

APPENDIX "T"

**Section 7 of the "Remediation Regulations"
Site Investigation Report (SIR) Checklist**

(The following information shall be completed and submitted with the SIR)

Contact Name:
Contact Address:
Contact Telephone:

Site Name:
Site Address:

OFFICE USE ONLY

SITE INVESTIGATION REPORT (SIR) SITE:
PROJECT CODE:
SIR SUBMITTAL DATE:
CHECKLIST SUBMITTAL DATE:

DIRECTIONS: *The box to the left of each item listed below is for the administrative review of the SIR submission and is for **RIDEM USE ONLY**. Under each item listed below, cross-reference the specific sections and pages in the SIR that provide detailed information that addresses each stated requirement. Failure to include cross-references shall delay review and approval. If an item is not applicable, simply state that it is not applicable and provide an explanation in the SIR.*

- 7.03.A. List specific objectives of the SIR related to characterization of the Release, impacts of the Release and remedy.
- 7.03.B. Include information reported in the Notification Of Release. A copy of the Release notification form should be included in the SIR. Include information relating to short-term response, if applicable.
- 7.03.C. Include documentation of any past incidents, releases, or investigations.
- 7.03.D. Include list of prior property Owners and Operators including past uses of the property, sequencing of property transfers and time periods of occupancy. Include supporting documentation.
 - Historical Sanborn Maps
 - Historical Aerial Photos
- 7.03.E. Include previously existing environmental information which characterizes the Contaminated-Site and all information that led to the discovery of the Contaminated-Site.
- 7.03.F. Include current uses and zoning of the Contaminated-Site, including brief statements of operations, processes employed, waste generated, Hazardous Materials handled, and any residential activities on the site, if applicable. (This section should be linked to the specific objectives section demonstrating how the compounds of concern in the investigation are those that are used or may have been used on the site or are those that may have impacted the site from an off-site source.)
- 7.03.G. Include a locus map showing the location of the site using US Geological Survey 7.5-min

quadrangle map or a copy of a section of that USGS map.

- 7.03.H. Include a site plan, to scale, showing:
 - Buildings
 - Activities
 - Structures
 - North Arrow
 - Drinking Water Wells
 - Monitoring Wells
 - UIC Systems, septic tanks, USTs (former and current), piping and other underground structures
 - Groundwater Flow Direction
 - Outdoor Hazardous Materials storage and handling areas
 - Extent of paved areas
 - Location of environmental samples taken with analytical results, including soil borings, test pits, and groundwater monitoring wells, highlighting any exceedences with the corresponding sample depth and medium listed
 - Waste management and disposal areas
 - Lot Lines
 - Property Lines
- 7.03.I. Include a general characterization of the property surrounding the area including, but not limited to:
 - Location and distance to any surface water bodies within 500 ft of the site
 - Location and distance to any Environmentally Sensitive Areas within 500 ft of the site
 - Actual sources of potable water for all properties immediately abutting the site
 - Location and distance to all public water supplies, which have been active within the previous 2 years and within one mile of the site
 - Determination as to whether the Release impacts any off-site area utilized for residential or industrial/commercial property or both
 - Determination of the underlying groundwater classification and, if the classification is GB, the

distance to the nearest GA area

- 7.03.J. Include classifications of surface and ground water at and surrounding the site that could be impacted by a Release.
- 7.03.K. Include a description of the contamination from the Release, including:
 - Free liquids on the surface
 - LNAPL and DNAPL
 - Concentrations of Hazardous Substances which can be shown to present an actual or potential threat to human health and any concentrations in excess of any of the remedial objectives; (reference Section 12 for requirements related to arsenic in soil).
 - Impact to Environmentally Sensitive Areas
 - Contamination of man-made structures
 - Odors or stained soil
 - Stressed vegetation
 - Presence of excavated or stockpiled material and an estimate of its total volume
 - Environmental sampling locations, procedures and copies of the results of any analytical testing at the site
 - List of Hazardous Substances at the site
 - Indicate if the site has previously been or is currently under the jurisdiction or any program within the Department or Environmental Protection Agency
 - Discuss if the contamination falls outside of the jurisdiction of the Remediation Regulations, including but not limited to USTs, UICs, and wetlands.
- 7.03.L. Include the concentration gradients of Hazardous Substances throughout the site for each medium impacted by the Release.
- 7.03.M. Include the methodology and results of any investigation conducted to determine background concentrations of Hazardous Substances identified at the Contaminated-Site (see Section 12 for Special Requirements for Managing Arsenic in Soil).
- 7.03.N. Include a listing and evaluation of the site specific hydrogeological properties which could influence the migration of Hazardous Substances throughout and away from the site, including but not limited to, where appropriate:
 - Depth to groundwater and elevation of groundwater above mean sea level
 - Presence and effects of both the natural and man-made barriers to and conduits for contaminant

migration

- Characterization of bedrock and depth of bedrock below ground surface, if available
- Groundwater contours, flow rates and gradients throughout the site, and location of groundwater monitoring wells depicted on a site figure drawn to scale. (a minimum of three (3) groundwater wells is required)
- 7.03.O. Include a characterization of the topography, surface water and run-off flow patterns, including the flooding potential, of the site.
- 7.03.P. Include the potential for Hazardous Substances from the site to volatilize and any and all potential impacts of the volatilization to structures within the site. Indoor air and/or soil gas analysis is required if appropriate.
- 7.03.Q. Include the potential for entrainment of Hazardous Substances from the site by wind or erosion actions.
- 7.03.R. Include detailed protocols for all fate and transport models used in the Site Investigation.
- 7.03.S. Include a complete list of all samples taken, the location of all samples, parameters tested for and analytical methods used during the Site Investigation. **Be sure to include the sample locations and analytical results on a site figure** as required in Rule 7.03.H. Please note that a representative number of soil samples taken should be analyzed for Priority Pollutant Metals, Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Total Petroleum Hydrocarbons (TPH), and Polychlorinated Biphenyls (PCBs). All analytical results shall be summarized in a tabular format. Include justification for all sample locations, depths, and parameters analyzed.
- 7.03.T. Include construction plans and development procedures for all monitoring wells. Well construction shall be consistent with the requirements of Appendix 1 of the Groundwater Quality Rules. Include boring logs for monitoring wells and soil borings in an appendix of the SIR.
- 7.03.U. Include procedures for the handling, storage and disposal of wastes derived from and during the investigation.
- 7.03.V. Include a quality assurance and quality control evaluation summary report for sample handling and analytical procedures, including, but not limited to, chain-of-custody procedures and sample preservation techniques.
- 7.03.W. Include any other site-specific factor, that the Director believes, is necessary to make an accurate decision as to the appropriate Remedial Action to be taken at the site.
- Include Remedial Alternatives. The Site Investigation Report **shall** contain a minimum of **2** remedial alternatives other than no action/natural attenuation alternative, unless this requirement is waived by the Department. It should be clear which of these alternatives is most preferable. All alternatives shall be supported by relevant data contained in the Site Investigation Report and consistent with the current and reasonably foreseeable land usage, and documentation of the following:
 - Compliance with Section 8 (RISK MANGEMENT);
 - Technical feasibility of the preferred remedial alternative;

- Compliance with Federal, State and local laws or other public concerns; and
- The ability of the Performing Party to perform the preferred remedial alternative
- 7.05 Certification Requirements:** The Site Investigation Report and all associated progress reports shall include the following statements signed by an authorized representative of the party specified:
 - A statement signed by an authorized representative of the Person who prepared the Site Investigation Report certifying the completeness and accuracy of the information contained in that report to the best of their knowledge; and
 - A statement signed by the Performing Party responsible for the submittal of the Site Investigation Report certifying that the report is a complete and accurate representation of the site and the Release and contains all known facts surrounding the Release to the best of their knowledge
- Progress Reports:** If the Site Investigation is not complete, include a schedule for the submission of periodic progress reports on the status of the investigation and interim reports on any milestones achieved in the project
- Public Involvement and Notice:** Be prepared to implement public notice requirements per Section 7.07 and 7.09 of the Remediation Regulations when the Department deems the Site Investigation Report to be complete.
- Indicate if the site falls within an Environmental Justice (EJ) area and, if applicable, include all EJ public notice documentation issued, and the list of recipients.