



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-831-5508

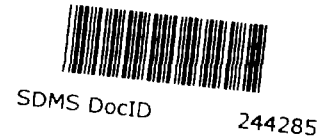
**LETTER OF RESPONSIBILITY
CASE # 2001-068**

CERTIFIED MAIL

October 23, 2001

Robert L. Carothers, President
University of Rhode Island
Carlotti Administration Building
75 Lower College Road
Kingston, RI 02881

Superfund Records Center
SITE: West Kingston
PROJECT: 9.1
OTHER: _____



Dear Mr. Carothers:

On 4 September 1996 the Rhode Island Department of Environmental Management (the Department) enacted the amended Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a responsible party.

Please be advised of the following facts:

1. The Department is in receipt of the following reports concerning the property identified as the West Kingston Town Dump/URI Disposal Area Superfund Site (the Site), located at Plains Road in South Kingstown, Rhode Island and further designated as Plat 15-3 Lot 1 and Plat 15-2 Lot 1 of the Town of South Kingstown Tax Assessor's plat maps:
 - A) West Kingston Landfill An Evaluation Of Its Effect On Ground-Water Quality, prepared by the URI Department of Civil and Environmental Engineering in cooperation with the Rhode Island Water Resources Board dated 1975;
 - B) Preliminary Assessment of South Kingstown Landfill #2, prepared by Thibault & Associates, Inc. dated January 1987.
 - C) West Kingston Town Dump and URI Disposal Area Screening Site Inspection Reports, prepared by RIDEM dated 1988.
 - D) West Kingston Town Dump and URI Disposal Area Final Listing Site Inspection Report, prepared by NUS Corporation dated April 27, 1990.

2. The Department and EPA have signed an Enforcement Agreement allowing the Site to be addressed through a State administration process. This Agreement reduces the need for federal involvement while expediting the assessment and cleanup of the Site. This Agreement allows the responsible parties to proceed with the Work at the Site which, while streamlined under a presumptive remedy, protects public health and the environment.
3. The University of Rhode Island is identified as the current owner of the Site and as such is a **responsible party** as defined by Rule 3.60 of the Remediation Regulations.
4. The above referenced reports document concentrations of hazardous substances in groundwater, which exceed the Maximum Contaminant Levels (MCLs) for those substances. Based on the presence of these hazardous substances, the Department has concluded that a **release of hazardous materials** has occurred which constitute a **source area** of contamination as defined by Rules 3.54, 3.28 and 3.62, respectively of the Remediation Regulations.

As a result of the information known and the conditions observed at the Site, the Department requests that you comply with the following:

1. Submit a Remedial Investigations/Feasibility Study (RI/FS) Work Plan (RI/FSWP) pursuant to Section 9.00 Remedial Investigations of the Remediation Regulations detailing specific investigatory activities that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached Scope of Work (SOW), and the National Contingency Plan (NCP) for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment. EPA will determine at a later date whether or not it will delegate performance of the Risk Assessment portion of the RI/FS. This determination will be based on New Policy on Performance of Risk Assessments During RI/FS Conducted by Potentially Responsible Parties (PRPs), (EPA, 1993).
2. Proceed with the RI/FS investigations while performing the presumptive remedial cleanup action within 30 days of receipt of the written approval of the RI/FSWP by the Department, after reasonable opportunity for review and comment by EPA.
3. Perform the presumptive remedy according to federal, state, and local regulations.
4. Submit a RI/FS Report that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached SOW, and the NCP for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

5. Submit to the Department for review and approval an Operation and Maintenance Plan and a Long Term Monitoring Plan for the presumptive remedy at the Site. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

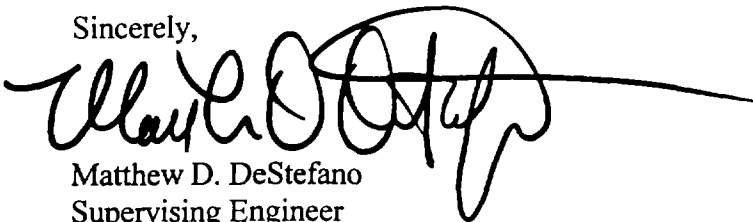
Please be advised that the University of Rhode Island, as the current owner of the property is responsible for the proper investigation and remediation of all hazardous materials at this Site. Furthermore, please note that the University of Rhode Island must notify all abutting property owners and tenants that an investigation is about to occur prior to the implementation of the Site Investigation field activities in accordance with the Industrial Property Remediation and Reuse Act (Rhode Island General Law 23-19.14, Section 11) and the Remediation Regulations. The notice should briefly indicate the purpose of the investigation, the work to be performed and the approximate scheduled date of activities. Failure to comply with any of the aforementioned laws and regulations may result in enforcement actions as specified in Rhode Island General Law 23-19.1-17 and 23-19.1-18.

Please address correspondence regarding this matter to the following address:

Gary Jablonski, Engineer
Office of Waste Management
Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
E-Mail: gjablons@dem.state.ri.us

Please notify this office within seven (7) days of the receipt of this letter of your plans. If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact Gary Jablonski at (401) 222 -2797 extension 7148.

Sincerely,



Matthew D. DeStefano
Supervising Engineer
Office of Waste Management

Cc: Leo Hellested, Chief-RIDEM OWM
John Langlois, Esq., RIDEM Office of Legal Services
Gary Jablonski, RIDEM OWM
Angela Shulman, RIDEM OWM
Richard Boynton, USEPA
Anna Krasko, USEPA



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-831-5508

**LETTER OF RESPONSIBILITY
CASE # 2001-068**

CERTIFIED MAIL

October 23, 2001

Steven Alfred, Town Manager
Town of South Kingstown
180 High Street
Wakefield, RI 02879

Dear Mr. Alfred:

On 4 September 1996 the Rhode Island Department of Environmental Management (the Department) enacted the amended Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a responsible party.

Please be advised of the following facts:

1. The Department is in receipt of the following reports concerning the property identified as the West Kingston Town Dump/URI Disposal Area Superfund Site (the Site), located at Plains Road in South Kingstown, Rhode Island and further designated as Plat 15-3 Lot 1 and Plat 15-2 Lot 1 of the Town of South Kingstown Tax Assessor's plat maps:
 - A) West Kingston Landfill An Evaluation Of Its Effect On Ground-Water Quality, prepared by the URI Department of Civil and Environmental Engineering in cooperation with the Rhode Island Water Resources Board dated 1975;
 - B) Preliminary Assessment of South Kingstown Landfill #2, prepared by Thibault & Associates, Inc. dated January 1987.
 - C) West Kingston Town Dump and URI Disposal Area Screening Site Inspection Reports, prepared by RIDEM dated 1988.
 - D) West Kingston Town Dump and URI Disposal Area Final Listing Site Inspection Report, prepared by NUS Corporation dated April 27, 1990.

2. The Department and EPA have signed an Enforcement Agreement allowing the Site to be addressed through a State administration process. This Agreement reduces the need for federal involvement while expediting the assessment and cleanup of the Site. This Agreement allows the responsible parties to proceed with the Work at the Site which, while streamlined under a presumptive remedy, protects public health and the environment.
3. The Town of South Kingstown is identified as a former operator of the Site and as such is a **responsible party** as defined by Rule 3.60 of the Remediation Regulations.
4. The above referenced reports document concentrations of hazardous substances in groundwater, which exceed the Maximum Contaminant Levels (MCLs) for those substances. Based on the presence of these hazardous substances, the Department has concluded that a **release of hazardous materials** has occurred which constitute a **source area** of contamination as defined by Rules 3.54, 3.28 and 3.62, respectively of the Remediation Regulations.

As a result of the information known and the conditions observed at the Site, the Department requests that you comply with the following:

1. Submit a Remedial Investigations/Feasibility Study (RI/FS) Work Plan (RI/FSWP) pursuant to Section 9.00 Remedial Investigations of the Remediation Regulations detailing specific investigatory activities that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached Scope of Work (SOW), and the National Contingency Plan (NCP) for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment. EPA will determine at a later date whether or not it will delegate performance of the Risk Assessment portion of the RI/FS. This determination will be based on New Policy on Performance of Risk Assessments During RI/FS Conducted by Potentially Responsible Parties (PRPs), (EPA, 1993).
2. Proceed with the RI/FS investigations while performing the presumptive remedial cleanup action within 30 days of receipt of the written approval of the RI/FSWP by the Department, after reasonable opportunity for review and comment by EPA.
3. Perform the presumptive remedy according to federal, state, and local regulations.
4. Submit a RI/FS Report that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached SOW, and the NCP for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

5. Submit to the Department for review and approval an Operation and Maintenance Plan and a Long Term Monitoring Plan for the presumptive remedy at the Site. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

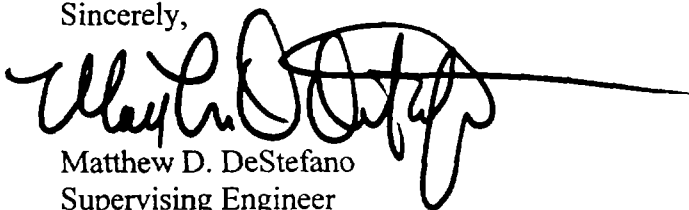
Please be advised that the Town of South Kingstown, as a former operator of the property is responsible for the proper investigation and remediation of all hazardous materials at this Site. Furthermore, please note that the Town of South Kingstown must notify all abutting property owners and tenants that an investigation is about to occur prior to the implementation of the Site Investigation field activities in accordance with the Industrial Property Remediation and Reuse Act (Rhode Island General Law 23-19.14, Section 11) and the Remediation Regulations. The notice should briefly indicate the purpose of the investigation, the work to be performed and the approximate scheduled date of activities. Failure to comply with any of the aforementioned laws and regulations may result in enforcement actions as specified in Rhode Island General Law 23-19.1-17 and 23-19.1-18.

Please address correspondence regarding this matter to the following address:

Gary Jablonski, Engineer
Office of Waste Management
Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
E-Mail: gjablons@dem.state.ri.us

Please notify this office within seven (7) days of the receipt of this letter of your plans. If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact Gary Jablonski at (401) 222 -2797 extension 7148.

Sincerely,



Matthew D. DeStefano
Supervising Engineer
Office of Waste Management

Cc: Leo Hellested, Chief-RIDEM OWM
John Langlois, Esq., RIDEM Office of Legal Services
Gary Jablonski, RIDEM OWM
Angela Shulman, RIDEM OWM
Richard Boynton, USEPA
Anna Krasko, USEPA



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-831-5508

**LETTER OF RESPONSIBILITY
CASE # 2001-068**

CERTIFIED MAIL

October 23, 2001

Maurice J. Loontjens, Town Manager
Town of Narragansett
25 Fifth Avenue
Narragansett, RI 02882

Dear Mr. Loontjens:

On 4 September 1996 the Rhode Island Department of Environmental Management (the Department) enacted the amended Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a responsible party.

Please be advised of the following facts:

1. The Department is in receipt of the following reports concerning the property identified as the West Kingston Town Dump/URI Disposal Area Superfund Site (the Site), located at Plains Road in South Kingstown, Rhode Island and further designated as Plat 15-3 Lot 1 and Plat 15-2 Lot 1 of the Town of South Kingstown Tax Assessor's plat maps:
 - A) West Kingston Landfill An Evaluation Of Its Effect On Ground-Water Quality, prepared by the URI Department of Civil and Environmental Engineering in cooperation with the Rhode Island Water Resources Board dated 1975;
 - B) Preliminary Assessment of South Kingstown Landfill #2, prepared by Thibault & Associates, Inc. dated January 1987.
 - C) West Kingston Town Dump and URI Disposal Area Screening Site Inspection Reports, prepared by RIDEM dated 1988.
 - D) West Kingston Town Dump and URI Disposal Area Final Listing Site Inspection Report, prepared by NUS Corporation dated April 27, 1990.

2. The Department and EPA have signed an Enforcement Agreement allowing the Site to be addressed through a State administration process. This Agreement reduces the need for federal involvement while expediting the assessment and cleanup of the Site. This Agreement allows the responsible parties to proceed with the Work at the Site which, while streamlined under a presumptive remedy, protects public health and the environment.
3. The Town of Narragansett is identified as a former operator of the Site and as such is a **responsible party** as defined by Rule 3.60 of the Remediation Regulations.
4. The above referenced reports document concentrations of hazardous substances in groundwater, which exceed the Maximum Contaminant Levels (MCLs) for those substances. Based on the presence of these hazardous substances, the Department has concluded that a **release of hazardous materials** has occurred which constitute a **source area** of contamination as defined by Rules 3.54, 3.28 and 3.62, respectively of the Remediation Regulations.

As a result of the information known and the conditions observed at the Site, the Department requests that you comply with the following:

1. Submit a Remedial Investigations/Feasibility Study (RI/FS) Work Plan (RI/FSWP) pursuant to Section 9.00 Remedial Investigations of the Remediation Regulations detailing specific investigatory activities that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached Scope of Work (SOW), and the National Contingency Plan (NCP) for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment. EPA will determine at a later date whether or not it will delegate performance of the Risk Assessment portion of the RI/FS. This determination will be based on New Policy on Performance of Risk Assessments During RI/FS Conducted by Potentially Responsible Parties (PRPs), (EPA, 1993).
2. Proceed with the RI/FS investigations while performing the presumptive remedial cleanup action within 30 days of receipt of the written approval of the RI/FSWP by the Department, after reasonable opportunity for review and comment by EPA.
3. Perform the presumptive remedy according to federal, state, and local regulations.
4. Submit a RI/FS Report that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached SOW, and the NCP for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

5. Submit to the Department for review and approval an Operation and Maintenance Plan and a Long Term Monitoring Plan for the presumptive remedy at the Site. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

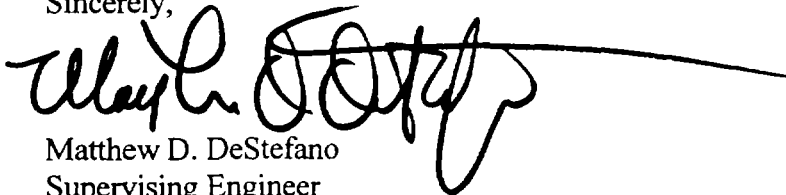
Please be advised that the Town of Narragansett, as a former operator of the property is responsible for the proper investigation and remediation of all hazardous materials at this Site. Furthermore, please note that the Town of Narragansett must notify all abutting property owners and tenants that an investigation is about to occur prior to the implementation of the Site Investigation field activities in accordance with the Industrial Property Remediation and Reuse Act (Rhode Island General Law 23-19.14, Section 11) and the Remediation Regulations. The notice should briefly indicate the purpose of the investigation, the work to be performed and the approximate scheduled date of activities. Failure to comply with any of the aforementioned laws and regulations may result in enforcement actions as specified in Rhode Island General Law 23-19.1-17 and 23-19.1-18.

Please address correspondence regarding this matter to the following address:

Gary Jablonski, Engineer
Office of Waste Management
Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
E-Mail: gjablons@dem.state.ri.us

Please notify this office within seven (7) days of the receipt of this letter of your plans. If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact Gary Jablonski at (401) 222 -2797 extension 7148.

Sincerely,



Matthew D. DeStefano
Supervising Engineer
Office of Waste Management

Cc: Leo Hellested, Chief-RIDEM OWM
John Langlois, Esq., RIDEM Office of Legal Services
Gary Jablonski, RIDEM OWM
Angela Shulman, RIDEM OWM
Richard Boynton, USEPA
Anna Krasko, USEPA



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-831-5508

**LETTER OF RESPONSIBILITY
CASE # 2001-068**

CERTIFIED MAIL

October 23, 2001

Mrs. Alice Tibbetts
P.O. Box 266
West Kingston, RI 02892

Dear Ms. Tibbetts:

On 4 September 1996 the Rhode Island Department of Environmental Management (the Department) enacted the amended Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner. A Letter of Responsibility (LOR) is a preliminary document used by the Department to codify and define the relationship between the Department and a responsible party.

Please be advised of the following facts:

1. The Department is in receipt of the following reports concerning the property identified as the West Kingston Town Dump/URI Disposal Area Superfund Site (the Site), located at Plains Road in South Kingstown, Rhode Island and further designated as Plat 15-3 Lot 1 and Plat 15-2 Lot 1 of the Town of South Kingstown Tax Assessor's plat maps:
 - A) West Kingston Landfill An Evaluation Of Its Effect On Ground-Water Quality, prepared by the URI Department of Civil and Environmental Engineering in cooperation with the Rhode Island Water Resources Board dated 1975;
 - B) Preliminary Assessment of South Kingstown Landfill #2, prepared by Thibault & Associates, Inc. dated January 1987.
 - C) West Kingston Town Dump and URI Disposal Area Screening Site Inspection Reports, prepared by RIDEM dated 1988.
 - D) West Kingston Town Dump and URI Disposal Area Final Listing Site Inspection Report, prepared by NUS Corporation dated April 27, 1990.

2. The Department and EPA have signed an Enforcement Agreement allowing the Site to be addressed through a State administration process. This Agreement reduces the need for federal involvement while expediting the assessment and cleanup of the Site. This Agreement allows the responsible parties to proceed with the Work at the Site which, while streamlined under a presumptive remedy, protects public health and the environment.
3. Mrs. Alice Tibbetts is identified as the current owner of the Site and as such is a **responsible party** as defined by Rule 3.60 of the Remediation Regulations.
4. The above referenced reports document concentrations of hazardous substances in groundwater, which exceed the Maximum Contaminant Levels (MCLs) for those substances. Based on the presence of these hazardous substances, the Department has concluded that a **release of hazardous materials** has occurred which constitute a **source area** of contamination as defined by Rules 3.54, 3.28 and 3.62, respectively of the Remediation Regulations.

As a result of the information known and the conditions observed at the Site, the Department requests that you comply with the following:

1. Submit a Remedial Investigations/Feasibility Study (RI/FS) Work Plan (RI/FSWP) pursuant to Section 9.00 Remedial Investigations of the Remediation Regulations detailing specific investigatory activities that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached Scope of Work (SOW), and the National Contingency Plan (NCP) for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment. EPA will determine at a later date whether or not it will delegate performance of the Risk Assessment portion of the RI/FS. This determination will be based on New Policy on Performance of Risk Assessments During RI/FS Conducted by Potentially Responsible Parties (PRPs), (EPA, 1993).
2. Proceed with the RI/FS investigations while performing the presumptive remedial cleanup action within 30 days of receipt of the written approval of the RI/FSWP by the Department, after reasonable opportunity for review and comment by EPA.
3. Perform the presumptive remedy according to federal, state, and local regulations.
4. Submit a RI/FS Report that is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), conducting RI/FS for CERCLA Municipal Landfill Sites, (EPA, 1991), this LOR, attached SOW, and the NCP for the Department's review and approval. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

5. Submit to the Department for review and approval an Operation and Maintenance Plan and a Long Term Monitoring Plan for the presumptive remedy at the Site. The Department may approve, disapprove, modify, or take any other action it considers appropriate, after providing EPA with reasonable opportunity for review and comment.

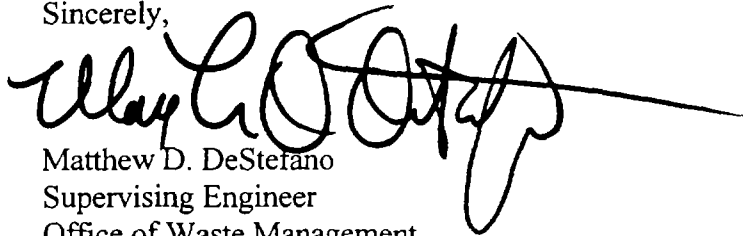
Please be advised that Mrs. Alice Tibbetts, as the current owner of the property is responsible for the proper investigation and remediation of all hazardous materials at this Site. Furthermore, please note that Mrs. Alice Tibbetts must notify all abutting property owners and tenants that an investigation is about to occur prior to the implementation of the Site Investigation field activities in accordance with the Industrial Property Remediation and Reuse Act (Rhode Island General Law 23-19.14, Section 11) and the Remediation Regulations. The notice should briefly indicate the purpose of the investigation, the work to be performed and the approximate scheduled date of activities. Failure to comply with any of the aforementioned laws and regulations may result in enforcement actions as specified in Rhode Island General Law 23-19.1-17 and 23-19.1-18.

Please address correspondence regarding this matter to the following address:

Gary Jablonski, Engineer
Office of Waste Management
Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
E-Mail: gjablons@dem.state.ri.us

Please notify this office within seven (7) days of the receipt of this letter of your plans. If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact Gary Jablonski at (401) 222-2797 extension 7148.

Sincerely,



Matthew D. DeStefano
Supervising Engineer
Office of Waste Management

Cc: Leo Hellested, Chief-RIDEM OWM
John Langlois, Esq., RIDEM Office of Legal Services
Gary Jablonski, RIDEM OWM
Angela Shulman, RIDEM OWM
Richard Boynton, USEPA
Anna Krasko, USEPA

ENFORCEMENT AGREEMENT BETWEEN RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY, NEW ENGLAND REGION

WHEREAS, the New England Region of the United States Environmental Protection Agency ("EPA") on October 14, 1992, listed the West Kingston/URI Dump Superfund Site ("Site") located in the Town of South Kingstown, in the State of Rhode Island ("State") on the National Priorities List ("NPL") pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C., §§ 9601 et seq. ("CERCLA");

WHEREAS, the State of Rhode Island acting by and through the State of Rhode Island Department of Environmental Management ("RIDEM"), has expressed an interest in allowing the Site to be addressed through a State administrative process;

WHEREAS, RIDEM has the authority pursuant to Rhode Island General Laws, Chapters 42-17.1-2, 42-35, 46-12, 46-13.1, the Rules and Regulations for the Investigation and Remediation of Hazardous Material Release, as amended on September 4, 1996 ("Remediation Regulations"), Rules and Regulations for Hazardous Waste Management, as amended April, 1992, and Solid Waste Regulation No. 2, Solid Waste Landfills, effective January, 1997, (collectively, "Regulations") to eliminate and/or control threats to human health and the environment;

WHEREAS, pursuant to the Remediation Regulations, RIDEM is authorized to issue a Letter of Responsibility informing a known responsible party(s) of its (their) obligations under the Remediation Regulations;

WHEREAS, RIDEM, pursuant to the Remediation Regulations, will issue a Letter of Responsibility to the University of Rhode Island, the Towns of South Kingstown and Narragansett and Mrs. Alice P. Tibbits, and other parties who may become known ("Responsible Parties") and/or assignees, successors in interest, lessees, sublessees, of the responsible parties, including but not limited to any successors in ownership interest in any portion of the Site and their assignees, successors in interest, lessees, and sublessees, to perform a response action, including operation and maintenance and long term monitoring, at the Site which is consistent with the Presumptive Remedy for CERCLA Municipal Landfill Sites, (OSWER Directive No. 9355.0-49FS, September, 1993) and to perform a Remedial Investigation/Feasibility Study ("RI/FS") that is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP") and Conducting Remedial Investigations Feasibility Studies for CERCLA Municipal Landfill Sites, (OERR/EPA/540/P-91/001, February, 1991). EPA will determine at a later date whether or not it will delegate performance of the Risk Assessment portion of the RI/FS. This determination will be based on New Policy on Performance of Risk Assessments During Remedial Investigation/Feasibility Studies (RI/FS) Conducted by Potentially Responsible Parties (PRPs), (OSWER Directive No. 9835.15b, September, 1993). Any response action taken pursuant to CERCLA and the RI/FS are hereinafter referred to as the Work;

Enforcement Agreement Between RIDEM and EPA, New England Region

WHEREAS, RIDEM has indicated that the Work will not be funded from the Hazardous Substance Superfund ("Fund") established by 26 U.S.C. § 9607, but will be funded and performed by the responsible parties involved at the Site;

WHEREAS, RIDEM shall not seek from EPA reimbursement of its costs, other than oversight costs of the Work pursuant to a Cooperative Agreement;

WHEREAS, RIDEM is not prohibited by this Agreement from entering into a Cooperative Agreement with EPA pursuant to 40 C.F.R. §§ 35.6145-35.6155, with respect to the State's costs incurred for its oversight of the Work;

WHEREAS, RIDEM shall be the primary negotiating authority with the responsible parties until RIDEM certifies completion of the Work;

NOW, THEREFORE, in consideration of the foregoing and the mutual covenants set forth herein, it is agreed as follows:

RIDEM and EPA hereby enter into the following Enforcement Agreement ("Agreement") for the West Kingston/URI Dump Superfund Site, Rhode Island.

I. INTRODUCTION

This Enforcement Agreement is entered into by EPA and the State, acting by and through RIDEM (each a "Party", collectively the "Parties") pursuant to CERCLA, as amended, and the Remediation Regulations and any other applicable Regulations. The parties agree to comply with all provisions specified in this Agreement.

II. PURPOSE OF AGREEMENT

- 1.) This Agreement defines the roles and responsibilities of the Parties for the successful remediation of the West Kingston/URI Landfill Superfund Site.
- 2.) This Agreement reduces the need for federal involvement while expediting the assessment and cleanup of the Site. This Agreement allows the responsible parties to proceed with the Work at the Site which, while streamlined, protects public health and the environment.
- 3.) This Agreement ensures that RIDEM provides adequate oversight of the Work, including Site assessments/characterizations, and ensures that the Work is consistent with the Letter of Responsibility, its attached Scope of Work and the NCP.

III. BACKGROUND

Site Description:

The Site consists of two adjacent properties, the West Kingston Town Dump and the University of Rhode Island ("URI") Disposal Area. Known in the past as "South Kingstown Landfill #2," the West Kingston Town Dump received waste from the Town of South Kingstown beginning in the 1930's. In the early 1950's, the Town of Narragansett and URI also began disposing of their waste in the landfill. The Rhode Island Department of Health ("RI DOH") inspected the Site in 1967 and cited numerous operational violations. A 1975 study conducted by the URI Department of Civil Engineering and the Rhode Island Water Resources Board resulted in the discovery of a leachate plume beneath the landfill which was contaminating groundwater as far as 1200 feet west of the dump.

From 1945 until 1987, waste was also accepted at the URI Disposal Area, referred to in the past as the "URI Gravel Bank" or the "Sherman Farm." After closure of the West Kingston Town Dump in 1978, the URI Disposal Area began accepting most of URI's wastes, including small quantities of empty paint cans, oil containers, and pesticide containers. Lab equipment, machinery, old drums, and old tanks buried on the Site were found by RIDEM during a 1987 inspection. RIDEM instructed URI to remove contaminated debris from the Site, an action completed by URI in 1987.

An estimated 15,800 people obtain their drinking water supply from three major public wells located within four miles of the Site. An additional 12,000 are supplied by private wells, the nearest being approximately 1000 feet northwest of the Site. The Site is located within the Chipuxet River valley basin. Hundred Acre Pond, which is part of the river, is approximately 1500 feet from the Site. The river basin is a major groundwater resource.

IV. SCOPE OF AGREEMENT

This Agreement pertains to the specific Site described above. A description of the West Kingstown Town Dump is found in the tax map located in the Assessor's Office, Town of South Kingstown, located in the County of Washington, Rhode Island, and is located in the northwest portion of Map 15-3, Lot 1 adjacent to Plains Road. A description of the University of Rhode Island Dump is found in the tax map located in the Assessor's Office, Town of South Kingstown, located in the County of Washington, Rhode Island, and is located in the northwest portion of Map 15-2, Lot 1 and is set back from Plains Road.

RIDEM and EPA are entering into this Agreement because they agree that this Agreement provides an expedient manner in which to clean up the Site by encouraging the responsible

parties to proceed with an investigation and presumptive remedy cleanup under RIDEM's oversight.

V. STATE CERTIFICATIONS

1.) RIDEM shall issue to the responsible parties a Letter of Responsibility with an attached Scope of Work ("SOW"). The SOW shall direct the responsible parties to develop and implement a response action for this Site and to conduct an RI/FS in accordance with the NCP. The Work must comply with any and all Federal, State or local laws that apply to the Site including, but not limited to, State landfill closure requirements, and must be consistent with Conducting Remedial Investigations Feasibility Studies for CERCLA Municipal Landfill Sites, (OERR/EPA/540/P-91/001), and Presumptive Remedy for CERCLA Municipal Landfill Sites, (OSWER Directive No. 9355.0-49F). Factors EPA will consider when determining protectiveness, as part of its analysis when issuing a Record of Decision ("ROD") for this Site, will include, but are not limited to:

- a.) Background contaminant concentrations;
- b.) A human health risk assessment that is consistent with a risk range, as defined in 40 C.F.R. § 300.430(e)(2)(i)(A)(2), for known and suspected carcinogens and for non-carcinogens, acceptable exposure levels that are consistent with 40 C.F.R. § 300.430(e)(2)(i)(A)(1), and that is based on EPA's Risk Assessment Guidance for Superfund, Parts A and B, and associated policy updates;
- c.) An ecological risk assessment that is consistent with the NCP and that is based on all relevant EPA Ecological Risk Assessment Guidelines;
- d.) Contaminant-specific models that are relevant;
- e.) Applicable and/or Relevant and Appropriate Requirements ("ARARS"), such as Maximum Contaminant Levels ("MCLs") for groundwater, landfill closure requirements and the Remediation Regulations.

2.) RIDEM certifies that it has adequate resources to initiate and oversee the Work and to take an enforcement action(s), if necessary, to compel the responsible parties to perform the Work at the Site, including, but not limited to, issuing an Immediate Compliance Order, pursuant to the Remediation Regulations, if the responsible parties fail or refuse to complete the Work. RIDEM ensures that the Work will be conducted in accordance with the SOW, and that both technical assistance and streamlined procedures, where appropriate, are available from RIDEM to the responsible parties conducting the Work;

- 3.) RIDEM shall provide adequate oversight to ensure that the Work is conducted in accordance with the SOW and approved work plans and schedules;
- 4.) RIDEM shall follow the procedures set out in the Remediation Regulations for written approval of the responsible parties' submittals and for issuance of a State Certification of the Completion of the Work;
- 5.) RIDEM, or designated agent, shall provide opportunities for meaningful community involvement to ensure that the public is informed of the planning of the Work. Meaningful opportunities for community involvement may include providing notification of the Work to local government officials and community groups, publication of legal notices of the Work in the relevant media outlets, and other forms of notification of the Work that are appropriate and necessary. Other meaningful opportunities for community involvement may include preparation of a public involvement plan that establishes opportunities for public involvement, involvement of the public in understanding the risk reduction aspects of the Work, the publication and distribution of Site fact sheets, remediation plan proposals, and other methods such as public meetings and hearings to solicit public participation and comment;
- 6.) RIDEM will provide EPA with 30 days advance notice of changes to its laws, regulations, resource levels, guidance, policies or procedures governing the Work, its oversight abilities or its enforcement authority; and
- 7.) RIDEM has primary responsibility for communications with the responsible parties performing the Work.

VI. EPA'S CERTIFICATION

Based on receiving from the responsible parties a complete RI/FS and upon completion of a Risk Assessment that EPA determines is consistent with the NCP and EPA Guidance documents, EPA shall issue a Record of Decision ("ROD") for the Site based on Site conditions after State Certification of the Completion of the Work. This does not limit EPA's ability to issue a ROD before State Certification if EPA has taken over the Work for any reason.

VII. EPA'S RESERVATION OF RIGHTS

- 1.) Nothing in this Agreement constitutes a release from, or determination of liability of the responsible parties under applicable Federal law.
- 2.) EPA reserves the right to take over the Work, take additional actions, and/or institute federal enforcement action(s) at the Site based upon information and/or conditions not known on the effective date of this Agreement, or if EPA determines such conditions or information indicate that the Work is not protective of human health, welfare or the environment.
- 3.) EPA reserves the right to take over the Work and/or institute federal enforcement action(s) against the responsible parties if RIDEM fails to fulfill its obligations under this Agreement due to legislative changes or regulatory amendments which in EPA's determination, affect RIDEM's ability to meet its obligations under this Agreement.
- 4.) EPA reserves the right to take over the Work and/or institute federal enforcement action(s) against the responsible parties if EPA determines that RIDEM has insufficient resources to oversee the Work and enforce performance of the Work or otherwise fulfill its obligations under this Agreement.
- 5.) EPA reserves the right to review, modify, and/or terminate this Agreement if any proposed legislative changes or regulatory amendments, in EPA's determination, affect RIDEM's ability to meet its obligations under this Agreement.
- 6.) EPA reserves the right to take over the Work and/or institute federal enforcement action(s) against the responsible parties if the cleanup of the Site is not protective of human health and welfare or the environment as determined by EPA in accordance with Paragraph No. 1 of State Certifications in this Agreement.
- 7.) EPA reserves the right to periodically review this Agreement for the purpose of assessing how effectively the Work is meeting the goals and expectations of the Parties and revise the Agreement accordingly to ensure the Agreement meets the goals and expectations of the Parties.
- 8.) EPA reserves the right to take response action and/or enforcement action at the Site in the event of imminent and substantial danger to the public health, welfare or the environment.

VIII. CONSULTATION BETWEEN THE STATE AND EPA

- 1.) RIDEM shall, in accordance with an agreed upon schedule, provide a reasonable opportunity for EPA review and comment all work plans, all major deliverables, and progress and completion

Enforcement Agreement Between RIDEM and EPA, New England Region

reports. These documents include, but are not limited to, responsible parties' Work Action Plans, the SOW, and other submittals such as Risk Assessment Studies, Feasibility Study reports, design documents, and any other submittals by the responsible parties;

2.) RIDEM's Project Manager and EPA's Remedial Project Manager shall discuss on a monthly basis, and more frequently as needed, the Site Work and the progress and competency of the Work;

3.) EPA and RIDEM will make best efforts to provide each other with 5 days notice of normally scheduled Site visits and/or inspections by either party and of all meetings conducted with the responsible parties and/or their representatives by either party except for emergency response actions taken or ordered. For emergency response actions, both parties shall make best efforts to give each other at least 24 hours advance notice, but in no event later than 24 hours after an emergency response action is taken or ordered; and

4.) EPA and RIDEM shall provide each other with 30 days notice of anticipated enforcement actions taken against the responsible parties.

IX. MODIFICATION

This Agreement may be modified or amended by mutual agreement of the parties.

X. TERMINATION CLAUSE

1.) EPA may terminate this Agreement and/or take over as lead agency if:

a.) EPA determines that the Work does not, for any reason, meet the requirements of this Agreement;

b.) EPA determines that the terms of the Agreement have not been upheld by RIDEM; or

c.) Conditions at the Site pose or may pose an imminent and substantial endangerment to public health or the environment.

2.) EPA and RIDEM may mutually agree to terminate the Agreement.

3.) Either party may terminate this Agreement if CERCLA is amended in a way that renders this Agreement a nullity.

XI. OTHER AUTHORITIES

This Agreement shall apply only to EPA New England Region's response and enforcement authority at the Site under CERCLA, and shall not limit the authority of EPA New England Region to undertake response or enforcement actions pursuant to any other environmental statute or regulation. Furthermore, this Agreement shall apply to EPA New England Region, and in no way limit the authority of other federal agencies to take response or enforcement actions pursuant to other federal statutes or regulations.

XII. DISPUTE RESOLUTION

1.) Any dispute which arises under or with respect to this Agreement shall be resolved informally within fourteen (14) days to the fullest extent possible by the EPA Remedial Project Manager and the State Project Manager in consultation with EPA and RIDEM Program Managers. If the dispute cannot be resolved within this fourteen (14) day period, RIDEM's Chief of Office of Waste Management and EPA's Branch Chief shall have seven (7) additional days to informally resolve the disputed matter.

2.) In the event that the parties cannot resolve the dispute by informal negotiations under the preceding Paragraph within twenty (20) days, then the position advanced by EPA shall be considered binding unless, within 7 days after the conclusion of the informal negotiation period, the dispute is referred to the Director of the Office of Site Remediation and Restoration, EPA New England Region, for a final resolution in accordance with the requirements of 40 C.F.R. § 31.70. For the purposes of resolving disputes under this Agreement, the Director of the Office of Site Remediation and Restoration, EPA New England Region, is the dispute decision official.

3.) The decision of the dispute decision official will constitute the final Agency decision unless RIDEM files a request for review of that decision with the Regional Administrator, EPA New England Region, in accordance with the requirements of 40 C.F.R. § 31.70.

XIII. PROJECT OFFICERS

EPA New England Region hereby designates Anna Krasko to be the Remedial Project Manager for EPA New England Region.

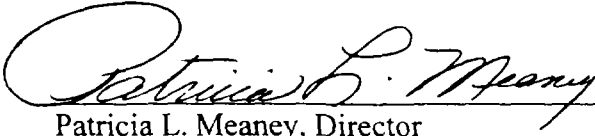
RIDEM hereby designates Gary Jablonski to be the Project Manager for RIDEM.

Enforcement Agreement Between RIDEM and EPA, New England Region

IN WITNESS WHEREOF, the Parties enter into this Agreement.

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

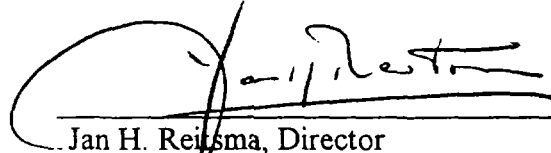
8/13/01
Date


Patricia L. Meaney, Director
Office of Site Remediation and
Restoration, New England Region

Enforcement Agreement Between RIDEM and EPA, New England Region

FOR THE STATE OF RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT

7/27/01
Date



Jan H. Reitsma, Director
Rhode Island Department of Environmental
Management

WK/URI Disposal Area
FINAL SOW

WEST KINGSTON TOWN DUMP/URI DISPOSAL AREA
SOUTH KINGSTOWN, RHODE ISLAND

SCOPE OF WORK

October 23, 2001

Prepared by:

Rhode Island Department of Environmental Management
Office of Waste Management
Providence, Rhode Island

WK/URI Disposal Area
FINAL SOW

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
I. INTRODUCTION AND PURPOSE	1
A. Objective	1
B. Site History	2
C. Summary of Past Investigations/Findings	4
D. Areas of Concern	5
II. SITE FEATURES AND GEOLOGY	5
A. Water Supply	6
B. Groundwater	6
C. Surface Water	6
III. DESCRIPTION OF INVESTIGATION OF ACTIVITIES	6
A. Remedial Investigation/Feasibility Study Work Plan (RI/FSWP).....	7
B. Field Investigations.....	7
C. Sampling and Analysis Plan.....	9
D. Health and Safety (H&S) Plan	10
E. Presumptive Remedy	11
F. Remedial Investigation (RI) Report	11
G. Feasibility Study (FS) Report.....	12
IV. PERFORMANCE STANDARDS	12
A. Overall Performance Standard for the Source Control Remedy	13
B. Performance Standards for the Landfill Cap and Site Operation	13
C. Performance Standards for the Excavation and Consolidation of the Wastes	14
D. Performance Standards for the Groundwater Monitoring	14
E. Performance Standards for the Surface Water Monitoring	15
F. Performance Standards for the Discharge to Surface Water	16
G. Performance Standards for the Discharge through Underground Injection	16
H. Performance Standards for the Emissions to Air	16
V. PRESUMPTIVE REMEDIAL DESIGN	16
A. Monthly Meetings.....	16
B. Progress Reports	17
C. Meetings During Design Phase	17

WK/URI Disposal Area
FINAL SOW

D. Preliminary Design Submittal/30% Design Submission17

E. 100% Final design Submission18

F. Operation and Maintenance Plan18

G. Long Term Monitoring Plan (LTMP).....19

H. Remedial Action Report.....19

VI. REVIEW, APPROVAL, AND/OR AMENDMENT OF
WORK PLANS, REPORTS AND WORK19

VII. SCHEDULE OF DELIVERABLES21

FIGURE 1: WEST KINGSTON TOWN DUMP/URI DISPOSAL AREA

WK/URI Disposal Area
FINAL SOW

SCOPE OF WORK

WEST KINGSTON TOWN DUMP/URI DISPOSAL AREA
SOUTH KINGSTOWN, RHODE ISLAND

EPA ID# RID981063993/RID982542417

I. INTRODUCTION AND PURPOSE

A. Objective

The West Kingston Town Dump/URI Disposal Area (the Site) was formally listed as part of the National Priorities List (NPL) on October 14, 1992. Its inclusion on the NPL was primarily due to its demonstrated release of contaminants (Final Listing Site Inspection Report (LSI) West Kingston Town Dump/URI Disposal Area 1990) and its proximity to local water supply wells (LSI, 1990).

Since the Site was added to the NPL, no further investigations have been conducted at the Site to determine the nature and extent of contamination, or the potential of an ongoing release of Site contaminants. As a result, a streamlined Remedial Investigation/Feasibility Study (RI/FS) should be conducted that is consistent with the guidance on conducting RI/FS and Presumptive Remedy for CERCLA Municipal Landfill Sites, (EPA, 1993), Letter of Responsibility (LOR), this Scope of Work (SOW), and the National Contingency Plan (NCP).

This SOW shall direct the Responsible Parties (RPs) to implement a Presumptive Remedy for the Site and to develop and conduct a streamlined RI/FS. This SOW reflects a Remedial Investigation/Feasibility Study Work Plan (RI/FSWP) pursuant to 9.00 Remedial Action Work Plan of the State of Rhode Island Department of Environment Management (RIDEM) Office of Waste Management (OWM) Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations) for the Site.

The RPs shall implement the Presumptive Remedy and the investigatory techniques in a phased approach. The results of the first phases (preliminary investigations and geophysical techniques) will be used to determine logistics of the later phases, such as the location, number and scope of subsequent investigations.

WK/URI Disposal Area
FINAL SOW

B. Site History

West Kingston Town Dump:

The West Kingston Town Dump, which comprises the southern portion of the Site, is located to the east of Plains Road, approximately 0.4 miles north of the University of Rhode Island (URI) campus, in South Kingstown, Rhode Island. The Town Dump is comprised of the western 6.5 acres of a 117-acre, mixed forest parcel (plat 15-3, lot 1), currently owned by Mrs. Alice Tibbits of South Kingstown. During its operation, the Town Dump was managed by the Town of South Kingstown. The Town Dump has been referred to in the past as "South Kingston Landfill #2" and "West Kingston Landfill".

The Town Dump has an approximate lift height of 30 feet. The volume of fill material has been approximated at 85,891 cubic meters. The area to the immediate south and east of the Town Dump had been used for sand and gravel excavation from the 1930's through the early 1960's. This excavation extended below the water table, as evidenced from aerial photography analysis of two on-site ponds, located at the east edge of the Town Dump.

In 1951, the towns of South Kingstown and Narragansett, and URI began using the property for disposal of solid wastes. As a result, the Town Dump operated unregulated until 1967 when the Rhode Island Department of Health (RIDOH) began conducting dump inspections. Wastes disposed of prior to that time are unknown and undocumented. During the late sixties and early seventies, numerous complaints were filed regarding fires at the Town Dump.

During the period from 1975 to 1978, the Town of South Kingstown was issued several warnings and notices of violations by RIDEM for operating an unlicensed landfill. Such violations of RIDEM rules and regulations included lack of sufficient cover, disposal of waste into surface water, and uncovered bulky waste.

In October 1978, allegations of mercury-waste disposal at the Town Dump by Photek, Inc. led RIDEM to collect groundwater samples in two on-Site and four off-Site wells. Analytical results, however, indicated that no mercury was detected in any of the samples.

The Town Dump was subsequently closed according to Town of South Kingstown specifications in 1978. The most recent documented disposal at the Town Dump was

WK/URI Disposal Area
FINAL SOW

observed in 1987 and resulted in the issuance of a Notice of Violation to the current owner, for disposal of solid wastes without a license.

URI Disposal Area:

The URI Disposal Area, which comprises the northern portion of the Site, is also located to the east of Plains Road, 0.5 miles north of the URI campus. The Disposal Area has been referred to by URI personnel as the "URI Gravel Bank" or "Sherman Farm." The Disposal Area was used for solid waste disposal for approximately 42 years, ending sometime in 1987.

The Disposal Area hereinafter divided into Fill Area 1 (FA1), Fill Area 4 (FA4), and Fill Area 5 (FA5), consists of approximately 12 acres of an abandoned 17 acre sand and gravel excavation area.

The estimated volume of fill was 6096 cubic meters for FA4 and 11,514 cubic meters for FA5. Volume of FA1 was not estimated. This area lies at the western end of the 127-acre property (Plat 15-2, Lot 1), currently owned by URI. The majority of the property, with the exception of the western most portion, consists of mixed forest. This western portion has been used for a variety of purposes, including farming, agricultural research, gravel excavation, refuse disposal, and the operation of a trash transfer station.

From 1945 to 1961, FA1 was used for disposal of building debris, stumps, leaves, landscape debris and furniture. Beginning in 1951, URI began to send its refuse of this type to the South Kingstown Town Dump. Upon closure of the Town Dump in 1978, URI began using their property for refuse disposal, which continued until its closure in 1987.

From 1956 until 1967, URI operated a pig farm to the east of the Disposal Area, near the present location of the URI radio tower. From 1967 to 1977, a dog kennel occupied the former pig farm. In 1967, a septic system was installed on the north side of the kennel building; it was later abandoned.

Sometime between 1962 and 1972, fill activities began in FA4, and subsequently ended by 1975. At that time, soil had been spread over the top of the debris, although it was still visible along the fill face. The covering of FA4 with soil continued until at least 1980. Filling activities in FA5 began in 1975; debris, including possible tanks, was visible on the fill face in 1980. By 1988 FA5 had been leveled.

WK/URI Disposal Area
FINAL SOW

In 1983 URI was granted permission to operate a transfer station on the property. Steve Macera & Sons Inc. of East Greenwich, RI operated the station. Although the facility was only meant to receive wastes from URI, it is known that Macera & Sons hauled in wastes from at least fifteen other sources including, various State Parks, RI Nuclear Science Center, Camp Fogerty Armory, the Organizational Maintenance Shop, Fort Green Armory, the URI Lab, and Quonset Building D-180.

In addition to the aforementioned solid waste, small quantities of paint cans, oil containers and pesticide containers, were also disposed of on the URI property. URI did not begin documenting the disposal of University-generated hazardous waste until 1978. In 1986, several 55-gallon drums were observed. The drums were described as degreaser drums with spigots on top. A 1987 RIDEM inspection noted refuse including paper, pesticides, industrial-size kitchen equipment, old lab equipment and machinery, closed drums, old tanks, brush, tires, furniture, foam rubber, and pallets.

During a December 1989 reconnaissance of the URI Disposal Area, a total of eleven drums were observed scattered over a 120 by 60 foot area, located approximately 270 feet south of the radio tower (see figure). It was noted that all of the drums were rusted. One drum, which had a "Texaco" label, was partially full and was surrounded by stained soil. A twelfth (empty) drum was found west of the URI Radio Tower and south of the former Dog Kennel.

As a result of a March 1987 RIDEM inspection of the URI Disposal Area, URI was issued a Notice of Violation for operation of an unlicensed solid waste disposal facility at the northern Disposal Area (FA5). In November 1987, URI was instructed to remove exposed solid waste and promote vegetation at both the north (FA5) and south (FA4) areas.

As of December 1987, URI had removed 159 tons of material from the Disposal Area, with two 30-yard roll-off containers full of removed material still on-site. In the fall of 1988 and January 1989 the RIDEM inspections noted that URI was still dumping waste, including engineering lab equipment, concrete scraps, and drums partially full of unknown contents. At that time URI was again reminded of the 1987 removal instructions.

C. Summary of Past Investigations/Findings

In 1975, URI and the RI Water Resources Board performed an evaluation of the Site's effect on groundwater quality. Water quality and hydrogeologic data was compiled

WK/URI Disposal Area
FINAL SOW

from 18 monitoring wells and a geophysical resistivity survey. The study concluded that a leachate plume existed beneath the Site and was traceable approximately 1,200 feet west of the Site.

The Solid and Hazardous Waste Research Division of the EPA initiated a second study in 1977. Based on the review of water quality data from five monitoring wells (which were sampled and analyzed for 16 Volatile Organic Compounds (VOCs) and 5 metals), EPA decided that there was not conclusive evidence that the Site had impacted the groundwater. The Site, therefore, did not warrant further study at that time.

VOCs were first detected in private wells located adjacent to the study area in June 1987. These contaminants were detected in samples collected as part of the private well survey program conducted by RIDOH, in which 72 wells were sampled around the Site and adjacent to Hundred-Acre Pond. It was determined that three residential drinking water wells (screened in the bedrock) located immediately west of the study area, at 870, 892, and 902 Plains Road, tested positive for VOC contamination. These residents were subsequently connected to the URI water supply in December 1988.

RIDEM completed a Preliminary Assessment (PA) of the URI Disposal Area in August 1988, and a Screening Site Inspection in November of 1988.

NUS/FIT conducted a Listing Site Inspection for EPA (study report dated April 27, 1990). The results of well sampling showed elevated concentrations of VOCs and metals above the corresponding background levels.

D. Areas of Concern

- WK Landfill
- URI Disposal Area
- Drum Disposal area
- Septic System

II. SITE FEATURES AND GEOLOGY

The elevations at the Site range from 130 feet above mean sea level (MSL) at the Turf Fields to 110 feet above MSL at the on-site surface water bodies. The Site is situated along the eastern side of the Chipuxet River valley, a low-lying drainage basin that slopes gently toward the southwest. This river basin has been described as a major groundwater reservoir consisting of glacial outwash that ranges from 100 feet to 220 feet in thickness. The

WK/URI Disposal Area
FINAL SOW

average thickness of the saturated layer throughout the aquifer is approximately 70 feet and the regional groundwater flow direction is southwesterly. However, the localized flow direction below the Site is westerly toward Hundred-Acre Pond. Tests have shown this aquifer to be hydraulically anisotropic, or having a lower hydraulic conductivity in the vertical direction. The fluvio-glacial deposits exhibit a coarsening-upward reverse grading.

The basal portion of the overburden has been mapped as till in the vicinity of the Site. The till occurs at the base of the outwash deposits within the valley and as a mantle over the bedrock in the uplands, and consists of loose textured, unsorted and unstratified sand with lesser amounts of clay and gravel. Exposed bedrock exists in the vicinity of URI radio tower and on the URI campus. The depth to bedrock at the Site varies, although is generally a few hundred feet in the Chipuxet river valley where the Site is located.

A. Water Supply

The majority of the groundwater used for public and private water supplies is drawn from the overburden portion of the aquifer. The private well at 958 Plains Road is the closest well to the Site currently in use (approximately 1,000 feet upgradient of the Site in the northwest direction). The URI and Kingston wells are down gradient from the Site. Both sets of wells were sampled in the past and were found to be uncontaminated.

B. Groundwater

The Site is located in the Chipuxet River Basin. This stratified drift aquifer is characterized as having generally high transmissivities and it is considered to be a major potable groundwater reservoir. The groundwater in the area of the Site is classified by RIDEM as GAA. Groundwater classified as GAA shall be suitable for public drinking water use without treatment.

C. Surface Water

A total of five surface water bodies are present on the Site, three on the URI Disposal Area and two on the West Kingston Town Dump.

III. DESCRIPTION OF INVESTIGATION ACTIVITIES

The RPs shall perform a historical record search at the RIDEM offices, the Town of South Kingstown Town offices and at the University of Rhode Island, Kingston campus. The RPs shall also perform interviews with Town officials, other RIDEM personnel familiar with the

WK/URI Disposal Area
FINAL SOW

Site, University of Rhode Island personnel and Steve Macera & Sons Inc. officials who operated a transfer station at the Site. Historical aerial photographs shall also be reviewed.

The RPs shall also review the historical results of the RIDOH private/municipal well sampling performed in the area. Review of private well contamination reports will facilitate the determination of whether observed contamination may be associated with the Site. The RPs shall determine whether Underground Storage Tanks may have been present at the Site. The RPs shall compile reports generated to date, from the available sources.

Field reconnaissance of the Site, using both visual and HNu/FID methods, will be employed during the initial stages of the investigation. Ambient air readings will be collected to determine if there is a potential off-Site air migration problem. The RPs shall locate and assess the condition of existing monitoring wells, and determine whether they can be sampled or whether they have been compromised. Comprehensive records search shall be performed to determine the locations of existing wells and a monitoring well inventory will be developed using this information.

The RPs shall inspect the nearest adjacent wetlands and One Hundred-Acre Pond for evidence of contamination or possible leachate out breaks.

A. Remedial Investigation/Feasibility Study Work Plan (RI/FSWP)

Within ninety (90) days after receipt of the LOR the RPs shall submit a RI/FSWP to RIDEM for review and approval, after reasonable opportunity for review and comment by EPA. The Work Plan shall be consistent with Section 9.00 Remedial Action Work Plan of the RIDEM Remediation Regulations, EPA's guidance on conducting RI/FS and Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), LOR, this SOW, and the NCP. The Work Plan shall specify and describe all tasks and investigations to be undertaken by the RPs, to further identify and quantify the extent of past waste deposits at the Site that requires remediation.

B. Field Investigations

Field investigations to be conducted for this SOW shall consist of a Site walkover, a soil gas survey, test pitting, installation and sampling of monitoring wells, in-situ permeability tests, measurement of groundwater levels in wells, surface and subsurface soil sample collection and analysis, geophysical investigations and samples. All exploration locations shall be surveyed for elevations and coordinates. The RPs will select locations and prepare plans of investigations to be included in the RI/FSWP in

WK/URI Disposal Area
FINAL SOW

accordance with the Remediation Regulations, Presumptive Remedy for CERCLA Municipal Landfill Sites (EPA, 1993), LOR, this SOW, and the NCP.

Prior to selecting soil sampling and monitoring well locations, the RPs shall perform a soil gas survey. The soil gas survey shall be performed to aid in the location of monitoring wells, test pits or soil boring, and also to ascertain whether off-Site contamination exists. The objective of the survey is to determine the subsurface distribution of contamination in the area. The RPs shall propose the type of equipment and procedures best suited to the conditions and type of contaminants known to be at the Site, the locations of sample points, and methods for establishing and marking field locations. The Soil Gas Survey Plan will include procedures to be followed for inclement weather operations.

Geophysical Investigations shall be conducted at both the URI Disposal Area and the West Kingston Town Dump. The objectives of the investigations are to characterize buried materials and to determine lateral and vertical limits of disposal to the extent possible. A magnetometer survey will be performed to determine the boundary of the landfills and to determine whether existing wells are located in areas of waste deposition. The magnetometer survey will also be performed in the drum disposal area.

Test pits (minimum reach of backhoe twenty feet) will be performed to determine both the depths of fill and for characterization purposes. Samples will be collected from the test pits from areas of observed contamination and high FID readings. Test pits will be excavated at the URI Disposal Area and the West Kingston Town Dump. Exact location of test pits within each area of concern will be based on field observations, records search, geophysical investigations and the soil gas survey.

New-monitoring wells (including 1 background well) shall be installed to investigate the horizontal and vertical extent of contamination and to make in-situ permeability determinations. Monitoring wells that comply with State guidelines will be installed at the Site and potentially off-Site. Total number of wells will depend on the results of the soil gas survey, magnetometer survey, field observations, test pits, as well as the condition, depth, and location of the existing wells.

Bedrock wells will extend into the fracture zone of the bedrock. Coring maybe required to determine the nature of the bedrock. At least one bedrock well will be drilled to competent bedrock (in deepest portion of bedrock trough).

Adjacent residential wells may be investigated to determine the depth of the well, well

WK/URI Disposal Area
FINAL SOW

screen interval, etc. As part of this SOW, the feasibility of using these residential wells as perimeter monitoring wells will be investigated. Additional perimeter wells may be installed based upon the results of the geophysical investigation and other studies. The eight existing monitoring wells will be sampled assuming they have maintained their integrity.

The RI/FSWP will discuss the protocol for soil sample selections, monitoring well development, purging and sampling. Prior to purging or sampling, the thickness of any Nonaqueous Phase Liquids (NAPL) encountered will be measured with an oil/water interface probe. If encountered, NAPL sampling and analysis will be addressed at that time. The number of wells to be installed, the number of wells to be sampled, specific locations, field screening, logging methods, and the laboratory analytical methods to be used shall be proposed in the RI/FSWP.

In-situ rising head permeability of the screened formation shall be determined. The number of tests to be performed will depend upon the characteristics of the aquifer. This method will be proposed in the RI/FSWP.

Surface soil samples in the areas of concern shall be taken to determine the presence and limits of soil contamination. Depths of surface soil sampling are assumed to be up to 2 feet maximum. Specific locations, sample collection methods, field screening, logging methods, and laboratory analytical methods shall be proposed in the RI/FSWP.

Sediment samples and surface water samples from on-Site ponds shall be collected to determine the presence of contamination. The sediment and surface water samples will be collected from any areas of observed contamination and from areas where contamination was observed during previous sampling events. Samples will be selected for laboratory chemical testing. Specific locations and laboratory analytical methods shall be proposed in the RI/FSWP.

Historical reports have indicated that partially filled drums were found at scattered locations across the Site, including but not limited to, the drum disposal area. Samples of the material in any existing drums should be collected and analyzed.

C. Sampling and Analysis Plan (SAP)

Within ninety (90) days after receipt of the LOR the RPs shall submit a SAP to RIDEM for review and approval, after reasonable opportunity for review and comment by EPA. The SAP shall document all anticipated field objectives and activities (e.g., sampling

WK/URI Disposal Area
FINAL SOW

objectives, data quality objectives, evaluation of existing data, standard operating procedures) and contain specific information on the field work (e.g., sampling locations and rationale, sample numbers and rationale, analyses of samples). The SAP should consist of two parts: (1) a Quality Assurance Project Plan (QAPP), and (2) the Field Sampling Plan (FSP). The FSP shall define in detail the sampling and data gathering methods used on a project and shall include information on-site background; sampling objectives and justification; sample locations, analytes and frequency; including QA/QC samples; sample numbering system; sampling equipment and procedures; and sampling handling and analysis.

The data generated shall be entered and maintained in a computer data base management system that is compatible with the RIDEM and EPA New England data storage and analysis systems.

All project activities shall comply with the Quality Assurance Project Plan (QAPP). All QAPP sampling and analysis objectives and procedures shall be consistent with EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations, Draft-Final, October 1998, (EPA QA/R-5); EPA Guidance for Quality Assurance Project Plans (EPA QA/G-5) EPA/600/R-98/018, February 1998; and appropriate EPA handbooks, manuals, and guidelines including Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (EPA Pub. SW-846, Third Edition, as amended by update 3) and Guidelines Establishing Test Procedures for the Analysis of Pollutants (40 CFR, Part 136).

The QA/QC procedures for any laboratory (both fixed and mobile) used during the project shall be included in the QAPP. The Respondents are required to certify that all data has been validated by an independent person according to the EPA New England Data Validation Functional Guidelines for Evaluating Organic Analyses, the EPA New England Data Validation Functional Guidelines for Evaluating Inorganic Analyses, and EPA New England Data Validation Functional Guidelines for Evaluating Environmental Analyses, Parts I and II (USEPA New England) December 1996; (amended as necessary to account for the differences between the approved analytical methods for the project and the Contract Laboratory Procedures (CLP) procedures). Approved validation methods shall be contained in the QAPP.

D. Health and Safety (H&S) Plan

Within ninety (90) days after receipt of the LOR the RPs shall submit a H&S Plan to RIDEM for review and approval, after reasonable opportunity for review and comment

WK/URI Disposal Area
FINAL SOW

by EPA. The H&S Plan shall provide for routine but hazardous field activities and for unexpected Site emergencies. The Site-specific HSP must meet the requirements stipulated by the Hazardous Waste Operations and Emergency Response, (Department of Labor, Occupational Safety and Health Administration, (OSHA) 29 CFR Part 1910. The measures in the HSP shall be developed and implemented to ensure compliance with all applicable State and Federal occupational health and safety regulations.

E. Presumptive Remedy

The presumptive remedy for the Site is a landfill cap. The presumptive remedy will be used at the Site to accelerate the remedial process. The RPs shall design and perform a landfill closure along with the submittals of the RI and FS Reports prior to EPA's issuance of the Record of Decision (ROD).

The landfill cap shall be designed, constructed, operated, and maintained to meet the requirements of the Resource Conservation and Recovery Act ("RCRA") as implemented through Rhode Island's Regulations, including but not limited to the Rhode Island and Providence Plantations Department of Environmental Management Rules and Regulations for Hazardous Waste Management, including but not limited to Sections 8, 9, 10 and 13 (RIDEM, 4/92 as amended 8/96) and as otherwise captured in the Rhode Island and Providence Plantations Department of Environmental Management Rules and Regulations Solid Waste Regulation #2 (RIDEM 01/97). The EPA-NE Technical Guidance-Alternative Cap Design for Unlined Hazardous Waste Landfills in Region I (09/97 revised 02/01) shall be considered in the design and construction of the cap. Innovative technologies and materials shall be considered for incorporation into the design and construction of the consolidation and cap components of the presumptive remedy. When possible, on-Site materials should be used for the remedial construction.

The RPs shall specify in the RI/FSWP the methods of collection and data needed to properly design the landfill cap. At a minimum, the RPs should collect data to evaluate the following: waste area delineation; slope stability and settlement; gas generation/migration; cover assessment; and surface run-on/run-off management.

F. Remedial Investigation (RI) Report

Within thirty (30) days after field investigatory activities have been completed, the RPs shall submit the RI Report for review and approval or modification by RIDEM,

WK/URI Disposal Area
FINAL SOW

after reasonable opportunity for review and comment by EPA. The RI Report should at a minimum summarize all field investigations, define the source(s), nature, extent, and distribution of contaminants released; determine and quantify the potential exposure pathways; and assess risks to public health and the environment. EPA will determine at a later date whether or not it will delegate performance of the Risk Assessment portion of the RI Report. The RI Report shall be consistent with Conducting Remedial Investigations Feasibility Studies for CERCLA Municipal Landfill Sites, (OERR/EPA/540/P-91/001), and Presumptive Remedy for CERCLA Municipal Landfill Sites, (OSWER Directive No. 9355.0-49F).

G. Feasibility Study (FS) Report

Within forty-five (45) days of the completion of the construction of the presumptive remedy the RPs shall submit the FS Report for review and approval or modification by RIDEM, after reasonable opportunity for review and comment by EPA. The FS Report should evaluate the remedial alternatives appropriate for the Site to serve as technical support for the writing of the ROD. The FS Report must be consistent with Conducting Remedial Investigations Feasibility Studies for CERCLA Municipal Landfill Sites, (OERR/EPA/540/P-91/001), and Presumptive Remedy for CERCLA Municipal Landfill Sites, (OSWER Directive No. 9355.0-49F).

IV. PERFORMANCE STANDARDS

This presumptive remedy is a source control remedy, therefore, Preliminary Remediation Goals (PRGs) for the groundwater cleanup levels will be based on MCLs, MCLGs, and/or other health based standards. The possible combination of excavation, consolidation, de-watering and leachate collection, capping and landfill gas collection and treatment provided in this source control remedy must limit the extent to which contaminated groundwater, or the emergence of leachate, shall continue to migrate off-Site and/or degrade groundwater below State water quality standards.

This section presents the overall performance standard for the presumptive source control remedy and performance standards for individual components of the presumptive remedy. Through groundwater, surface water, and air monitoring, the effectiveness of possible excavation, consolidation, capping and landfill gas controls will be evaluated over time. The presumptive source control remedy may require adjustments or modifications if the data collected during design or its operation along with any other factors indicate that such adjustments or modifications are necessary to achieve the overall performance standard. Once the presumptive source control remedy is

WK/URI Disposal Area
FINAL SOW

implemented and sufficient monitoring data is obtained, this data shall provide the basis for a future decision document concerning the management of migration of contaminants from the Site. This future decision document may contain certain interim groundwater cleanup standards and other standards that will then be applied to the Site. Therefore, instituting a well designed and constructed source control remedy that meets or exceeds all performance standards, with expectations of fully minimizing the migration of contaminants to groundwater will facilitate a more cost effective and potentially less extensive future management of migration.

The presumptive remedy shall be of sufficient quality and detail such that the presumptive remedy shall achieve the following Performance Standards for source control:

A. Overall Performance Standard for the Source Control Remedy

The possible combination of excavation, consolidation, de-watering and leachate collection, capping and landfill gas collection and treatment provided in this source control remedy shall limit the extent to which contaminated groundwater, or the emergence of leachate, shall continue to migrate off-Site and/or degrade groundwater below State water quality standards.

B. Performance Standards for the Landfill Cap and Site Operation

The landfill cap shall be designed, constructed, operated, and maintained to meet the performance requirements of the Resource Conservation and Recovery Act ("RCRA") as implemented through Rhode Island's Regulations, including but not limited to the Rhode Island and Providence Plantations Department of Environmental Management Rules and Regulations for Hazardous Waste Management, including but not limited to Sections 8, 9, 10 and 13 (RIDEM, 4/92 as amended 8/96) and as otherwise captured in the Rhode Island and Providence Plantations Department of Environmental Management Rules and Regulations Solid Waste Regulation #2 (RIDEM 01/97). The EPA-NE Technical Guidance-Alternative Cap Design for Unlined Hazardous Waste Landfills in Region I, (09/97 revised 02/01) shall be considered in the design and construction of the cap. Innovative technologies and materials shall be considered for incorporation into the design and construction of the possible consolidation and cap components of the presumptive remedy. When possible, on-Site materials should be used for the presumptive remedy.

WK/URI Disposal Area
FINAL SOW

C. Performance Standards for the Excavation and Consolidation of the Wastes

The presumptive remedy shall be of sufficient quality and detail to implement excavation and consolidation activities in areas of the Site. The goal of this source control component is to effectively use "Best Management Practices" to remove and consolidate the contaminant mass so as to significantly reduce contaminant migration through groundwater and possible leachate production to surface waters and sediments on-Site. The performance standards are described below:

1. Assure, to the greatest practical extent, that all physical evidence of waste deposits is removed, irrespective of the level of groundwater within the excavation.
2. Reasonable pre-design assessments shall be made to identify the limits of the past waste disposal practice in the areas designated for excavation/consolidation. These assessments may include a review of past data collection, vertical profiling, geophysical tools, and/or test pitting.
3. The extent of the excavation shall conclude when all lines of evidence agree that no physical characteristics of waste remain in place in any sidewall or at the base of any excavation.
4. Proper shoring and cut and fill techniques shall be implemented during these operations to ensure worker safety.
5. Staging and placement of excavated materials shall be properly handled and controlled so as to provide adequate protection to human health and environment.
6. All odors, wind blown debris, dust, leachate production, and surface erosion/runoff shall be properly contained, controlled and managed in accordance with State regulations and best solid waste management practices.

D. Performance Standards for Groundwater Monitoring

The presumptive remedy shall be of sufficient quality and detail to establish a groundwater monitoring program for the purpose of monitoring the integrity and performance of the landfill cap over time, assuring protectiveness, and providing a

WK/URI Disposal Area
FINAL SOW

groundwater database to form a basis for future decisions concerning the management of migration of contaminants. A sufficient monitoring network with proper well spacing and installation with established sampling frequencies and data collection are critical elements for performance monitoring. The objective of the monitoring is to provide assurances that the source control remedy is performing as expected, is protective, and through implementation of this remedy, the potential exposure to organic and inorganic contaminants of concern in groundwater are reduced.

Groundwater on and adjacent to the Site shall be monitored to demonstrate reductions in contaminant levels and to provide evidentiary assurances that the migration of Site contaminants in groundwater remain at equilibrium, or that its extent continually declines, with time. The RPs must demonstrate that they have achieved compliance according to the evaluation procedure defined in 40 C.F.R. Section 264.97 and this SOW. Using such procedures, the monitoring shall demonstrate compliance through the use of trend analyses, statistics, and other data gathering and presentation methods as approved by RIDEM, in consultation with EPA. Such methods shall be described in the RI/FS Work Plan and further defined and modified as appropriate in future Remedial Action Work Plans.

E. Performance Standards for Surface Water Monitoring

The presumptive remedy shall establish a plan, and initiate a surface water monitoring program for the purpose of monitoring the integrity and performance of the landfill cap over time, assuring protectiveness, providing a surface water database to assist RIDEM for Site-related contaminant concentrations affecting on-Site ponds, and to form a basis for future decisions concerning the management of migration of contaminants. The goal of the monitoring is to document the reduction (over time) of contaminant migration via leachate and groundwater to surface waters and sediments of on-Site ponds. Monitoring shall continue until RIDEM determines that water quality standards are met throughout the Site, in consultation with the EPA, or a future decision, regarding the management of migration of contaminants, is implemented. Surface water bodies shall be monitored on and adjacent to the Site to demonstrate reductions in Site related contaminant levels and to provide evidentiary assurances that the migration of Site contaminants to surface waters of the State are reduced such that measurable improvements in water quality can be documented over time. Certain monitoring activities will be identified and initiated in the design phase, as may be required, to support the overall presumptive remedy.

WK/URI Disposal Area
FINAL SOW

F. Performance Standards for Discharges to Surface Water

Effective management of on-Site leachate collection, runoff, and de-watering processes may require the discharge of certain fluids to surface water. The point of compliance for point source surface water releases resulting from any component of this source control action, consistent with the NCP, shall be the point(s) where the release enters the surface water body. Any point source discharge to a surface water body shall comply with the NPDES program under Section 402 of the Clean Water Act, the State of Rhode Island Water Quality Standards and Water Quality Regulations, and the State RIPDES Regulations.

G. Performance Standards for Discharges through Underground Injection

As an alternate means for Site discharge, compliance for discharges by a process of injection shall be limited to the RIDEM Office of Water Resources Underground Injection Control Program Rules and Regulations and applying best engineering practices.

H. Performance Standards for Emissions to Air

A monitoring and reporting program shall be designed and implemented to demonstrate that possible landfill gas collection or any releases to the ambient air resulting from any component of this source control remedy, do not result in an unacceptable risk. The RPs shall demonstrate that any releases to the ambient air will comply with all Federal and State air ARARs. Ambient and subsurface landfill gas emission monitors shall be deployed and emissions monitored at a minimum frequency of quarterly.

V. PRESUMPTIVE REMEDIAL DESIGN

The Presumptive Remedial Design Phase shall consist of meetings with RIDEM and EPA, progress reports, operational and maintenance plan, long term monitoring plan, additional field investigations if necessary, and preliminary and final design submittals. The required activities are as follows:

A. Monthly Meetings

During the design period, the RPs and their design contractor(s) shall meet monthly with RIDEM and EPA regarding the progress and details of design unless otherwise

WK/URI Disposal Area
FINAL SOW

agreed to in writing. Such meetings may be in person or take place via teleconference.

B. Progress Reports

During the field investigations and continuing through to the end of construction, the RPs shall submit Progress Reports to RIDEM and EPA. The Progress Reports shall be submitted monthly and shall summarize all activities that have been conducted each month, those planned for the next month, the percentage of design completed, and the problems encountered, including projected problems for meeting the design and construction schedule.

C. Meetings during Design Phase

During the Design Phase, the RPs, and their respective subcontractor(s) shall, at a minimum, schedule and conduct a meeting (and any additional meetings required by RIDEM) with RIDEM and EPA regarding the progress and details of the design of the Preliminary 30 % Design and the Final Design.

If, during any Remedial Design, results of the field investigations, such as pre-excavation/consolidation explorations and/or pre-construction monitoring, warrant modifications of the design, construction, and/or schedules, the RPs may propose such design or construction or schedule modifications. Following approval by RIDEM, after reasonable opportunity for review and comment by EPA, the RPs shall implement the design or construction modifications.

D. Preliminary Design Submittal/30% Design Submission

Within thirty (30) days of receiving RIDEM's approval or modification of the RI Report, the RPs shall submit the Preliminary Design (30%) for review and approval or modification by RIDEM, after reasonable opportunity for review and comment by EPA. The 30% design submission shall include, at a minimum, the results of all field investigations, a discussion of how ARARs are being met by the design, the design criteria, the project delivery strategy, preliminary plans, drawings, sketches, and calculations, an outline of the required technical specifications, and a preliminary construction schedule.

WK/URI Disposal Area
FINAL SOW

E. 100% Final Presumptive Remedy Design Submission

Within sixty (60) days of receiving RIDEM's approval or modification of the 30% Remedial Design from RIDEM, the RPs shall submit the 100% Final Presumptive Remedy Design for approval or modification by RIDEM, after reasonable opportunity for review and comment by EPA. This design submittal shall address all the comments and be a complete documentation package of the total Remedial Design for each component of the Presumptive Remedial Action.

F. Operation and Maintenance Plan

Within fifteen (15) days of the 75% construction completion date, the RPs shall submit to RIDEM for review and approval or modification, after reasonable opportunity for review and comment by EPA, an Operation and Maintenance Plan. The Operation and Maintenance Plan shall include, at a minimum, the following:

- 1) Description of normal operations and maintenance;
- 2) Description of potential operational problems;
- 3) Description of routine process monitoring and analysis, and methods for evaluating the monitoring data for compliance with ARARs;
- 4) Description of contingency operation and monitoring;
- 5) Description of fail-safe controls and incident alarms to alert facility personnel to component failures, breakdowns, or unacceptable performance;
- 6) Operational safety plan;
- 7) Detailed description of equipment components;
- 8) Ongoing record keeping and reporting requirements including, but not limited to, copies to RIDEM and EPA of those requirements set forth in any permits;
- 9) Well maintenance program including, at a minimum, the following:
 - (i) Provision for prompt and proper abandonment, as appropriate, of wells which are currently unusable or which become unusable during the construction

WK/URI Disposal Area
FINAL SOW

activities;

- (ii) Provision for inspection, continued maintenance and repair, if necessary, of all wells identified for use during the Long-Term Environmental Monitoring Work Plan and not otherwise abandoned, and a description and location for any additional wells to be used in the Operation and Maintenance phases.

10) Site closure and post-closure monitoring:

- (i) Post-closure inspection schedule and provisions for implementing such activities consistent with 40 C.F.R. Part 264;
- (ii) Periodic evaluation of the stability and integrity of the cover system; and
- (iii) Periodic assessment of the emissions from the possible landfill gas collection.

G. Long Term Monitoring Plan (LTMP)

The LTMP is, in part, a continuance of the SAP and shall involve monitoring to demonstrate conformance and compliance with the PRGs. At a minimum, this plan shall detail how the RPs will demonstrate that the Performance Standards listed in Section IV of this SOW have been or will be attained at the Site. This plan shall be developed in accordance with the requirements of 40CFR 264.97 and the RIDEM 01/97.

H. Remedial Action Report

Within thirty (30) days of the determination by the RPs, and concurrence by RIDEM and EPA, that the Performance Standards have been met, the RPs shall submit the Remedial Action Report for review and approval or modification by RIDEM, after reasonable opportunity for review and comment by EPA. The Remedial Action Report shall document that all construction activities are complete, Performance Standards have been met, and the presumptive remedy is Operational and Functional.

VI. REVIEW, APPROVAL, AND/OR AMENDMENT OF WORK PLANS, REPORTS AND WORK

- A. All plans, deliverables and reports identified in this SOW for submittal to RIDEM and EPA shall be delivered to RIDEM and EPA in accordance with this SOW.

WK/URI Disposal Area
FINAL SOW

- B. Any plan, deliverable, or report shall be submitted to RIDEM and EPA for review or approval in duplicate, with one of the submittals being an unbound, photo-ready original, and each shall be printed using two-sided printing and marked "Draft" on each page. An electronic copy of the text, and to the extent practical, any/all tables and figures, shall be submitted in a format compatible with RIDEM and shall accompany each deliverable to RIDEM. Additionally, each shall include, in a prominent location in the document, the following disclaimer: "Disclaimer: This document is a DRAFT document prepared by the Responsible Parties for the State. This document has not undergone formal review by RIDEM and EPA. The opinions, findings, and conclusions, expressed are those of the author and not those of the RIDEM and the EPA." To the extent practicable, all submissions shall be printed on both sides of the paper and shall be reproduced on recycled paper.
- C. Approval of a plan, deliverable or report does not constitute approval of any model or assumption used by the Responsible Parties in such plan, deliverable or report.
- D. After review of any plan, report or other item that is required to be submitted for approval pursuant to this SOW, RIDEM shall either: (1) approve the submission; (2) disapprove the submission, notifying the Responsible Parties of deficiencies; (3) disapprove the submission and develop its own plan, report, or other item; (4) modify the submission to cure the deficiencies; or (5) a combination of (1) and (4) above.
- E. Upon receipt of a notice of disapproval with notice of deficiencies, the Responsible Parties shall, within twenty (20) days thereafter, correct the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding a notice of disapproval, the Responsible Parties shall proceed to take any action required by any non-deficient portion of the submission unless otherwise directed by RIDEM.

WK/URI Disposal Area
FINAL SOW

VII. SCHEDULE OF DELIVERABLES

Below is a summary of tasks or deliverables and due dates. In the event of an inconsistency between this Section and any textual description set forth elsewhere in the SOW, the textual description shall control.

<u>Task/Deliverable</u>	<u>Due Date</u>
RP's Formal Response to LOR	7 Days after receipt of LOR
RI/FS Work Plan	90 Days after receipt of LOR
Sampling and Analysis Plan	90 Days after receipt of LOR
Health and Safety Plan	90 Days after receipt of LOR
Progress Reports	To be submitted monthly following the commencement of field work
RI Report	30 Days after the completion of field investigations
Preliminary Design Submittal 30%	30 Days after RIDEM's letter of approval of the RI Report
Final Design Submittal 100%	45 Days after approval of 30% Design
Operational and Maintenance Plan	15 Days after 75% completion of presumptive remedy construction
Long Term Monitoring Plan	30 Days after completion of presumptive remedy construction
FS Report	45 Days after completion of presumptive remedy construction
Remedial Action Report	30 Days after RIDEM approval of the completion of presumptive remedy