hazardous materials conditions along the corridors.

Municipal records from the Williston Tax Assessors office were reviewed to determine the locations of fuel oil storage tanks used for residential heating. Records from the Essex Tax Assessors office do not include information regarding residential heating.

United States Census data (2000) were reviewed to characterize the age of residential structures along each corridor, and to establish the likelihood that fuel oil is used for heating at homes within specific Census Block Groups. These data present only a partial picture, but do provide some indication of residential areas where USTs and petroleum tanks used for residential heating fuel can be expected, and where asbestos containing material (ACM) and lead-based paint may have been used in residential construction.

2.2.3 Visual Corridor Inspection

The VT 2A corridor and that portion of the Circ A/B corridor south of the Chittenden Solid Waste District transfer station was traversed by foot on March 16–17, 2006. That portion of the Circ A/B corridor north of the transfer station was traversed on foot on March 28, 2006. Visual inspection of parcels on either side of the corridor was conducted from the public right-of-way. Evidence of environmental concerns, and evidence of potential environmental concerns, was noted where apparent. Such evidence included, but was not limited to: the presence of stained or stressed vegetation; the presence of debris, barrels and containers; locations of automobile service stations and repair facilities, dry cleaning establishments, railyards and electrical substations; vent and/or fill pipes for petroleum storage tanks; and other land uses or features associated with potential environmental concern.

2.2.4 Interviews

Where inconsistencies between records from the commercial database and records from the DEC website were encountered, or where further information was needed to fully characterize contamination or the potential for contamination on a site, the case manager from DEC was contacted to establish the status of the particular site. Interviews were also conducted with DEC Solid Waste Division personnel regarding groundwater monitoring at the Williston Landfill. Additionally, interviews were conducted with Chittenden Solid Waste District personnel to characterize conditions at the District's waste transfer facility.

2.3 Agency Consultation and Coordination

In addition to the interviews described in the previous section, other agencies were contacted for data under their jurisdiction. Vermont Emergency Management, a division within the Department of Public Safety, compiles records regarding environmental conditions and records concerning incidents resulting in contamination through thirteen Local Emergency Planning Committees (LEPC). A letter was sent to LEPC # 1, which covers the area surrounding both project corridors, requesting information regarding conditions along both corridors.

The DEC Solid Waste Division was contacted to obtain groundwater monitoring data for the former Williston Landfill. These data, available to the public, indicate contaminants in groundwater in the vicinity of the landfill.