

## **9.0 CONTAMINATED PROPERTIES AND HAZARDOUS MATERIALS**

### **9.1 Introduction**

Typically, roadway projects in developed areas encounter contaminated materials during construction activities such as excavation and earthwork, dewatering and building demolition. Contaminated materials that may be encountered include petroleum products, metals, chemicals, and asbestos and lead-based paint in building materials and bridges.

### **9.2 Summary of 2004 FEIS Analysis and Record of Decision Commitments**

The 2004 FEIS petroleum, hazardous materials and solid waste evaluation was based on a search of available environmental databases for information related to sites with confirmed releases and sites that have the potential for soil and/or groundwater contamination. In addition to the database review, the following sources of information were consulted:

- New Hampshire Department of Environmental Services (NHDES), Waste Management Division, list of “CERCLIS Sites” (March 26, 1992);
- NHDES, Waste Management Division, list of hazardous waste generators (September 18, 1992);
- NHDES, Groundwater Protection Bureau, listing of sites (July 2, 1992);
- NHDES, Waste Management Division, list of "solid waste" sites (April 10, 2003);
- NHDES, Waste Management Division, list of "MSW Incinerators" Operating in 2001 (November 2001);
- NHDES, Waste Management Division, list of used "tire sites" (December 4, 2001);
- NHDES, Waste Management Division, list of "MSW and ash landfills" operating in 2001 (August 2002);
- NHDES, Waste Management Division, list of collection, storage, and "transfer facilities" (September 2002);
- NHDES, Waste Management Division, list of "infectious waste incinerators" operating in 2001 (August 2002).
- NHDES, Waste Management Division, list of "composting facilities" (September 4, 2001);
- NHDES, Waste Management Division, email of “Asbestos Disposal Sites (ADS)” in Salem, Derry, Londonderry and Manchester (June 3, 2003);
- NHDES, Waste Management Division, list of “Materials Recovery Facilities (MRF)” (January 14, 2003); and
- A Site reconnaissance of the project corridor to identify suspect properties not identified in environmental databases or the above listed sources.

The properties identified in the environmental database search were further evaluated to generate a smaller subset of properties that would require additional investigations (i.e., soil sampling, groundwater testing, etc.) to determine whether the potential exists to encounter any

contamination during construction. The subset of properties requiring additional investigation was developed based on the following selection criteria:

- Relative distance to the proposed I-93 corridor of approximately 500 feet;
- Windshield survey of current land uses of properties;
- Federal, state, and local regulatory agencies file review; and
- A review of the “mapped site” details provided in the environmental database report which indicated that the potential of encountering hazardous materials contamination on the subject property was not likely.

The 2004 FEIS referred to these non-intrusive evaluations as Initial Site Assessments (ISAs). Preliminary Site Investigations (PSIs) were recommended for properties where further information was required to determine if there exists a potential to encounter any contamination during construction and operation of the proposed project.

The analysis presented in the 2004 FEIS also included a review of potential acquisition properties that may contain buildings and/or structures possessing regulated materials requiring removal prior to demolition. Based on the age of the buildings, regulated materials may include the following:

- Asbestos;
- Lead-based paint;
- Polychlorinated biphenyls (PCBs) within fluorescent light ballasts;
- Electrical transformers that may contain PCB dielectric oil;
- Mercury-containing fluorescent light bulbs;
- Mercury thermostats;
- Miscellaneous containers of oil or hazardous materials;
- Refrigerants (air conditioners, refrigerators);
- Hydraulic lifts;
- Aboveground storage tanks; and
- Underground storage tanks.

The environmental database report revealed 83 properties within the study area analyzed as being solid waste sites or petroleum and hazardous material release sites. Upon further evaluation, 13 sites were recommended for PSIs to determine the potential of encountering any contamination during construction. These sites included maintenance garages and gasoline stations, among other uses.

Based on the review of potential property acquisitions and associated buildings and structures, the 2004 FEIS concluded that up to 49 properties containing 55 structures may require demolition as a result of the 2005 Selected Alternative (Section 3.12.4 of the 2004 FEIS).

### 9.2.1 Record of Decision Commitments/Mitigation

The Record of Decision made the following commitments with respect to contaminated properties and hazardous materials:

- ISAs and PSIs of properties to be acquired will be performed to address potential and confirmed areas of soil or groundwater contamination (as necessary).
- Based on the results of the PSIs, contamination may be identified. In the event that contamination is identified, the following scenarios are likely:
  - Contamination is limited to groundwater that does not warrant remediation and the groundwater will not be encountered during construction;
  - Contamination is limited to soils that do not warrant remediation and the contaminated soil will not be encountered during construction;
  - The contaminated soil or groundwater identified requires remediation by NHDOT following property acquisition;
  - The contaminated groundwater encountered will not be encountered during construction and assessment/remediation is ongoing by the existing property owner as part of an existing Groundwater Management Zone (GMZ) permit; and
  - Limits of solid waste will be categorized. Removal or consolidation of solid waste on-site will be performed in consultation with NHDES.
- If contaminated materials are expected to be encountered during construction, appropriate worker health and safety provisions and waste management provisions will be included in the construction documents. All work will be performed in accordance with applicable NHDES regulations and NHDES approved remedial action plans.
- A comprehensive building audit will be performed prior to any scheduled demolition to identify and quantify all regulated building materials and special wastes. Abatement plans will be prepared to address the removal of all regulated building materials.

### 9.3 Methodology

An updated environmental database search was performed using information supplied by Environmental Data Resources (EDR) of Milford, Connecticut and a query of ongoing remediation projects under the purview of NHDES from their One Stop Data Retrieval website<sup>1</sup>. NHDOT's Risk Assessment Survey for Contamination and Appraisal of Land (RASCAL) database was also reviewed to identify updated information on known hazardous material concerns along the corridor, including the results of ISAs and PSIs completed since the 2004 FEIS. No site reconnaissance and/or windshield surveys were conducted as part of the update analysis.

The environmental regulatory agency database report was obtained from EDR for information regarding documented and/or suspected releases of regulated hazardous substances and/or petroleum products in the I-93 corridor. The environmental record sources contained in the

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<sup>1</sup> <<http://www.des.state.nh.us/OneStop.htm>>, accessed 5/29/08 through 6/2/08.

database report are consistent with the standard environmental record sources defined in the American Society of Testing and Materials (ASTM) Standard Practice E 1527-05, in accordance with the “due diligence” regulations of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and in accordance with Section 9601 (35)(b) of the Superfund Amendments and Reauthorization Act (SARA), which requires that “all appropriate inquiry” be made into the presence or potential presence of hazardous substances or petroleum products on a site.

## 9.4 Impacts

The review of the EDR and NHDES databases did not identify any potentially contaminated properties along the I-93 corridor that were not already accounted for in the RASCAL database.

Since the 2004 FEIS, there have been design refinements to the 2005 Selected Alternative, changes in the proposed property acquisitions and additional hazardous material studies. The additional hazardous material studies have eliminated some sites as areas of concern and identified some new sites where additional testing would be warranted if the property will be impacted. Table 9-1 summarizes the current status of the sites listed in the RASCAL database where additional testing or construction monitoring is recommended.

Major changes since the 2004 FEIS with respect to hazardous material issues include:

- Design changes to avoid substantial groundwater contamination at the Keewaydin Drive site (S74). The stormwater detention basin previously proposed for this site will be relocated to avoid the contamination.
- Evaluation of alternative mitigation sites to avoid the substantial contamination issues associated with the Salem Waste Water Treatment (WWTP) site (S2058). More information about this potential change in the project wetland and floodplain mitigation commitments is provided in Section 10.6.2.
- NHDOT is considering purchasing the remainder of a parcel at Exit 5 in Londonderry, adjacent to the new park-and-ride lot (L82-1 and L82-2). The parcel would be used for construction staging and would provide an area for expanding the capacity of the Exit 5 park-and-ride as needed to meet future demand. The eight-acre parcel, formerly owned by Waste Management, Inc. is currently vacant. An ISA conducted for the site as part of the 2004 FEIS identified potential contamination related to a former landfill. A portion of this site was acquired for the park-and-ride and remedial work was conducted to remove construction debris and potential putrescible household waste. The material excavated from the site was disposed of in accordance with State and Federal regulations.<sup>2</sup> Prior to the purchase of the remainder of the site, additional on-site

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<sup>2</sup> Remedial Action Implementation Report- I-93 Exit 5 Park and Ride, Portion of the Former Spartan Transfer Station, Londonderry, New Hampshire, NHDES #198804014. Prepared by Golder Associates, Inc. October 29, 2007.

environmental evaluations would be conducted to determine the potential extent of contamination and remediation costs.

**Table 9-1**  
**Summary of Petroleum and Hazardous Material Site Status/Recommendations**

Town	NHDOT Parcel ID	Site Name/Address	Current Status/ Recommendations
Salem	S73	West side of I-93 off Keewaydin Drive	Construction monitoring due to known contaminated property to the north (S74)
Salem	S74	Keewaydin Drive/ 13-21 Keewaydin Drive	Contaminated groundwater present on site. Remedial activities are ongoing and a revised Groundwater Management Permit (GWP) was issued on January 16, 2007. The detention basin proposed for this site be relocated to parcel S175
Salem	S75	11 Keewaydin Drive	Construction monitoring due to known contaminated property to the south.
Salem	S173	Flight Line/Bosch Service/Line X/Tech Mark	Install groundwater monitoring wells and conduct soil sampling.
Salem	S2058	Salem WWTP/ 33 Geremonty Drive	Contaminated groundwater present on the site and remediation activities are ongoing. NHDOT is considering alternative mitigation sites to avoid the hazardous materials issues associated with this site.
Salem	S226	Salem DPW/ 19 Cross Street	Construction monitoring
Windham	W35	Former Computer Auto Sales/ 61 Indian Rock Road	Conduct sampling if this property is impacted.
Windham	W42	87 Indian Rock Road	Remove the above ground storage tank present on site with proper management. Conduct sampling if staining or damage to the AST is observed during removal.
Windham	W44	Exxon/ 1Wyman Road	Construction monitoring due to the presence of soil and groundwater contamination. Some contaminated soil has been removed and groundwater monitoring is ongoing in coordination with NHDES.
Windham	W51	Wall Street	Conduct soil sampling if the southwestern portion of the site will be disturbed, otherwise no further investigations needed.
Windham	W99	Windham Sunoco	Continue groundwater monitoring.
Windham	W104	90 Range Road	A pre-demolition audit identified asbestos, lead paint and other regulated materials that would need to be handled and disposed of in accordance with federal and state regulations. A subsurface investigation is recommended to determine if the site is affected by contaminated groundwater from nearby inactive hazardous waste sites.
Derry	D26	Derry Town Landfill/ 29 Kendall Pond Road	Conduct sampling as part of geotechnical drilling in the I-93 right-of-way near the landfill.

Town	NHDOT Parcel ID	Site Name/Address	Current Status/ Recommendations
Derry	D2072A	Former Sybiak Farm/ 79 Windham Road	Limited subsurface investigation in debris area of former house and barn. Investigate contents of drums present on the site and remove.
Londonderry	L73	3 Symmes Drive	If purchased, inventory and remove all chemicals stored at property
Londonderry	L78	8 Jack's Bridge Road	Soil sampling identified contaminated soils. Remove the contaminated soil for off-site disposal as landfill material.
Londonderry	L79	Cycle World/ 168 Rockingham Road	ISA recommended due to proximity to the North Londonderry Exxon and the Coca-Cola bottling company sites. Four USTs are located on the site.
Londonderry	L80	164 Rockingham Road	ISA recommended because the property adjoins North Londonderry Exxon, which is a site remediation, LUST, active hazardous waste site, and vapor recovery site.
Londonderry	L81	Exxon / 162 Rockingham Road	Contaminated soil and groundwater present on the site. Conduct soil and groundwater sampling along NH 28 and the WMNH property.
Londonderry	L82-2 and L82-1	Waste Management/ 160 Rockingham Road	Landfilled debris and high levels of methane gas present at site. Remediation activities and sampling are ongoing in coordination with NHDES. Additional groundwater and soil sampling and removal of landfilled debris would occur before this parcel is purchased.
Londonderry	L94	Poor Boy's Diner	Construction monitoring due to nearby Sunoco/RNZ Truck Stop. Collect samples as part of geotechnical drilling along NH 28 between Poor Boy's Diner and the Sunoco station.
Londonderry	L96	LBP Towing/ 5 Auburn Road	Conduct sampling along the road in front of the site during geotechnical drilling. Conduct interior site walk and interview site personnel.
Londonderry	L130	Sunoco/ RNZ Truck Stop 133-137 Rockingham Road	Conduct soil sampling for total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs) during geotechnical drilling.
Londonderry	L173	Tisdell Transmission/ 27 Ash Street	Conduct sampling during geotechnical drilling. Conduct interior site walk and interview site personnel.
Londonderry	L181	Shell Gas Station	Contaminated groundwater present on site. Conduct soil and groundwater sampling during geotechnical drilling down gradient from the site.
Londonderry	L182	Derry Plaza	Conduct sampling during geotechnical drilling. Conduct interviews and interior site walk at laundromat and paint store on site.
Londonderry	L183	Sunoco Gas Station	Conduct sampling during geotechnical drilling.
Londonderry	L185	Gulf Gas Station	Conduct sampling during geotechnical drilling.
Londonderry	L186	Citgo Gas Station	Conduct sampling during geotechnical drilling.
Londonderry	L187	Mobil Gas Station	Conduct sampling during geotechnical drilling.
Londonderry	L188	Auto Auction of New England/ 9 Action Boulevard	Conduct sampling during geotechnical drilling.
Londonderry	L189	Derry Wastewater Treatment Plant	Soil and groundwater sampling has been conducted, results are below the applicable standards.

Town	NHDOT Parcel ID	Site Name/Address	Current Status/ Recommendations
Londonderry	L191	Luk-Oil Station/ 6 Nashua Road	Conduct sampling during geotechnical drilling.
Londonderry	L197	S&S Metals Recycling, Inc./ 196 Rockingham Road	Conduct sampling during geotechnical drilling.
Londonderry	L199	Lemire's Auto Service/ 190 Rockingham Road	Conduct sampling during geotechnical drilling.

Source: RASCAL database, 01/29/2009. Does not include sites beyond the limits of the I-93 expansion, sites where no further action is recommended, sites where the only recommended action is the removal of debris, and sites where the only recommended action is a site walkover prior to purchase.

## 9.5 Mitigation

Additional testing where warranted and appropriate mitigation measures will be implemented in accordance with the Record of Decision commitments, see Section 9.2.1.

## 9.6 Conclusions

Since the 2004 FEIS, there have been design refinements to the 2005 Selected Alternative, changes in the proposed property acquisitions and additional hazardous material studies. Additional site testing, worker safety provisions, and material disposal procedures have been and will continue be implemented in accordance with state and federal regulations at potentially contaminated sites.