

Remedial Action Plan
Windsor-Bloomfield Landfill
EPA ID No. CTD991289133
Stewardship Permit No. DEP/HWM/CS-164-014

Town of Windsor
Windsor, CT

October 2019



146 Hartford Road
Manchester, Connecticut 06040



October 8, 2019

Sandy Brunelli
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Bureau of Water Protection and Land Reuse
Remediation Division
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Hartford, CT 06106

RE: Remedial Action Plan
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Stewardship Permit No. DEP/HWM/CS-164-014

Dear Ms. Brunelli:

We are pleased to submit this Remedial Action Plan (RAP) on behalf of the Town of Windsor for the above-referenced site. This RAP presents the remedial strategy proposed to meet the clean-up objectives in the Connecticut Department of Energy and Environmental Protection's (DEEP's) Stewardship Permit and RCRA Corrective Action.

Please contact the undersigned if we can be of further assistance.

Sincerely,

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List of Common Abbreviations

Units of Measurement	
ug	micrograms
mg	milligrams
kg	kilograms
L	liter
ppb	parts per billion
ppm	parts per million
Analytical Parameters and Chemical Compounds	
ETPH	extractable total petroleum hydrocarbons
PAHs	polycyclic aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCE	tetrachloroethylene
SPLP	synthetic precipitate leaching procedure
SVOCs	semivolatile organic compounds
TCLP	toxicity characteristic leaching procedure
TCE	trichloroethylene
TPH	total petroleum hydrocarbons
VOCs	volatile organic compounds
Regulatory Abbreviations	
CFR	Code of Federal Regulations
DEC	direct exposure criteria
DEEP ¹	Department of Energy and Environmental Protection
ECAF	Environmental Condition Assessment Form
GWPC	groundwater protection criteria
I/C	industrial/commercial
PMC	pollutant mobility criteria
RCRA	Resource Conservation and Recovery Act
RCSA	Regulations of Connecticut State Agencies
Res	residential
RSRs	Remediation Standard Regulations
TSCA	Toxic Substances Control Act
SWPC	surface water protection criteria
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VC	volatilization criteria
Other	
AOC	area of concern
AST	aboveground storage tank
COC	constituent of concern
QA/QC	quality assurance/quality control
UST	underground storage tank

¹ In portions of this report we refer to the Connecticut Department of Energy and Environmental Protection (DEEP). The Connecticut Department of Environmental Protection (CTDEP) was re-named the Department of Energy and Environmental Protection (DEEP) in July 2011. For convenience and consistency, we refer to the agency as the DEEP throughout this report, including the timeframe prior to July 2011.

1 Introduction

Fuss & O'Neill prepared this Remedial Action Plan (RAP) on behalf of the Town of Windsor and the Connecticut Department of Energy and Environmental Protection (DEEP) for the Windsor Bloomfield Landfill, located at 500 Huckleberry Road in Windsor, Connecticut. The RAP was prepared in part in response to Section II(D)(4) of Stewardship Permit No. DEP/HWM/CS-164-014. The Town entered into the Stewardship Permit in 2010 to fulfill requirements with both the Connecticut Solid Waste Management Regulations and the Connecticut Hazardous Waste Management Regulations.

The RAP was prepared to achieve compliance with the milestone required for corrective action (CA) under the Resource Conservation and Recovery Act (RCRA) known as Corrective Action Remedy Decision, CA 400. The Remedy Decision (CA 400) is defined as when the State or Environmental Protection Agency (EPA) approves a remedy designed to meet corrective action long-term goals. In most cases this is achieved when the final remedial action plan has been public noticed.

1.1 Regulatory Context

Groundwater monitoring was initiated at the Windsor-Bloomfield Landfill site in 1984 to monitor a closed metal hydroxide sludge cell. The closed cell contains an EPA-listed hazardous waste (EPA Waste Code No F006) in an area of approximately 0.1 acre. The cell is regulated as a treatment, storage, and disposal (TSD) facility under RCRA. Metal hydroxide sludge was disposed of in the cell between March 1975 and March 1982 at the direction of DEEP. The cell was certified closed in November 1985.

The monitoring program progressed from detection monitoring to assessment monitoring in 1986 due to a statistically significant increase in total organic halides (TOX) concentrations. The increase in TOX was attributed to impacts from the solid waste landfill and not the metal hydroxide cells. A Consent Order HM-450 was issued by DEEP August 22, 1987. Following a series of assessment reports a second DEEP Consent Order (HM-576) was issued on January 30, 1990. Subsequent groundwater monitoring programs for various monitoring wells, surface water, and leachate seeps have been established to satisfy both RCRA and DEEP bureau requirements.

DEEP issued A Post Closure Stewardship Permit (Permit) No. DEP/HWM/CS-164-014 to the Town on September 18, 2010 (*Appendix A*). The Permit outlines post closure care responsibilities at the landfill, requires RCRA Corrective Action, and is a mechanism for financial assurance. The authorized Permit Activities and major deliverables associated with those activities include the following:

Permit Section	Deliverable	Deliverable Description
A – Solid Waste Closure Requirements	Closure Plan	For Municipal Solid Waste Disposal Area
B – Post Closure Requirements	Post Closure Plan	Care of Metal Hydroxide Sludge Cell Area
C – Water Quality Monitoring Requirements	Water Quality Monitoring Plan	Surface and Groundwater Monitoring

D - Corrective Action Requirements	Remedial Options Assessment/ Remedial Action Plan	Evaluate feasibility and environmental impacts of Areas of Concern (AOC) and an ecological risk assessment
E – Financial Responsibility	Cost Estimate	Estimate for performing landfill closure, landfill post-closure, environmental investigation and remediation (if necessary) at other areas of concern.

1.2 Landfill Closure Regulations

The landfill *Final Closure Plan* was prepared to address the requirements outlined in Section 22a-209-13 of the Regulations of Connecticut State Agencies (RCSA) and the Stewardship Permit. The Stewardship Permit was issued by DEEP on September 28, 2010.

The Stewardship Permit is the administrative mechanism for the State of Connecticut to administrate compliance with and enforce the requirements of both the Connecticut Solid Waste Management Regulations and the Connecticut Hazardous Waste Management Statutes, CGS Sections 22a-208(a) and 22a-449(c) which incorporates by reference Title 40 of the Code of Federal Regulations (CFR) Parts 270.41, 270.42 and 270.43. The Interim Status of the Windsor-Bloomfield Landfill under RCRA was terminated in accordance with 40 CFR 270.73(a) upon issuance of the Stewardship Permit.

1.3 Remediation Standard Regulations

The Connecticut Remediation Standard Regulations (RSRs) are the clean-up standards in the State of Connecticut. They also contain procedures to evaluate whether actions (e.g., remediation or institutional controls) will be required to address identified releases of hazardous substances. The RSRs require that the nature and extent of release areas be fully characterized prior to making a final determination of compliance with the RSRs. Final landfill closure is subject to achieving the regulatory objectives defined in the *Final Closure Plan*. The RSR criteria will apply to the Site for AOCs not associated with final landfill closure and are discussed in the following subsections.

RSR Criteria Overview

RSR Soil Criteria	Description of Criteria Objectives	Common Alternatives to Compliance with Baseline Criteria
Direct Exposure Criteria (DEC)	DEC are applicable to soil within 15 feet of the ground surface. Soil impacted by a release is typically compared to the residential (Res) DEC unless alternatives or variances are applied. The DEC applies to PCBs that are present at any depth below grade.	Industrial/Commercial Criteria ¹ Inaccessible Soil ² Engineered Controls ³ Incidental Sources ⁴

Pollutant Mobility Criteria (PMC)	The PMC protect groundwater from constituents leaching out of impacted soil and are dependent upon the groundwater quality classification of a site. Since the Site is located in a GB-designated area, the GB pollutant PMC were used. The GB criteria apply only to soil located above the seasonal high water table.	Engineered Controls ³ Incidental Sources ⁴ SPLP Analysis ⁵ Environmentally Isolated Soil ⁶ Variances for fill ⁷ Groundwater monitoring ⁸
RSR Groundwater Criteria	Description of Criteria Objectives	Common Alternatives to Compliance with Baseline Criteria
Surface Water Protection Criteria (SWPC)	<p>The SWPC ensure that surface water quality is not impaired by the discharge of contaminated groundwater into a surface water body. Groundwater at the Site discharges to an unnamed stream and the Farmington River.</p> <p>The 95 percent upper confidence limit (UCL) of the arithmetic mean of all sample results representative of the groundwater plume is equal to or less than the SWPC.</p>	The SWPC apply to a groundwater plume at the point where it discharges to a surface water body, in this instance, an unnamed stream and the Farmington River.
Volatilization Criteria (VC)	Volatilization criteria protect human health from volatile substances (i.e. VOCs) in shallow groundwater that may migrate into overlying buildings and apply to groundwater within 15 feet of the ground surface or a structure intended for human occupancy. The residential (Res) VC apply unless a land use restriction is recorded. Groundwater at the Site is within 15 feet of the ground surface.	Industrial/Commercial Criteria ¹ Vapor mitigation systems ⁹

Description of Common Alternatives

1. **Industrial/Commercial Criteria** – If a portion of the property is used exclusively for industrial or commercial activities and an Environmental Land Use Restriction (ELUR) is recorded to prohibit residential use of such property, the industrial/commercial criteria may be applied. This is applicable for both DEC and VC.
2. **Inaccessible Soil** – The DEC do not apply if the soil is considered inaccessible and an ELUR prohibiting disturbance of such soil is recorded. Inaccessible soil is defined follows:
 - More than four feet below the ground surface
 - More than two feet below a surface consisting of at least three-inches of bituminous concrete or concrete, which two feet may include the pavement sub-base
 - Contaminated fill beneath a bituminous concrete or concrete surface consisting of at least three-inches of bituminous concrete or concrete if such fill meets the following criteria:
 - Semi-volatile compounds or petroleum hydrocarbons in the fill exceeding the DEC are normal constituents of bituminous concrete
 - Metals in the fill do not exceed two times the applicable DEC
 - No other compounds exceed the DEC
 - Beneath a building or DEEP-approved permanent structure

3. **Engineered Controls** – Section 22a-133k-2(f)(2) of the RSRs provides a variance to the DEC if a DEEP-approved engineered control is installed to physically isolate the underlying soil, thereby minimizing the potential for contact with the soil. The RSRs also provide a variance to the PMC if the DEEP-approved impermeable engineered control is constructed to minimize the migration of liquids through the soil. With an engineered control in place and an ELUR prohibiting unauthorized disturbance of the engineered control recorded, the DEC and/or the PMC do not apply. However as stated previously, the DEC for PCBs cannot be considered inapplicable, even if the soil is placed beneath an engineered control and subject to an ELUR.
4. **Incidental Sources** – The DEC and PMC do not apply to metals, petroleum hydrocarbons or semi-volatile substances if such pollution is the result of incidental releases due to the normal operation of motor vehicles (not including refueling or repair) or normal paving and maintenance of a bituminous concrete surface.
5. **SPLP Analysis** – In order to evaluate the actual leaching potential of constituents of concern (COCs), samples can be analyzed using the synthetic precipitate leaching procedure (SPLP) and, for GB areas, compared to ten times the groundwater protection criteria (GWPC).
6. **Environmentally Isolated Soil** – Contaminated soil beneath a building can be considered environmentally isolated if such soil is above the seasonal high water table, is not polluted with volatile organic substances (or, if such substances are present, they have been reduced in concentration to the maximum extent prudent), and is not a continuing source of contamination. The PMC do not apply to environmentally isolated soils, provided an appropriate ELUR is recorded to prohibit disturbance of the soil.
7. **Groundwater Monitoring** – For substances other than VOCs, Section 22a-133k-2(c)(4)(C) of the RSRs allows an exemption from the PMC based on four consecutive quarters of groundwater sampling under certain conditions that consider precipitation infiltration, compliance with applicable groundwater criteria, representativeness of sampling locations, and stability of the groundwater plume.
8. **Vapor Mitigation Systems** – With notification to the DEEP, engineered systems such as vapor barriers and sub-slab depressurization systems (SSDS) can be used to mitigate potential VOC vapor intrusion. When such systems are in place and properly monitored and maintained, the VC do not apply (22a-133k-3(c)(3)(B)).

2 Site Overview

2.1 Physical Description

The Windsor-Bloomfield Sanitary Landfill is located at the north end of Huckleberry Road in Windsor, Connecticut (*Figure 1*). The landfill is situated on a portion of an approximately 201-acre property owned by the Town of Windsor. The landfill property is bordered to the west by the Farmington River, to the north by Northwest Park (Town of Windsor), eastward by residential properties and to the south by Combustion Engineering, Inc. Two buildings exist on the site, including the landfill office/garage and a transfer station.

The DEEP issued a permit to landfill municipal solid waste (MSW) on 65 acres at the site on February 5, 1973. However, MSW was only landfilled on 50 of the acres at the site. As shown in *Figure 2*, the solid waste is permitted to be landfilled in excavated cells designated as Cells B, C, D, and a small strip of Cell A. The Town is currently in the process of closing the landfill and applying the final cover material per the *Final Closure Plan*. Final cover has been installed over the SW and NE portion of the landfill, and is currently being installed over the NW corner of the landfill.

A closed metal hydroxide cell is located along the easternmost portion of Cell C (*Figure 2*). This closed cell is approximately 0.1 acres and contains an EPA listed hazardous waste (EPA Waste Code No. F006). The cell was certified closed on November 6, 1985.

2.2 Environmental Setting

2.2.1 Geology & Hydrogeology

The surficial geology at the landfill property is characterized by the presence of various unconsolidated sediments, including ice-contact deposits, deltaic deposits and glacial till in distinct areas of the site.

The main aquifer at the site is composed of unconsolidated ice-contact and deltaic deposits consisting largely of interlayered sand with lesser amounts of silt and occasional gravelly and/or clayey horizons. Due to the landfill excavation and the mechanism by which the sediments were deposited, the clay-rich layers are discontinuous in many areas over the site.

Throughout the site, the unconsolidated sandy aquifer is bounded from below by glacial till. The upper surface of the till has a “U” shaped depression that is oriented north/south beneath the landfill. Surface exposures of the till are visible in two drumlins, one located northwest of the site, and another located southwest of the landfill along the banks of the Farmington River. The depth to the upper surface of the basal till varies from 0 to 102 feet below the landfill property. Geophysical investigations indicated that the till is continuous throughout the site, with thicknesses ranging from 10 to 80 feet. This till lies directly over bedrock.

Groundwater flow patterns at the Windsor-Bloomfield Landfill have been extensively mapped based on quarterly groundwater level measurements. Groundwater flow is primarily to the northwest, although local variations in flow direction are apparent. Groundwater flow patterns in the vicinity of the landfill are illustrated in the representative quarterly groundwater mapping shown on *Figure 2*.

Groundwater that flows from the landfill eventually discharges into the adjacent wetlands and an unnamed stream system, which discharges to the Farmington River that is located to the west/northwest. Groundwater seeps and springs are prevalent along the banks of the Farmington River and the adjacent unnamed stream at the till/stratified drift interface.

In accordance with the landfill's operating permit, solid wastes have always been deposited in the landfill at elevations above the groundwater table. By design, solid wastes have been placed a minimum of six feet above the prevailing groundwater table.

2.2.2 Water Quality Classifications

The groundwater underlying the Site and the southern abutting property of Combustion Engineering is classified as "GB". Groundwater designated as GB is within a historically highly urbanized area or an area of intense industrial activity and where public water supply service is available. Such groundwater may not be suitable for human consumption without treatment due to waste discharges, spills or leaks of chemicals or land use impacts (CT ECO, 2019).

Leachate-impacted groundwater ultimately discharges to an approximate two-acre wetland and a small unnamed stream down-gradient of the landfill. Surface water quality has been monitored at four locations in the unnamed stream (Class A) and Farmington River (Class B) on a quarterly basis for more than 15 years. These surface water classifications are described by the DEEP as follows:

"A": Known or presumed to meet Water Quality Criteria that support the following designated uses:

- Potential drinking water supply;
- Fish and wildlife habitat;
- Recreational use; and
- Agricultural and industrial supply and other legitimate uses including navigation.

"B": Designated uses of such inland surface waters are for recreational use, fish and wildlife habitat, agricultural and industrial supply and other legitimate uses including navigation (CTDEP, 2011).

2.2.3 Potential Receptors

An assessment was conducted to evaluate whether sensitive human health or ecological receptors are present at or directly downgradient of the Site. The results of this evaluation are presented below:

- **Wetlands** – The existing wetlands were delineated in 2003 by New England Environmental Services. Additional wetland areas down-gradient of the Landfill were delineated by Fuss & O'Neill in 2011. The wetland complex is part of a tributary to the Farmington River. The primary hydrologic input to the system is groundwater. The wetlands also receive seasonal inputs associated with surface water runoff and occasional flooding of the Farmington River. The wetlands are located in the Farmington River local watershed basin (Basin No. 4300-00-05+L5)(F&O BERA, 2014).
- **Endangered Species & Ecological Receptors** - Fuss & O'Neill performed a Baseline Ecological Risk Assessment in 2014. As part of this effort, a DEEP Natural Diversity Database

(NDDDB) mapping review occurred to determine if any endangered, threatened or special concern species have been observed on or in the vicinity of the Site. The Site was determined to be located within one-half mile of a NDDDB area. The existing wetland is within the limits of a DEEP “State and Federal Listed Species and Natural Communities” area. As a result, an NDDDB Review Request Form was submitted to the DEEP. In their response dated March 14, 2007, DEEP cited four state-listed species that occur either within the boundary of the impacted wetland area or just north at Northwest Park in Windsor:

Scientific Name	Common Name	State Protection Status
Plants		
<i>Ranunculus sceleratus</i>	cursed crowfoot	special concern
Animals		
<i>Terrapin carolina carolina</i>	eastern box turtle	special concern
<i>Cicindela formosa generosa</i>	Pine Barrens tiger beetle (also big sand tiger beetle)	special concern
<i>Falco sparverius</i>	American kestrel	threatened

These species were not identified at the Site during field inspections by ecological risk staff completed for the *Baseline Ecological Risk Assessment* (F&O BERA, 2014).

- **Surface Waters** – The nearest surface water body is the Farmington River, located adjacent to the Site to the west. (*Figure 2*)
- **Aquifer Protection Areas** – No aquifer protection areas were identified within a 0.5-mile radius of the Site (CTECO, 2019).
- **Public Water Supply Wells** – The Atlas of Public Water Supply Sources and Drainage Basins of Connecticut (CTDEEP, 1982) shows no public water supply wells within 0.5-mile radius of the Site.

3 Previous Documents

Documents prepared by Fuss & O’Neill that address each of the five Stewardship Permit Sections A – F at the Site are listed below along with a brief description of the contents and status.

Permit Section	Document Title and Status
A – Solid Waste Closure Requirements	<ul style="list-style-type: none"> • <i>Final Closure Plan, July 2018</i> • <i>Response to CT DEEP Comments, August 2018</i> • <i>DEEP accepts Response to Comments and instructs Town to proceed with finalizing and submitting the Closure Plan, July 2019</i>

Permit Section	Document Title and Status
B – Post Closure Requirements	<ul style="list-style-type: none"> • <i>Metal Hydroxide Sludge Cell Closure Plan, Revised May 26, 1999</i> <p>The metal hydroxide sludge cell was certified closed by DEEP November 1985.</p>
C – Water Quality Monitoring Requirements	<ul style="list-style-type: none"> • <i>Revised Water Quality Monitoring Plan, May 2011</i> <p>A revised water quality monitoring plan was submitted to DEEP May 27, 2011. Written approval from DEEP on the plan have not been received.</p>
D - Corrective Action Requirements	<ul style="list-style-type: none"> • <i>Environmental Condition Assessment Form, August 27, 2003</i> • <i>Work Plan for Ecological Risk Assessment, August 24, 2011</i> • <i>Baseline Ecological Risk Assessment, September 24, 2012</i> • <i>Baseline Ecological Risk Assessment, January 6, 2014</i> <p>An Environmental Condition Assessment Form was required to be submitted to DEEP in 2003 as an obligation of the adoption of Corrective Action at RCRA land disposal facilities (RCSA 22a-4499(c)-105(h). The ECAF identified nine (9) Areas of Concern (AOCs) as further described in <i>Section 3.1 (Appendix B)</i>.</p> <p>A Baseline Ecological Risk Assessment (BERA) was performed 2011/2012. The BERA was revised in 2014 to address department comments and updated to include the results of benthic invertebrate sampling and additional laboratory analysis. Follow up comments from the department or an approval have not yet been received.</p>
E – Financial Responsibility	<ul style="list-style-type: none"> • <i>Financial Assurance Demonstration Letters, Annual</i> <p>Closure and Post Closure Cost Estimates are prepared for the Town of Windsor annually. Separate letters are required by State regulations to cover both the Subtitle C Hazardous Waste Cell and Subtitle D (municipal solid waste and bulky waste) portions of the landfill. The Town submits the closure cost estimates annually to DEEP.</p>

3.1 Areas of Concern

Fuss & O'Neill reviewed the AOC table identified in the 2003 ECAF filing and added a tenth AOC to the Site list. The AOCs are based on review of the types of activities or processes conducted at the facility and the chemicals used or stored (*Figure 2*). These include:

AOC No.	AOC Description
1	Municipal Solid Waste Landfill (includes cells A, B, C, D) and close metal hydroxide sludge cell
2	Transfer Station/Recycling Area
3	Former 2,000-gallon gasoline UST
4	Former 3,000-gallon diesel fuel UST
5	Former 1,000-gallon fuel oil UST
6	Former (2) 275-gallon waste oil USTs

7	Former Dry Well and Abandoned Oil/Water Separator
8	Area of tornado debris
9	Maintenance Garage/Existing ASTS & Petroleum Storage
10	Abandoned Septic Leaching Field

3.2 Overview of AOC Conditions and Conceptual Site Model

3.2.1 AOC 1 – Municipal Solid Waste Landfill and Closed Metal Hydroxide Sludge Cell

The landfill and each of the cells are primary sources of potential release and therefore the whole landfill is considered a single source area. As the landfill was a permitted activity, soils have not been investigated; however wetland soil, bulk sediment, surface water samples have been collected from areas downgradient of the landfill for evaluation purposes. Groundwater has been evaluated through installation and sampling of groundwater monitoring wells. The landfill received DEEP approval for both the RCRA Environmental Indicator for *Groundwater Under Control* (CA 750) in 1997 and the RCRA Environmental Indicator for *Human Exposures Under Control* (CA 725) in 2003 as required by regulation.

AOC 1 – Groundwater Contaminant Fate and Transport

The groundwater beneath the Windsor-Bloomfield Landfill is impacted by leachate generated by the landfill. The concentrations of iron, manganese, chloride, alkalinity, hardness, total dissolved solids (TDS) and volatile organic compounds (VOCs) indicate the degree of impact. The inferred extent of leachate impact north of the landfill is based on the results of sample collection during the *Zone-of-Influence Investigation* in 1995, the *Supplemental Off-site Investigation* in 1998, and split field sampling of select wells with Harding ESE during the January 2002 quarterly field sampling event. The impacts to groundwater quality are observed at all wells located within and downgradient of the solid waste landfill within the Zone-of-Influence. The lateral extent of leachate-impacted groundwater contaminant plume, based on groundwater flow directions and groundwater quality results from 2018, is shown on *Figure 3*.

The inferred migration path for groundwater flow from the regulated unit to the receiving stream is shown on *Figure 2*. The landfill-impacted groundwater discharges to either the Farmington River, groundwater seeps adjacent to the river, or wetlands located north and west of the landfill. The majority of the leachate-impacted groundwater in the wetlands eventually discharges to the Farmington via a small southerly-flowing stream. A small quantity of the leachate-impacted groundwater flows northward to a small pond and northerly-flowing stream that discharges to the Farmington River approximately 2,400 feet from the landfill. This northward flow extends the area of potential leachate impact to those areas downgradient of the impacted surface waters.

Based on hydraulic gradients calculated from review of the water table contour maps and hydraulic conductivities determined by slug test data at select monitoring wells, the time required for groundwater to

migrate from the easternmost edge of the permitted landfill refuse area (i.e., metal hydroxide cell) to the Farmington River is estimated to be between 1.0 and 1.7 years for the upper portion of the unconsolidated deposits and between 1.9 and 9.6 years for the lowermost portion of the unconsolidated deposits. The migration rates are conservative and do not account for retardation or dispersion of the leachate plume.

AOC 1 – Ecological Risk Assessment

The objectives of the BERA were to evaluate potential risks associated with exposure to sediments or soil using the following three specific assessment endpoints:

1. Survival, growth and reproduction of the benthic invertebrate community
2. Survival, growth and reproduction of aquatic organisms
3. Sustainability of upper trophic level populations

Each of the assessment endpoints were evaluated for the five habitat areas located down gradient of the landfill – Areas D, E, F, G and H (*Figure 4*). Habitat areas were determined based on homogeneity of biological, hydrological and physiographic conditions. Areas A, B and C are outside of groundwater and surface water influence of the landfill and were identified as areas of site-specific background. Areas D, E, F and G are hydrologically down gradient of the landfill and may be affected by surface water or groundwater originating from or beneath the landfill. Area H (the Farmington River) is also hydrologically down-gradient of the landfill, but has a significant watershed area, of which the landfill is only a small percentage.

The principal contaminants of potential concern (COPECs) identified in wetland soil/sediment and surface water testing were metals, specifically, arsenic, barium, cadmium, chromium, iron and lead. Not all metals were identified as COPEC in all habitat areas. Based on a weight of evidence approach, a risk of harm to the survival growth and reproduction of benthic invertebrate communities (Assessment Endpoint 1) was identified for Area F. Area F, which is downstream of the landfill and is hydrologically dependent upon groundwater discharge from the landfill, exhibited a significant reduction in survival and growth of benthic organisms through toxicity testing. Benthic community assessments were quantitatively inconclusive. A qualitative evaluation of these assemblages of organisms indicated that the existing conditions do not support a healthy and diverse benthic community. However, the overall weight of evidence for the remaining downstream wetland habitat areas – Areas D, E, G, and H – indicates that there is no risk of harm to the survival growth and reproduction of benthic invertebrate communities.

With regard to Assessment Endpoint 2 (survival, growth and reproduction of aquatic organisms), the weight of evidence approach indicates that there is a risk of harm associated with Areas E, F and G. However, there is no risk of harm associated with Areas D and H for Assessment Endpoint 2. The principal component of risk is the elevated concentrations of metals that have precipitated out from groundwater and reduced pH. However, because Areas D and H are not affected, the risk does not extend beyond the wetlands and seeps that receive substantial and supporting groundwater input originating from the landfill (Areas E, F and G).

Lastly, with regard to Assessment Endpoint 3 (sustainability of upper trophic level populations), the weight of evidence approach indicates there is a potential risk of harm to upper trophic level organisms.

However, the potential risk is not limited to the down-gradient areas, but included background locations as well. Because this risk extends to all areas around the landfill, and there is the presence of a healthy community of upper trophic level organisms, a qualitative assessment indicates that the relative risk is negligible.

Overall, there are the obvious aesthetic impacts to the wetlands down-gradient of the Windsor-Bloomfield Landfill. These wetlands receive and are supported by groundwater discharge affected by landfill leachate, which contains elevated concentrations of metals. These metals, dissolved in groundwater, precipitate out of solution when exposed to air and collect on the surface of the wetland. As a result, the elevated metal concentrations create an impairment of the benthic community in Area F and an impairment of the aquatic community in Areas E, F and G. All three areas, receiving the majority of impacted groundwater.

More importantly, however, is the risk characterization of Area H – the Farmington River. For both Assessment Endpoint 1 and Assessment Endpoint 2, there is no risk of harm to benthic and aquatic communities. This means that the risk associated with impacted groundwater that is expressed in Wetland Areas E, F and G does not extend to the Farmington River.

3.2.2 AOC 2 – Transfer Station/Recycling Area

The landfill began recycling glass, aluminum, tin, and tires in 1974. Recycling of clothing, waste oil, and newspaper followed in 1982, 1984, and 1985, respectively (*Figure 2*). The WBLF transfer station includes the Citizen's Drop-off Center; a covered building with concrete floors and three open sides. Materials stored there include scrap metal, household solid waste, used oil, and oily containers. The transfer station also includes the recycling area; used battery and paint sheds; tires, cardboard, mattress, and universal waste roll-offs; clothing containers; and storage for propane cylinders, refrigerators, and air conditioning units. Other materials stored on the property include bulk storage of leaf compost, asphalt, and brush. Active operations at the transfer station/recycling area are ongoing and therefore environmental investigation at this AOC has not yet occurred.

3.2.3 AOC 3 & 4 – Former 2,000 Gallon Gasoline UST & Former 3,000 Gallon Diesel Fuel UST

Former 2,000-gallon gasoline UST and a former 3,000-gallon diesel UST were located southeast of the landfill office (*Figure 2*). The tanks reportedly were installed circa 1973. On December 15, 1997 the USTs were removed by Excavation Technologies, Inc (*Appendix C*). The tanks were cleaned and triple rinsed by ETI staff. Five verification soil samples were collected from each excavation area and submitted for analytical testing for total petroleum hydrocarbons by USEPA Method 418.1, VOCs by USEPA Method 8260 with MTBE, lead by USEPA Method 7421. The results were non detect with the exception of trace MTBE in the south side wall of the gasoline tank excavation well below baseline RSR criteria. The USTs were reported to be observed in good condition at the time of removal with no

defects observed. Based on the reported visual observation of the USTs at the time of removal, the sampling results, and results non detect in groundwater samples for COCs from the downgradient well MW-1, the AOC has been properly characterized and a release warranting remediation activities has not occurred.

3.2.4 AOC 5 (Former UST), AOC 7 (Drywell and Abandoned Oil/Water Separator) & AOC 10 (Abandoned Septic Leaching Field)

The conceptual model for AOC 5, 7, and 10 are discussed in one section because these AOCs are within approximately 20 to 30 feet from one another north of the landfill office and maintenance building (*Figure 2*). The building is used to perform routine maintenance on vehicles and equipment. The maintenance area is approximately 80 feet by 30 feet with garage bays opening to the south. Constituents of concern include petroleum hydrocarbons, degreasers, PCBs, and metals. Release characterizations occurred at these AOCs simultaneously through separate mobilizations as further described below. The AOCs include:

- AOC 5 was a former 1,000 gallon heating oil tank, reportedly installed circa 1973, for the maintenance area and landfill offices. The tank was removed in 1998 with no evidence of a release reported. Reportedly, soil samples were collected from the excavation by others with no constituents of concern detected above baseline RSR criteria. These data were not available.
- AOC 7 consists of a dug drywell previously connected to a maintenance area floor drain through a former 1,000 gallon oil/water separator.
- AOC 10 consists of an abandoned septic leaching field formerly serving the landfill office bathroom prior to connection to sanitary sewer.

2,000 Subsurface Investigation

In August 2000 a subsurface investigation occurred in the footprint of the AOCs to assess the environmental quality of soil prior to excavation activities associated with a sanitary sewer extension (*Appendix D*). Seven soil borings were advanced to a depth of 12 feet below the ground surface within the AOCs using a direct push rig (*Figure 5*). Soil was screened in each of the soil borings at two-foot intervals for total petroleum hydrocarbon (TPH) using a PetroFlagg analyzer and for volatile organic compounds (VOCs) with a photoionization detector (PID). One sample from each boring was submitted for laboratory analysis of VOCs, CT ETPH, and total RCRA 8 Metals. Select samples were also analyzed for polynuclear aromatic hydrocarbons and PCBs.

VOCs, PCBs and PAHs were not detected above the laboratory minimum detection limits. TPH was detected above the laboratory MDLs from soil collected at every soil boring location with the exception of B-02. One sample collected from the 0 to 2 ft depth interval (B-01) exceeded the RSR baseline industrial/commercial Direct Exposure Criteria of 2,500 (mg/Kg). Based on the other laboratory results

and screening data, the source for TPH in this area was an incidental surface spill of a solution containing petroleum hydrocarbons. Arsenic was also reported present slightly above the baseline RSR I/C DEC of 10 mg/kg. Based on the random distribution detections and absence of a suspected arsenic source, the detection of arsenic was associated with background conditions.

2002 Sewer Construction Project

In February 2002 a construction project was undertaken to connect the office and maintenance garage to the Metropolitan District Commission (MDC) sewer system and abandon the existing oil/water separator and septic leaching field (AOC 10) (*Appendix D*). The project also included cleanout of the maintenance garage floor drain system and installation of a new oil/water separator for the MDC connection. Project activities included the following:

- Installing and testing 925 linear feet of 12" PVC sanitary sewer extending from the end of existing 18" PVC sanitary sewer in Lantern Way
- Installing and testing 120 linear feet of 8" PVC sanitary sewer extending from the end of the above
- Installing approximately 50 linear feet of 6" PVC sanitary sewer service connection
- Installing 8 sanitary sewer manholes
- Installing new 1,000-gallon oil/water separator and sand-trap manhole
- Cleaning and testing the existing maintenance garage floor drain piping
- Connecting existing maintenance garage floor drain piping to new sand-trap manhole and oil/water separator
- Installing one gravity sewer cleanout between maintenance garage and sand trap manhole
- Pumping out and abandoning the existing oil/water separator
- Transporting and disposing sludge and wastewater from pumping out and power washing existing oil/water separator
- Abandoning existing septic tank and removing access manway

The above project resulted in extensive earthwork activities within the footprint of the AOCs (*Figure 6*). The service connection to the landfill office was made on April 1, 2002. The existing septic tank was abandoned by filling it with sand and removing the access manway. Since the tank was located six feet below grade, the Town of Windsor Health Department did not require that the tank be crushed.

On March 3, 2002 a vacuum truck extracted the dirt and oil from the floor drain trench and drain pipe. The floor drains were cleaned using power washers with water forced through the existing floor drain pipe and collected in the existing oil/water separator and then removed with the vacuum truck. The floor drainpipe was air tested and determined to be sound.

Previously, the garage floor drains discharged to a 1000-gallon oil/water separator (AOC 10) prior to ultimately discharging to a drywell (AOC 4) north of the maintenance garage. A new 1000-gallon oil/water separator was installed in 2002. Upstream of the new oil/water separator, a sand trap manhole with a two-foot sump was installed to reduce the sediment load to the oil/water separator. The new oil/water separator discharges to the newly installed sanitary sewer. The sludge and sediment was removed from the abandoned oil water separator (AOC 4) and subsequently power-washed the inside. The liquid was removed and disposed off-site at a permitted facility. The oil/water separator was then

abandoned in place by filling it with 300-500 p.s.i. flowable fill and backfilling. The manways were removed and disposed.

2004 Drywell Release Assessment

In 2004 a soil boring was advanced to a depth of 20 feet below the ground surface at the drywell to further characterize the environmental quality of the subsurface (Appendix D). Soil samples were collected continuously to approximately 20 feet. The samples were screened for VOCs. Three soil samples were submitted for laboratory analysis of CT ETPH, VOCs, total RCRA 8 metals, PCBs and PAHs. VOCs, PCBs, ETPH, and PAHs were not reported above laboratory detection limits. Metals concentrations were within background concentrations. Based on laboratory results, screening readings and visual observation, we conclude a release of petroleum and other hazardous substances had not occurred.

AOC CSM Summary

The AOCs have been well-characterized through a series of investigations and construction activities causing extensive disturbance of the subsurface over a period of approximately four years. Releases of petroleum or other hazardous substances warranting remedial actions from these AOCs has not been observed.

3.2.5 AOC 6 – Former (2) 275-gallon Waste Oil USTs

Two 275-gallon waste oil tanks installed in 1984 were contained within a 2,000-gallon partially below grade concrete vault. The AOC was located west of the bulky waste cell (*Figure 2*). In 1995 the tanks were removed and the concrete vault was broken up and disposed of in the concrete pile at the landfill. The AOC was located in what is today landfill Cell D and was removed in 1995 to accommodate construction of the cell. Since the AOC is located within what is today the landfill cell, the entire area was disturbed as a result of cell construction activities. We conclude a release warranting further remedial action at this AOC has not occurred.

3.2.6 AOC 8 – Area of Tornado Debris

The area of tornado debris, also referred to in some department correspondence as “Cell F” encompasses approximately 1.5 acres. In 2003, thirty test pits were excavated in the area to assess the type of buried material. The following bulky waste materials were identified within a silt and sand matrix: leaves, tree stumps, metal, plastic, carpet, piping, and wooden pallets. The surface of the area was capped with an approximate 2 feet thick sand and silt cap. The capacity of the area is estimated to be approximately 13,000 cubic yards. The area was opened in 1979 to dispose of debris created from a tornado that swept through the area. The cell is no longer open.

Fuss & O'Neill also advanced five soil borings within the area to characterize the environmental quality of the sand and silt matrix. Four samples were collected from a depth of 1 foot below the top of pile within the cap material. The fifth sample was collected from a depth of 11 feet below the top of the pile

(Appendix D). Soil samples were screened for VOCs using a PID. Soil samples were submitted for analysis of CT ETPH, VOCs, and total Priority Pollutant 13 metals. VOCs were not reported above laboratory detection limits. Three of the five samples had detections of CT ETPH ranging between 220 mg/kg – 420 mg/kg. Concentrations of arsenic, chromium, copper, lead, nickel and zinc were reported in each soil sample at concentrations generally representative of background conditions. The exception was a single near surface sample containing lead at a concentration of 806 mg/kg, which is above the baseline RSR Res DEC.

Based on visual observation of the soil matrix during test pit excavation/soil borings and laboratory analytical results, the soil and silt matrix that comprise the tornado debris area is generally mildly polluted with petroleum hydrocarbons and lead. Metals concentrations are generally within background concentrations. However, due to the heterogeneity of the material, concentrations of petroleum hydrocarbons and lead in select areas may exceed the baseline RSR DEC. Further discussion on this AOC is provided in *Section 4.1.4*.

3.2.7 AOC 9 – Maintenance Garage, Existing ASTs & Petroleum Storage

The maintenance garage was constructed in 1972 and is used to support landfill and transfer station operations. The facility maintains oil storage and management areas as shown on *Figure 7*. There are currently five above ground storage tanks (ASTs) including:

- 1,000-Gallon No. 2 Heating Oil AST: No. 2 oil is stored in a steel 1,000-gallon aboveground storage tank (AST) and used for on-site heating purposes. The single-wall AST is located outside just north of the office/maintenance building. A steel dike provides greater than 110% tank capacity of integral secondary containment to the AST.
- 2,000-Gallon Diesel Fuel AST: Diesel is stored in a steel 2,000-gallon diesel fuel AST. The single-wall AST is located outside and northeast of the office/maintenance building to supply landfill equipment and service trucks. A steel dike provides greater than 110% tank capacity of integral secondary containment to the AST.
- 1,000-Gallon Used oil AST: Used oil is stored in a double-walled steel 1,000-gallon AST. The AST is located under the roofing at the south section of the citizen's recycling center. WBLF personnel manually transfer used oil to the AST incrementally. Used oil is off-loaded to disposal trucks.
- 330-Gallon Motor Oil AST: Motor oil is stored in a steel 330-gallon AST. The single-wall AST is located inside against the north wall of the maintenance garage. Motor oil is transferred to landfill vehicles and equipment manually. The facility floor drains are connected to an oil water separator (OWS) and the sanitary sewer.
- 500-Gallon Diesel AST: Diesel fuel is stored in a steel 500-gallon AST northeast of the office/maintenance building. The tank is double-walled. This diesel tank was previously used

to supply fuel to the landfill's methane collection system generators. The system, including the AST, is relocated periodically due to nearby operations or modifications to the methane collection system. Fuel is off-loaded to the AST from delivery trucks, or by WBLF personnel using the 100-gallon Auxiliary Fuel Tank mounted in a pickup truck bed.

Petroleum Storage

The facility has a designated area for the storage of 55-gallon oil drums (*Figure 7*). This area is inside the maintenance building and typically houses up to two drums placed on spill pallets. Speedi-dry and other nearby release mitigation equipment also provide active secondary containment controls in the event that release occurs outside of the spill pallets' containment areas. Both active (spill equipment) and passive (spill pallets) secondary containment measures are used, in addition the facility floor drains are connected to an OWS.

Equipment

A Toro Tub Grinder and Powerscreen Trommel 620 each contain diesel fuel and hydraulic oil reservoirs. The Toro Tub Grinder contains 120 gallons of diesel fuel and 65 gallons of hydraulic oil. The Powerscreen Trommel 620 contains 70 gallons of diesel fuel and 120 gallons of hydraulic oil. The diesel fuel and hydraulic oil contained on these pieces of equipment are solely for the purpose of their operation and are not self-propelled.

Transformer

There is one transformer located onsite. The transformer is labelled as non-PCB containing. It is owned and maintained by Eversource Energy.

Since the above areas are part of active site operations, release determination characterizations have not occurred. The facility is subject to the requirements of 40 CFR Section 112, the Federal Oil Pollution Prevention Regulations, since the quantity of aboveground petroleum stored or used at the facility exceeds 1,320 gallons. Therefore, a Spill Prevention, Control, and Countermeasure Plan (SPCC Plan) is in place and procedures have been defined in response to spills or releases of oil or petroleum products at the site. The SPCC plan includes weekly and monthly inspections of these areas by staff from the Town and Fuss & O'Neill. Review of inspection records indicate that there has been no visual evidence of releases of petroleum hydrocarbons or other hazardous substances from these areas to the subsurface.

4 Remedial Approach

For the purposes of this RAP, it is necessary to make a distinction between "remedial technology" and "remedial option." Remedial technology is a specific method used to address impacted soil or groundwater by techniques such as destruction or stabilization of pollutants. In contrast, a remedial option in this RAP refers to a combination of technologies employed to optimize the best features of each to meet site-specific remedial goals.

The sections below describe the remedial options that the Town proposes to achieve the long-term corrective action goals for this site.

4.1 General Strategy for Soil & Land Reuse

As described in more detail in the *Final Closure Plan* submitted to DEEP, a Steering Committee was appointed by the Town Council to evaluate the post closure land use for the site. In order to make an informed decision, the committee researched similar sites, evaluated the needs of the Town and gathered input from citizens. The result of the Landfill Steering Committee's efforts was summarized in a *Post Closure Land Use Report* prepared in early 2002. Recommended and alternate land use plans were developed by the Landfill Steering Committee following public input provided by local stakeholders. The Town intends to revisit the post-closure use plan prior to making a final decision on future use.

The Town Recreation Master Plan was also considered. The Steering Committee was careful in selecting uses for the disposal area, west of Huckleberry Road, since these will be most important to the CTDEEP Closure Plan approval process. The committee determined that other areas of the property, east of Huckleberry Road outside of the Tornado Debris Area, could be developed for a larger variety of potential uses and would also be of less concern to the CTDEEP Closure Plan review process. Therefore, the Committee's vision and recommendations for the active recreation area and the Park Drive are less definitive than those for the proposed uses on top of the landfill.

In general, the committee determined that the best use over the closed landfill would be passive recreation and active uses should be developed outside the footprint of the former landfill. With this concept in mind, the following were proposed:

- A compost/brush area, dog park, mountain bike area and seasonal grassland bird habitat were proposed on the disposal area.
- Off the landfill, to the west, scenic overlooks were depicted near the Farmington River.
- East of Huckleberry Road, a picnic pavilion and grove, open lawn, gravel parking areas, and an active recreation area for team sports and hard recreation were proposed.
- A trail system of various types would cover much of the landfill and link the various proposed land uses on this site with existing trail systems in Northwest Park. A Park Drive and Multi-Use Trail could also link the landfill and Northwest Park properties.

After final closure has been completed, including installation of the final cover system, the Town proposes to use select portions of the landfill for limited solid waste management purposes. These include the following:

- *Leaf Composting and Brush Management* - After the landfill closes, these operations will continue to occur on the landform.
- *Municipal Transfer Station/Solid Waste Management* – The current activities are registered under the aforementioned CTDEEP *General Permit for a Municipal Transfer Station*, and will be updated and submitted to the CTDEEP if revisions to the site plan or operations are proposed.

Based on the intended uses described above, the remedial approach for soil above the seasonal high water table at the non-landfill AOCs at the site should be consistent with the following objectives:

- Meet the requirements of the RSRs found at RCSA 22a-133k-1 through 22a-133k-3 in accordance with the requirements of the intended use of the property;
- Mitigate short term and long-term risk to human health and the environment, both during implementation and subsequent to remedial measures.

The approach toward achieving these goals for soil is described below.

4.1.1 AOC 1 – Municipal Solid Waste Landfill and Closed Metal Hydroxide Sludge Cell

An earthen cover system was identified as the most appropriate technology for closure of the landfill. A geomembrane cap was not selected because it is anticipated to exacerbate the existing anaerobic conditions beneath the landfill, including the mobilization of iron. The rationale for selection of an earthen cover system is discussed in greater detail in the *Final Closure Plan*. The system will incorporate concepts of an evapotranspiration (ET) cover system within a conventional earthen cover system to enhance its performance by decreasing the rate of infiltration.

ET cover systems use vegetative support layers that are amended to maximize evaporation of pore water and promote a vigorous stand of vegetation that has been selected to maximize transpiration. By maximizing evaporation and transpiration, in addition to grading the landform to maximize runoff, these caps minimize infiltration. Therefore, a *modified* ET cover system consisting of a conventional earthen cover system with an enhanced vegetative support layer is proposed to reduce anaerobic conditions caused by an impermeable geomembrane liner or equivalent ET cover system.

The proposed final grades depicted on *Figure 8* reflect the placement of a minimum of 24" of acceptable cover material over landfilled material. The upper 6" layer will consist of a seeded, vegetative support material capable of establishing and sustaining a vigorous stand of permanent grass growth and will overlay an 18" thick layer of low permeable final cover material installed in two 9-inch lifts.

Final cover material at the Windsor-Bloomfield landfill will be obtained from on-site stockpiles and off-site sources and consist of either naturally occurring soils or some form of alternate soil cover material acceptable to CTDEEP. The Town of Windsor obtained approximately 129,700 cubic yards of low permeability material (i.e., till) from the University of Hartford, a Route 75 Windsor reconstruction project, and the East Windsor Wal-Mart for use as a part of the final cover system. It is estimated that an additional 8,950 CY of installed final cover material will be needed to complete the installation of the 18" low permeable layer.

The Town received approval from DEEP on April 10, 2018 to utilize low-level environmentally-impacted soil for the first 9-inch lift of final cover material. The soil is Asphalt Cold Batch Treated Soil from Ondrick Materials & Recycling in Chicopee, Massachusetts. Cover material obtained from additional sources will be subject to testing to ensure that it is of sufficient environmental quality with concentrations less than the RSR baseline Res DEC.

A minimum 6" layer of naturally occurring topsoil, or other suitable vegetative support material conforming to the requirements of the enclosed technical specifications will be used to cover the landfill top and side slopes. The grain size of this material will be selected to maximize evaporation of pore water. In addition, the soil will be amended with a high composition of organic material (12% to 20%) to stimulate the vigorous growth of vegetation and maximize transpiration.

A total of approximately 46,000 cubic yards of vegetative support material is required to complete the landfill closure. In June of 2001, DEEP approved the use of compost mixed with sand for a vegetative growth media. In November 2016, DEEP also approved the use of FiberBuild in the mixture. FiberBuild is a proprietary product made from discarded short paper fiber that is a waste product from the manufacture of paper. If another alternative vegetative support material is proposed for such use, additional testing will be performed and submitted to DEEP for review and approval.

4.1.2 AOCs 3, 4, 5, 6, 7, & 10 Former or Out-of-Use Areas

The six AOCs comprised of 3, 4, 5, 6, 7 & 10 are inactive former or abandoned locations. Based on the characterization and CSM described in *Section 3.2*, releases of petroleum or other potentially hazardous substances warranting additional soil remediation have not occurred or are not required.

4.1.3 AOCs 2 & 9 Active Operations Areas

AOC 2 and AOC 9 continue to be active areas associated with operation of the landfill and transfer station areas. As previously described, these areas currently are inspected either weekly or monthly by the Town or Fuss & O'Neill staff as an obligation of the SPCC Plan. Therefore, in an event of a release, procedures are in place to respond and remediate spills.

At the time of final landfill closure, modifications to the operations area may occur as portions of the site transform over to the passive and active recreational uses described in *Section 4.1*. As this occurs, individual ASTs, equipment, or petroleum storage areas described in *Section 3.2.7* may be discontinued or removed. Should this occur, release characterization sampling and remedial design (if warranted) will occur in a phased process as described in Section IID(4) of the Stewardship Permit.

4.1.4 AOC 8 Tornado Debris

As approved in a February 2010 letter from DEEP, slopes on top of the Tornado Debris Area will be graded to a minimum of two percent (2%) so that a future parking lot can be constructed in this area. Detailed plans have not been developed for the parking area, as the concept must be fully vetted with all stakeholders. Until this process can be completed, the *Final Closure Plan* proposed maintaining grades at 2% rather than 4% to promote positive drainage over the capped surface, and will not require significant regrading for construction of the future parking lot. The area would be capped with a minimum of 18" of low permeable soil material.

4.2 General Strategy for Groundwater & Surface Water

In any groundwater classification area, the goal of groundwater remediation is to:

- Protect the existing use of the groundwater
- Prevent further degradation of groundwater quality
- Prevent degradation of surface water from discharges of impacted groundwater
- Protect human health

Analytical results from over thirty years of groundwater monitoring demonstrate that the leachate plume has been defined and well-characterized. In October 1997, a monitoring program was implemented in accordance with the Connecticut DEEP-approved plan presented in the May 24, 1996 report titled *Comprehensive Groundwater and Surface Water Monitoring Program* and subsequent addendum letter of August 6, 1997. As part of the 2010 Stewardship Permit, a *Revised Water Quality Monitoring Plan* with an updated monitoring program was submitted for DEEP approval on May 27, 2011. DEEP approval on the plan has not been received.

Groundwater

The current monitoring plan requirements include the collection of groundwater samples from ten monitoring wells (GZ-100, MW-J, MW-9R, MW-17S, MW-19S, MW-D, MW-C, PZ-95-13, PZ-12-15 and PZ-12-16). The network consists of upgradient, compliance, metal hydroxide cell, and downgradient wells.

The downgradient well consist of wells MW-C and MW-D (*Figure 2*). Well MW-C is also considered a surface water impact monitoring well with groundwater representative of the quality of groundwater prior to discharge to the nearest surface water body comprised of the unnamed stream and wetlands at the northwest toe of the landfill. MW C contains concentrations of leachate indicator parameters indicative of landfill impact. VOCs are not typically detected in samples collected from this well. Metals frequently detected included arsenic, barium, iron, manganese, mercury, nickel, lead and zinc. Typically, there are no exceedances of the National Primary Drinking Water Standards (NPDWS) and the Connecticut Department of Health Maximum Contaminant Levels (CTDPH), which are the benchmark criteria defined in the *Revised Water Quality Monitoring Plan* used to assess groundwater quality. Screening of the historical

data from 2010 – 2019 for samples collected from well MW-C relative to exceedances of the RSR promulgated or “fast track” SWPC indicate that the constituents: chloride, manganese, arsenic, and iron have exceeded baseline criteria for one or more sampling events.

Leachate indicator parameters and the metals arsenic, barium, cobalt, iron, mercury, manganese, nickel, lead, vanadium, and zinc are typically detected in samples collected from MW-D. Arsenic concentrations in samples collected from MW-D are detected at concentrations exceeding NPDWS and CTDPH MCL. The constituents chloride, manganese, arsenic, iron, and lead have exceeded the SWPC in one or more sampling events. Low concentrations of VOCs below the criteria of 1,4-dichlorobenzene, chlorobenzene, chloroethane, ethyl ether and tetrahydrofuran have also been detected in samples from this well in one or more sampling events.

Surface Water

Collection of surface water samples occurs from five locations (SW-1 through SW-5) positioned within the unnamed stream at the toe of the landfill and the Farmington River (*Figure 2*). Surface water quality of the receiving stream (Farmington River) is monitored upstream of the landfill property at SW-01 and downstream of the site at SW-03. Sampling location SW-02 is situated at the confluence of the small, southerly flowing stream that discharges to the Farmington River. This stream is recharged by surface water runoff and groundwater seeps downgradient of the landfill. SW-04 is located in the south-flowing unnamed stream, which is the primary discharge point for leachate-impacted groundwater. SW-05 is located at the discharge point of the northern pond.

Sampling results upstream from the landfill in the Farmington River (SW-01) are generally similar to that downstream (SW-03). Leachate indicator parameters typically fluctuate at SW-02 and SW-04 depicting fluctuations in chloride, hardness, alkalinity and total dissolved solids. The SW-05 sampling results indicate that leachate impacted surface water flows northward into the pond and discharges to the stream. Surface water results for the unnamed stream compared to the Freshwater Aquatic Life Chronic Water Quality Standards generally indicate no exceedances of the baseline criteria.

4.2.1 Monitored Natural Attenuation

As detailed in previous submissions, a modified ET cover has been selected for closure of the Windsor-Bloomfield landfill. This type of cover system was selected because it will protect human health and the environment in addition to eventually allowing for the attainment of water quality goals. Therefore, leachate impacted groundwater downgradient of the landfill will require less time to stabilize the mobilization of iron beneath the landfill if the landform is closed with a modified ET cover. Due to the permeable nature of the saturated materials at the site, leachate from the landfill is diluted by a significant volume of groundwater.

As detailed in the *Final Closure Plan*, leachate indicator parameters are expected to decline after closure of the landfill. The results of our case study evaluation indicate that concentrations of leachate indicators (e.g. ammonia, alkalinity, chloride, hardness, phosphorous, sodium, total dissolved solids, and volatile organic compounds) in groundwater decreased rapidly in the literature studies following the cessation of waste disposal and/or construction of the cover system.

As such Monitored Natural Attenuation (MNA) for groundwater is proposed as the remedial strategy for this landfill. MNA refers to the reliance on natural processes to achieve site-specific remedial objectives. MNA processes include a variety of physical, chemical, or biologic processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater. These processes include biodegradation, dispersion, dilution, sorption, volatilization, and chemical or biological stabilization/transformation, or destruction of contaminants.

Following final closure, MNA will be performed to assess contributions from biodegradation and physical processes of the groundwater leachate plume. MNA geochemical parameters, electron acceptors, and by-products will be incorporated into select groundwater sampling events to assess the effect of decreased leachate generation resulting from decreased infiltration associated with final grading and construction of the ET cover.

4.2.2 Surface Water & Wetlands

The literature indicates that an impermeable cap or a modified ET cover will not significantly address the aesthetic issues caused by anaerobic conditions that mobilize iron from saturated native aquifer material. The literature indicates that landfill leachate generates a reservoir of sorbed organic carbon, which creates anaerobic conditions beneath and downgradient of the landfill. In this anaerobic environment, insoluble Fe+3 in the aquifer sediments at the landfill is reduced to mobile Fe+2. The Fe+2 flows downgradient of the landfill and is ultimately precipitated in the oxygenated surface water of the wetlands and unnamed stream as Fe+3. The rusty orange-colored material observed in the wetland system is the accumulated precipitate of iron adhering to the cellular walls of bacteria.

The Town of Windsor and Fuss & O'Neill have worked with the DEEP over the past decade to evaluate various methods for mitigating the discharge of visible iron precipitate to the Farmington River. Options previously evaluated included wetlands enhancement and off-site mitigation, constructed wetlands treatment, and subsurface treatment with supplemental constructed wetlands as further described in the report *Mitigation and Remediation Feasibility Study Existing Impacted Wetlands*, dated May 24, 2007.

A concept most recently proposed by DEEP and further evaluated to reduce the visibility of discoloration from the unnamed stream during low flow conditions was that iron-containing surface water collected in a pipe from the stream would be discharged from the subsurface up into the bottom of the Farmington River.

As a result of the above, Fuss & O'Neill investigated the feasibility of diverting low flows in the stream into a pipe installed beneath and up into the bottom of Farmington River using horizontal directional drilling (HDD) methods. The objective would be to reduce the visibility of the main iron seep associated with the unnamed stream as it discharges into the Farmington River during periods of low flow.

To date Fuss & O'Neill has developed a *Conceptual Design Report* dated June 6, 2019 that provides preliminary design, description of work, list of likely required permits, and an order-of-magnitude opinion of cost (*Appendix E*). Specific tasks have included:

- Focused river area bathymetric survey using sonar methods
- Access and feasibility assessment by a HDD subcontractor
- Assessment of pipe installation from Farmington River
- Approach for geotechnical investigation
- Development of budgetary opinion of construction cost
- Analysis of anticipated permitting

We conclude based on the research and concept design performed to date, that diverting low flows in the unnamed stream into a pipe installed beneath and up into the bottom of Farmington River to reduce the visibility of iron seeps in the river during periods of low flow is constructible using HDD methods. Periodic maintenance will be required after construction is complete to keep the pipe, inlet, and outlet clear of sediment and debris. The plan of the proposed concept previously submitted to DEEP is provided as *Figure 9*.

5 Public Notice

Public notice will be required as part of the remedial process as required by the various applicable regulatory programs. Public notice will be required for the following:

- Public Notice under RCRA Corrective Action including Remedy Decision CA 400 Milestone

Section 22a-449(c)-105(h) of the Regulations of Connecticut State Agencies provides the mechanism for interim status facilities to complete RCRA Corrective Action under LEP oversight. Items within Subsection 7 of the regulations (which includes the requirements for public noticing) are provided below with a description of how the task will be completed during public notice procedures.

- Provide a contact person (with name, address and telephone number)

The contact person who will be listed for public notice filings at the Site is:

Daniel R. Jahne LEP
Fuss & O'Neill, Inc.
146 Hartford Road, Manchester, CT 05040
(860) 646-2469

- Provide notice that comments may be submitted to DEEP within 45 days of publication or mailing of such notice.
- The notice will be published in a newspaper having a substantial circulation in the municipality in which the facility is located and the municipality or area affected by the facility.

- Either (1) erect and maintain for at least 30 days, a 4x6 foot sign visible from a public highway indicating “Environmental Clean-Up in Progress at this Site. For Further Information Contact...” including a telephone number for a contact who can provide additional information, or (2) mail a copy of the notice to each owner of record for abutting properties.

A sign will be erected at the Site for a 30-day period during public notice procedures at the Site.

- A copy of the draft Remedy Decision CA 400 Remedial Action Plan will be available for public review at the Windsor Town Hall, located at 275 Broad Street, Windsor, CT.
- A copy of the draft Remedy Decision CA 400 Remedial Action Plan will also be available for public review at the Department of Energy & Environmental Protection located at 79 Elm Street, Hartford, CT (c/o Sandra Brunelli).

The regulations require DEEP to forward to the contact person a copy of all comments received by the date specified in the public notice on the proposed remediation, and all comments made at a public hearing (if DEEP determines that such a hearing is necessary).

A written summary of all comments and written response to each such comment must be submitted by the contact to DEEP within 45 days. DEEP then either adopts the responses at its own, adopts with modification or rejects and prepares its own response to each person who submitted comments.

6 Post-Closure Documentation

As described in *Section 7 of the Final Closure Plan* and *Section A(7) of the Permit*, within ninety (90) days after the completion of the closure construction a record drawing depicting the final closure grading will be placed in the land records of Windsor and filed with DEEP. In addition, a detailed description of the landfill disposal area shall also be filed in the land records and a certification of such filing will be submitted to DEEP. The description will include a reference to the deed that describes the property where the disposal area is sited, a description of the general types and quantities of waste on the site, depth of fill, depth and type of cover material, dates of landfill operation, and areas of potential groundwater impacts.

6.1 Post-Closure Monitoring and Maintenance

Water Quality Monitoring

A water quality monitoring plan is currently in effect for the landfill. The current monitoring plan will be updated when the landfill has been closed. The purpose of this post-closure monitoring will be to document the following:

- The effectiveness of the remedial options

- The long-term impact of the landfill on groundwater and surface water systems associated with the site
- Any changes in leachate composition or concentration over time
- Any change in the migratory path of leachate over time

A quarterly report detailing and evaluating the monitoring results will continue to be submitted to the DEEP.

Decomposition Gas Monitoring

After closure, decomposition gas monitoring will continue to be conducted in areas that are currently monitored. The *Final Closure Plan* also proposes future methane monitoring inside buildings and utility structures on a weekly basis. Particular attention will be paid to monitor areas that are accessible by the general public. Following each quarterly methane monitoring event, the results will be submitted to the DEEP in conjunction with the groundwater monitoring results.

Inspection and Maintenance

The closed landfill facility and other portions of the site will require periodic inspection to assess the integrity of the access roads, slopes, and cover material. Inspections will be conducted at a minimum of once per quarter by qualified personnel, and will include the following items of concern:

- Roadway and access gates will be maintained to provide access to the landfill for maintenance and emergency vehicles.
- If any landfill seeps are observed from the cover material, the seep area will be repaired by directing leachate back into the landfill. The area will then be re-covered and re-vegetated.
- If erosion of slopes is noted, the affected areas will be regraded and re-vegetated as soon as possible to prevent additional erosion. Particular attention will be paid to erosion along the banks of the Farmington River. If bank sloughing continues to occur in these areas, the Town may consider taking appropriate measures (e.g., using stone toe protection, vegetated gabions, vegetated geogrids, live cribwalls, tree revetments) to stabilize the bank of the river and help preserve the existing vegetative screening afforded by trees here.
- If nuisance vectors are observed, a licensed exterminator will be contacted to help eliminate any public health risks.
- Clearing and mowing of the landfill will be completed to avoid establishment of deep-rooted vegetation that may damage the cap's integrity. The landfill will be mowed at a minimum of twice per year in the spring and fall. More frequent mowing may be completed to ensure a maximum vegetative growth height of 24 inches.
- Inspections required by the SPCC Plan.

Per *Section II(B)(6)* of the Permit, the Town will notify DEEP in writing of any newly discovered releases(s) of solid or hazardous waste or hazardous waste constituents discovered during the course of post-closure care, groundwater monitoring, environmental audits, or other means, within fifteen (15) calendar days of the date of discovery. The Town will provide a written request for any modification of an approved Remedial Action Plan for DEEP review and written approval.

6.2 Estimated Cost of Closure and Post Closure Care

Closure and Post-Closure cost estimates have been prepared for the Town as part of the *Final Closure Plan*. Section II(E) of the *Permit* requires preparation of closure cost estimates, establishment of financial assurance, and mechanisms for adjustment and release of financial assurance. The most recent estimates of closure and post-closure costs dated September 26, 2018 is provided as *Appendix F*.

Construction costs for the wetland pipe outlet option described in *Section 4.2.2* is also provided in *Appendix F*. Should DEEP approve the wetland pipe outlet option, the Closure and Post-Closure cost estimates will be amended to reflect these costs.

7 Schedule for Implementation

A summary of the schedule for site remediation and associated site improvements is as follows:

Date	Remediation Milestone
TBD*	DEEP Approval To Proceed with RAP public notice
TBD*	RAP public notice DEEP Approval of: <ul style="list-style-type: none"> • RAP & Ecological Risk Assessment • Wetland Pipe Outlet Option • Final Closure Plan
Ongoing – December 2020	Construction of Landfill Cap
December 2021	Construction of Landfill Cap, Drainage Structures, and Access Roads
2021	Evaluation of AOC-specific investigation/remediation associated with transition to future recreational use
December 2022	Wetland Pipe Outlet Option Construction
December 2022	Implementation of Post Closure Protocols

*Schedule for implementation will depend on the timing for receipt of DEEP approvals.

8 References

Connecticut Department of Environmental Protection, 1982. *The Atlas of Public Water Supply Sources and Drainage Basins of Connecticut*. CTDEP Natural Resources Center.

Connecticut Department of Environmental Protection, 2002. *Water Quality Standards*; Surface Water Quality Standards Effective December 17, 2002; Ground Water Quality Standards Effective April 12, 1996.

Connecticut Department of Energy and Environmental Protection, 2019, Connecticut Environmental Conditions Online, prepared in cooperation with the University of Connecticut Center for Land Use Education and Research. Retrieved online from <http://cteco.uconn.edu>. Accessed on July 1, 2019.

Connecticut Department of Energy and Environmental Protection, July 10, 1997, *Environmental Indicator Evaluation Report*, Windsor Bloomfield Landfill.

Fuss & O'Neill, January 6, 2014, *Baseline Ecological Risk Assessment*, Windsor Bloomfield Landfill.

Fuss & O'Neill, June 6, 2019, *Conceptual Design Report Wetland/ Stream Outlet Design and Permitting*, Windsor Bloomfield Landfill.

Fuss & O'Neill, July 2018, *Final Closure Plan*, Windsor Bloomfield Landfill.

Fuss & O'Neill, May 2007, *Mitigation and Remediation Feasibility Study Report*, Windsor-Bloomfield Landfill.

Fuss & O'Neill, September 20, 2002, *Windsor Bloomfield Landfill Sewer Extension Project*, Windsor Bloomfield Landfill.

Fuss & O'Neill, May 1996, *Zone of Influence Investigation Report*, Windsor Bloomfield Landfill.

Rodgers, J., 1985. *Bedrock Geological Map of Connecticut*. Connecticut Department of Environmental Protection, Natural Resources Center, Connecticut Geological and Natural History Survey, in cooperation with the United States Department of the Interior, U.S. Geological Survey.

Stone, J. R., Schafer, J. P., London, E. H. and Thompson, W. B., 1992. *Surficial Materials Map of Connecticut*. Prepared in cooperation with CTDEP, Geological and Natural History Survey.

9 Limitations of Work Product

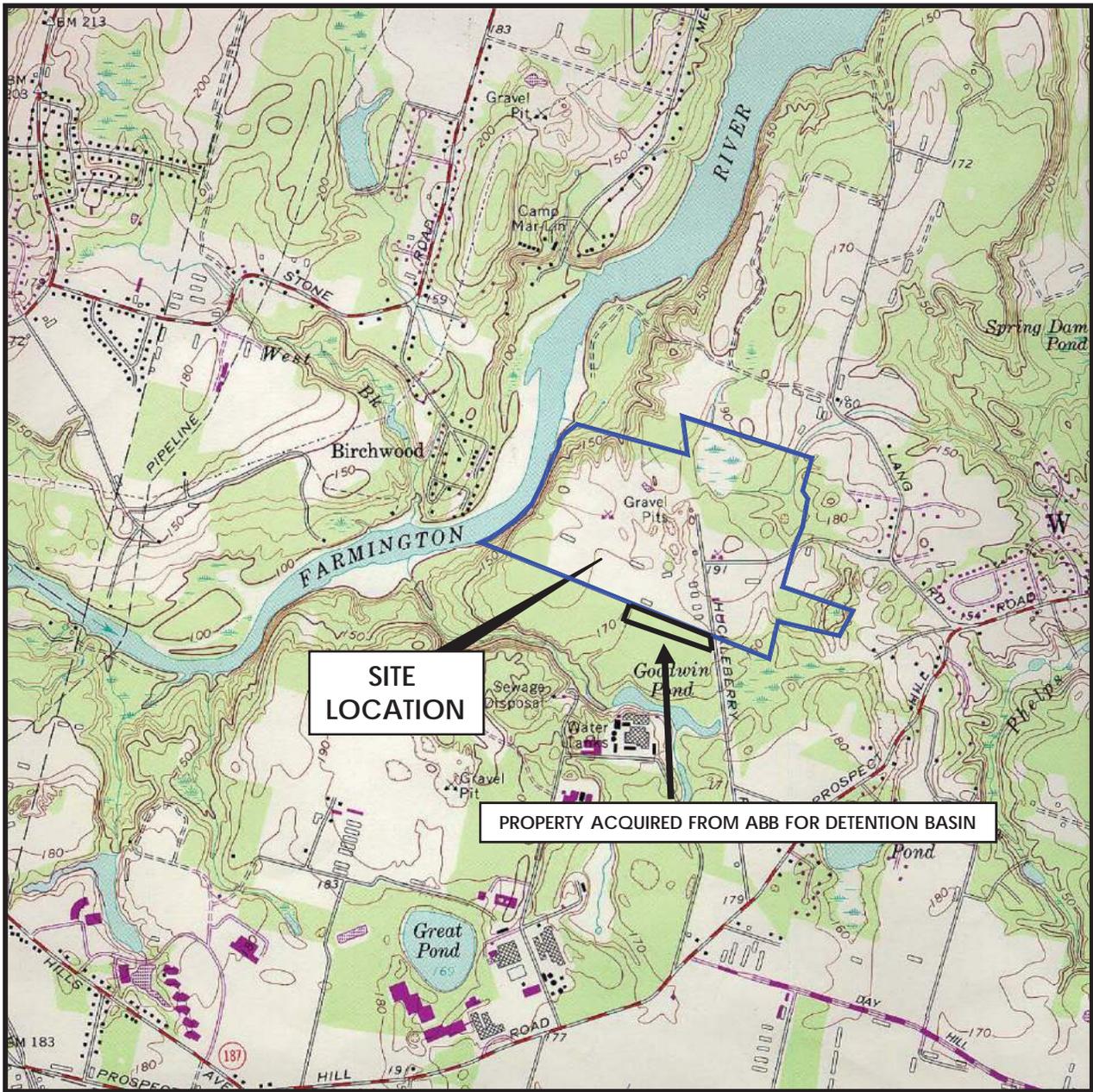
This document was prepared for the sole use of the Town of Windsor, the only intended beneficiary of our work. Those who may use or rely upon the report and the services (hereafter “work product”) performed by Fuss & O'Neill, Inc. and/or its subsidiaries or independent professional associates, subconsultants and subcontractors (collectively the “Consultant”) expressly accept the work product upon the following specific conditions.

1. Consultant represents that it prepared the work product in accordance with the professional and industry standards prevailing at the time such services were rendered.
2. The work product may contain information that is time sensitive. The work product was prepared by Consultant subject to the particular scope limitations, budgetary and time constraints and business objectives of the Client which are detailed therein or in the contract between Consultant and Client. Changes in use, tenants, work practices, storage, Federal, state or local laws, rules or regulations may affect the work product.
3. The observations described and upon which the work product was based were made under the conditions stated therein. Any conclusions presented in the work product were based solely upon the services described therein, and not on scientific or engineering tasks or procedures beyond the scope of described services.
4. In preparing its work product, Consultant may have relied on certain information provided by state and local officials and information and representations made by other parties referenced therein, and on information contained in the files of state and/or local agencies made available at the time of the project. To the extent that such files which may affect the conclusions of the work product are missing, incomplete, inaccurate or not provided, Consultant is not responsible. Although there may have been some degree of overlap in the information provided by these various sources, Consultant did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this project. Consultant assumes no responsibility or liability to discover or determine any defects in such information which could result in failure to identify contamination or other defect in, at or near the site. Unless specifically stated in the work product, Consultant assumes no responsibility or liability for the accuracy of drawings and reports obtained, received or reviewed.
5. If the purpose of this project was to assess the physical characteristics of the Site with respect to the presence in the environment of hazardous substances, waste or petroleum and chemical products and wastes as defined in the work product, unless otherwise noted, no specific attempt was made to check the compliance of present or past owners or operators of the Site with Federal, state, or local laws and regulations, environmental or otherwise.

6. If water level readings have been made, these observations were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in water levels may occur due to variations in rainfall, passage of time and other factors and such fluctuations may affect the conclusions and recommendations presented herein.
7. Except as noted in the work product, no quantitative laboratory testing was performed as part of the project. Where such analyses have been conducted by an outside laboratory, Consultant has relied upon the data provided, and unless otherwise described in the work product has not conducted an independent evaluation of the reliability of these tests.
8. If the conclusions and recommendations contained in the work product are based, in part, upon various types of chemical data, then the conclusions and recommendations are contingent upon the validity of such data. These data (if obtained) have been reviewed and interpretations made by Consultant. If indicated in the work product, some of these data may be preliminary or screening-level data and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time and other factors.
9. Chemical analyses may have been performed for specific parameters during the course of this project, as described in the work product. However, it should be noted that additional chemical constituents not included in the analyses conducted for the project may be present in soil, groundwater, surface water, sediments or building materials at the Site.
10. Ownership and property interests of all documents, including reports, electronic media, drawings and specifications, prepared or furnished by Consultant pursuant to this project are subject to the terms and conditions specified in the contract between the Consultant and Client, whether or not the project is completed.
11. Unless otherwise specifically noted in the work product or a requirement of the contract between the Consultant and Client, any reuse, modification or disbursement of documents to third parties will be at the sole risk of the third party and without liability or legal exposure to Consultant.
12. In the event that any questions arise with respect to the scope or meaning of Consultant's work product, immediately contact Consultant for clarification, explanation or to update the work product. In addition, Consultant has the right to verify, at the party's expense, the accuracy of the information contained in the work product, as deemed necessary by Consultant, based upon the passage of time or other material change in conditions since conducting the work.
13. Any use of or reliance on the work product shall constitute acceptance of the terms hereof

Figures

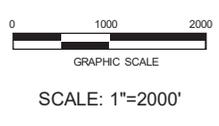




**SITE
LOCATION**

PROPERTY ACQUIRED FROM ABB FOR DETENTION BASIN

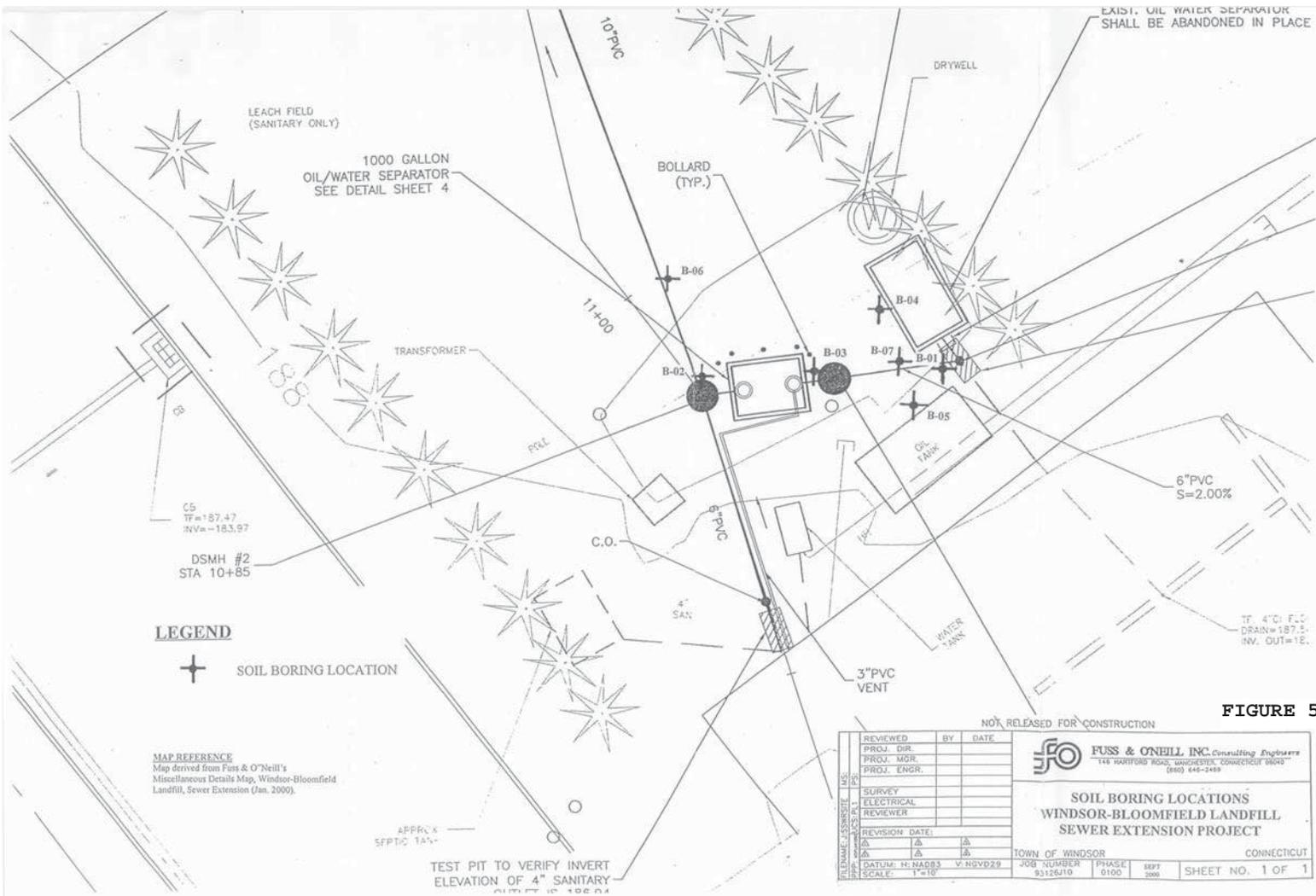
MAP REFERENCE:
 THIS MAP WAS PREPARED FROM THE FOLLOWING
 7.5 MINUTE SERIES TOPOGRAPHIC MAPS:
 WINDSOR LOCKS, CONN. 1964 PHOTOREVISED
 1984



FUSS & O'NEILL
 146 HARTFORD ROAD
 MANCHESTER, CONNECTICUT 06040
 860.646.2469
 www.fando.com

SITE LOCATION MAP
 Windsor-Bloomfield Landfill
 500 Huckleberry Road
 WINDSOR CONNECTICUT

PROJ. No: 88377M18
 DATE: APRIL 2019
FIGURE 1



LEGEND

⊕ SOIL BORING LOCATION

MAP REFERENCE
 Map derived from Fuss & O'Neill's
 Miscellaneous Details Map, Windsor-Bloomfield
 Landfill, Sewer Extension (Jan. 2009).

APPROX
 5 FT TIC 1.5\"/>

TEST PIT TO VERIFY INVERT
 ELEVATION OF 4\"/>

NOT RELEASED FOR CONSTRUCTION

FIGURE 5

REVIEWED	BY	DATE	FUSS & O'NEILL INC. Consulting Engineers 110 WINDFORD ROAD, WINDSOR, CONNECTICUT 06095 (860) 646-2469		
PROJ. DIR.					
PROJ. MGR.					
PROJ. ENGR.					
SURVEY			SOIL BORING LOCATIONS WINDSOR-BLOOMFIELD LANDFILL SEWER EXTENSION PROJECT		
ELECTRICAL					
REVIEWER			TOWN OF WINDSOR CONNECTICUT		
REVISION DATE					
DATUM: N. NAD83	V. NGVD29		JOB NUMBER	PHASE	SEPT
SCALE: 1"=10'			93126210	0100	2000
					SHEET NO. 1 OF 1

Appendix A

Stewardship Permit No. DEP/HWM/CS-164-014



STEWARDSHIP PERMIT

WINDSOR-BLOOMFIELD LANDFILL

500 HUCKLEBERRY ROAD
WINDSOR, CT

EPA ID No. CTD991289133
Permit No. DEP/HWM/CS-164-014

SECTION I

**Stewardship Permit
Standard Facility Conditions**

**TOWN OF WINDSOR
WINDSOR-BLOOMFIELD LANDFILL**

**EPA ID No. CTD991289133
Permit No. DEP/HWM/CS-164-014**

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**STEWARDSHIP PERMIT
SECTION I
STANDARD FACILITY CONDITIONS**

A. EFFECT OF PERMIT

Except as is provided in the Regulations of Connecticut State Agencies ("RCSA") Section 22a-449(c)-110(a)(2) and except for any federally enforceable requirement(s), compliance with this Permit during its term constitutes compliance, for purposes of enforcement, with Connecticut General Statutes ("CGS") Sections 22a-208a and 22a-449(c). This Permit may be modified, revoked and reissued, or terminated during its term as set forth in RCSA Section 22a-449(c)-110(a)(1), which incorporates by reference Title 40 of the Code of Federal Regulations ("40 CFR") Parts 270.41, 270.42 and 270.43.

To fulfill the requirements with both the Connecticut Solid Waste Management Regulations and the Connecticut Hazardous Waste Management Regulations, the Permittee shall perform closure, post-closure care inclusive of surface and groundwater monitoring, landfill decomposition gas monitoring and corrective action in accordance with its application (Application No. 201001731) received by the Department of Environmental Protection ("Department") on March 29, 2010 and the requirements of this Permit. In the event of a conflict between the Permittee's application and the requirements of this Permit, the requirements of this Permit shall take precedence and apply. The provisions of Paragraph No. 8 of Consent Order No. WC5149 issued on July 12, 1994 are superseded by the requirements of this Permit.

The issuance of this Permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of federal, state or local law or regulations.

Term (Duration) - The effective date of this Permit is the date on which the Permit is signed by the Commissioner. This Permit is in effect for a term of ten (10) years and may be renewed at the end of the term, in accordance with the requirements described in Condition No. I.E.2., "Duty to Reapply."

In accordance with 40 CFR 270.73(a), upon issuance of this Permit the Permittee's Interim Status granted under Resource Conservation and Recovery Act ("RCRA") is hereby terminated. In addition, upon the Commissioner's determination that the Permittee has satisfied the requirements of this Permit, a Certificate of Completion shall be issued to the Permittee.

B. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

C. CONFIDENTIAL INFORMATION

The Permittee may claim that any information required to be submitted by this Permit contains or constitutes confidential information in accordance with CGS Section 1-210(b).

D. IMMINENT HAZARD ACTIONS

Notwithstanding any provision of this Permit, enforcement actions may be brought pursuant to Section 7003 of RCRA, CGS Section 22a-6, or any other applicable law.

E. DUTIES AND REQUIREMENTS

1. **Duty to Comply.** The Permittee shall comply with all conditions of this Permit except that the Permittee need not comply with the conditions of this Permit to the extent and for the duration such noncompliance is authorized in an Emergency Permit that explicitly authorizes any such noncompliance. Noncompliance by the Permittee with the terms of this Permit, except under the terms of an Emergency Permit, shall constitute a violation of this Permit and any applicable laws or regulations and is grounds for enforcement action, for Permit termination, revocation and reissuance or for denial of a Permit renewal. Emergency Permit as used herein shall mean Emergency Permit as identified in RCSA Section 22a-449(c)-110(a)(1) incorporating 40 CFR 270.61.

A violation of this Permit for purposes of state and federal law constitutes a violation of a RCRA Permit.

2. **Duty to Reapply.** This Permit shall expire ten (10) years after the effective date of this Permit. The Permittee shall renew this Permit if any activity required by this Permit is not completed prior to the expiration date of this Permit. The Permittee shall apply for renewal of this Permit one hundred eighty (180) calendar days prior to the date of expiration of the Permit, in accordance with the requirements of RCSA Sections 22a-449(c)-104 and 22a-449(c)-110 incorporating 40 CFR 264.101 and 270.10(h) and any other applicable law.
3. **Obligation for Closure, Post-Closure Care and Corrective Action.** The Permittee is required to continue this Permit for any period necessary to comply with the closure, post-closure care and corrective action requirements of this Permit.
4. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce any activity authorized by this Permit in order to maintain compliance with the conditions of this Permit, unless otherwise required to do so by another state or federal authority.
5. **Duty to Mitigate.** In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent its noncompliance from having significant adverse impacts on human health or the environment. No action taken by the Permittee pursuant to this section of this Permit shall affect or limit the Commissioner's authority under any other statute or regulation.
6. **Permit Actions.** This Permit may be modified, revoked and reissued, or terminated as provided for in 40 CFR 270.41, 270.42 or 270.43, and in accordance with all applicable law, including but not limited to, CGS Sections 22a-6g and 6h and RCSA Sections 22a-3a-5 and 22a-449(c)-110. The filing of a request by the Permittee for a Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any condition of this Permit.
7. **Property Rights.** This Permit does not convey any property rights of any sort, or any exclusive privilege to the Permittee.
8. **Duty to Provide Information.** The Permittee shall furnish to the Commissioner, within the timeframe specified by the Commissioner, any information which the Commissioner

may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit or to determine compliance with this Permit. The Permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this Permit.

9. Post-Closure Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance, at a minimum, includes effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls, including appropriate laboratory quality assurance procedures. This provision requires the operation of backup, auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.
10. Inspection and Entry. The Permittee shall allow the Commissioner, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:
 - (a) Enter at reasonable times upon the Facility where a regulated activity is located or conducted, or where records must be kept under the conditions of this Permit;
 - (b) Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Permit;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, and operations regulated or required under this Permit; and
 - (d) Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA, any substance or parameters at any location.
11. Security. Pursuant to RCSA Section 22a-449(c)-104 incorporating 40 CFR 264.14, the Permittee shall prevent the unknowing entry, and minimize the possibility for unauthorized entry, of persons or livestock onto the active portion of the Facility. The Permittee shall secure the Facility to the extent necessary to protect human health.
12. Monitoring and Records.
 - (a) The Permittee shall ensure that samples and measurements taken for the purpose of monitoring are representative of the monitored activity.
 - (b) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit (i.e. records from groundwater monitoring and groundwater surface elevations), the certification required by RCSA Section 22a-449(c)-104 incorporating 40 CFR 264.73(b)(9), and records of all data used to complete the application for this Permit, for the Post-Closure Period. This period may be extended by request of the Commissioner at any time.
 - (c) Records for monitoring information shall include:

- (i) The date, exact place and time of sampling or measurements;
 - (ii) The individual(s) or company who performed the sampling or measurements;
 - (iii) The date(s) analyses were performed;
 - (iv) The individual(s) or company who performed the analyses;
 - (v) The analytical techniques or methods used; and
 - (vi) The results of such analyses.
13. Operating Record. The Permittee shall maintain, in writing, the following information in the Facility's operating record until termination of this Permit:
- (a) Records and results of inspections as required by this Permit, except this data need only be kept for three (3) years from the date of any such inspection;
 - (b) Monitoring, testing or analytical data, and corrective action where required by 40 CFR 264 Subpart F or any regulatory section noted in 40 CFR 264.73(b)(6);
 - (c) All closure, post-closure and corrective action cost estimates, as applicable, under RCSA Sections 22a-209-13 and 22a-449(c)-104 and 40 CFR 264.142 and 40 CFR 264 Subpart H; and
 - (d) Any other information required by this Permit or by any applicable law to be maintained in the Facility operating record.
14. Signatory Requirements. The Permittee's application and all reports or information submitted to the Commissioner by the Permittee pursuant to this Permit shall be signed by the person specified in and contain the certification prescribed in RCSA Section 22a-449(c)-110 incorporating 40 CFR 270.11.
15. Transfers. This Permit is not transferable to any person without the advanced written authorization of the Commissioner. The Commissioner may request any information deemed necessary regarding the potential transferee. Before any such transfer, the Permittee and any proposed transferee shall fully comply with the requirements of CGS Section 22a-60. The Commissioner may require modification or revocation and reissuance of this Permit to change the name of the Permittee and as an incident to any such transfer, incorporate such other requirements, as the Commissioner deems necessary.

In advance of transferring ownership or operation of its Facility prior to the termination of this Permit, the Permittee shall notify the prospective new owner or operator in writing of the requirements of this Permit, 40 CFR 264 through 270, and of the RCSA Section 22a-449(c)100 et. al. The Permittee shall provide such prospective new owner or operator with a copy of this Permit.

The Permittee's failure to notify the new Permittee of the requirements of this Permit in no way relieves the new Permittee of his obligations to comply with all applicable requirements.

If the transfer of the property takes place and the Permittee retains the Permit, an access agreement between the Permittee and the prospective new owners of the Facility shall be approved by the Commissioner prior to the sale of the Facility. The agreement shall

include the anticipated times, locations and frequency of access needed in order for the Permittee to complete closure, post-closure care and corrective action activities and conduct inspection, operation and management activities for all remedial systems. A copy of the Post Closure Plan, referenced in Condition No. II.A.1.. of this Permit, shall be provided to the prospective new owner prior to transfer of the property.

16. Reporting Requirements.

(a) Anticipated Non-Compliance. The Permittee shall give as much advance written notice as possible to the Commissioner of any planned changes in the Facility or activity, which may result in non-compliance with any requirement of this Permit.

(b) Compliance Schedules. Except where otherwise provided for in this Permit, reports of compliance and non-compliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule (Section III) of this Permit, shall be submitted no later than fourteen (14) calendar days following each schedule date, to the extent such reports are required herein.

(c) Twenty-four Hour Reporting.

(i) The Permittee or designee shall orally report to the Commissioner any condition resulting from remedial activity or waste related activity at its Facility, irrespective of whether such activity is in compliance with the requirements of this Permit, which does or may pose an imminent and substantial endangerment to human health or the environment, immediately but not later than twenty-four (24) hours from the time the Permittee becomes aware or should be aware of the circumstances causing such endangerment.

The report to the Commissioner shall include:

- (A) Name, address, and telephone number of the Permittee;
- (B) Name, address, and telephone number of the Facility;
- (C) Date, time and type of incident;
- (D) Description of the occurrence and its cause;
- (E) Name and quantity of waste(s) or constituents thereof involved;
- (F) The extent of injuries, if any;
- (G) An assessment of actual or potential hazards to human health and the environment;
- (H) Estimated quantity and disposition of recovered waste that resulted from the incident;
- (I) All information concerning the release of any waste or constituents thereof that may cause an endangerment to public drinking water supplies; and
- (J) All information concerning a release or discharge of waste or constituents thereof or of a fire or explosion from the Facility, which could threaten human health or the environment

(ii) A written submission shall also be provided within five (5) calendar days of the time the Permittee becomes aware of the circumstances described in subdivision (i) above. The written submission shall contain a

description of the endangerment and its cause; the period of endangerment including exact dates and times, if the endangerment has been abated, and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the endangerment. The Permittee shall maintain in the operating record of its Facility a copy of all such written reports. The Commissioner may waive the five (5) day written notice requirement in favor of a written report within fifteen (15) days of the incident requiring reporting.

(iii) Nothing in this section shall effect or relieve the Permittee of its obligations under CGS Sections 22a-6u or 22a-450.

(d) Other Noncompliance. The Permittee shall report all instances of noncompliance with this Permit not otherwise required to be reported by this Permit to the Commissioner along with any other required monitoring report, no later than thirty (30) days from or after the date the Permittee is aware, or reasonably should have been aware of any such noncompliance. Any such report shall contain, at a minimum, the information listed in Condition No. I.E.16.(c)(i) of this Permit.

(e) Other Information. When the Permittee becomes aware that it failed to submit any relevant facts or information in a Permit application, or submitted incorrect information in a Permit application, report or other document provided to the Commissioner regarding this Permit, it shall submit such relevant facts or correct information to the Commissioner within thirty (30) calendar days of becoming aware of such facts or information.

17. Computation of Time.

(a) Except as is expressly provided for in this Permit, the computation of time periods set forth in this Permit shall be as follows:

- (i) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.
- (ii) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.
- (iii) If the final day of any time period falls on a Saturday, Sunday or a federally or state recognized legal holiday or state mandated furlough day, the time period shall be extended to the next working day.

(b) Submission of Reports. Where this Permit requires the submission of a written report, a notification or other information or documentation to the Commissioner, the report or notification shall be deemed submitted on the date such report, notification or other information is received by the Department.

18. Availability, Retention and Disposition of Records. The Permittee shall ensure that all records required under RCSA Sections 22a-449(c)-100 to 119 et. seq. or this Permit, including all plans, are furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the Department or the U.S. Environmental Protection Agency ("EPA").

The retention period for all records required under RCSA Sections 22a-449(c)-100 to 119 and this Permit is extended automatically during the course of any unresolved enforcement action regarding the Facility or as requested by the Commissioner or Regional Administrator of EPA.

19. Additional Requirements. Requirements not included in this Permit, which become effective by statute or regulation, and not made specifically inapplicable to facilities with a Permit, shall apply to the Permittee's Facility. In the event of any conflict between this Permit and any such requirement, the Permittee shall comply with the more stringent requirement. If the Permittee does not fully comply with the more stringent requirement, the Department may enforce either requirement.
20. Federal, State and Local Laws. Nothing in this Permit shall be construed to prohibit any federal, state or political subdivision thereof from imposing any requirements to the extent authorized by law which are more stringent than those imposed by this Permit. In addition, nothing in the Permit shall relieve the Permittee of its obligation to comply with any other applicable federal, state, or local statute, regulation or ordinance.
21. Modification of the Compliance Schedule.
 - (a) The Permittee may request to modify the submittal due dates of the Compliance Schedule (Section III) of this Permit at any time. Such requests shall be submitted for the Commissioner's review and written approval and shall include sufficient justification for such request(s).
 - (b) The Commissioner may grant extensions of submittal due dates based on the Permittee's demonstration that sufficient justification for the extension exists. Extensions to due dates, which this Permit explicitly defines as being due by a certain time or during a certain time interval, may be granted by the Commissioner if sufficient justification for the extension is demonstrated by the Permittee.
22. Delegation of Licensed Environmental Professional.

The Permittee may request that a licensed environmental professional ("LEP"), pursuant to RCSA Section 22a-133v, verify that Facility-wide environmental investigation has been performed in accordance with prevailing standards and guidelines and remediation activities have addressed any and all requirements of the Commissioner and have achieved compliance with the Remediation Standard Regulations.

 - (a) The LEP shall submit the final report for Facility-wide corrective action for the Commissioner's review and written approval in conjunction with the submission of the verification.
 - (b) In the event the Commissioner revokes the delegation of Facility-wide investigation and oversight of Facility-wide corrective action, the Permittee shall ensure all reports and documents required by this Permit are submitted for the Commissioner's review and written approval within the timeframes specified.
 - (c) The Permittee shall notify the Commissioner in writing of the identity of any LEP other than the one approved by the Commissioner, within ten (10) calendar

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days after assigning or retaining any LEP for the purpose of addressing the actions required by this Permit. The Permittee shall submit to the Commissioner a description of the assigned LEP's education, experience and training which is relevant to the work required by this Permit within ten (10) calendar days after a request for such a description has been made. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable LEP unacceptable.

F. DEFINITIONS

Any term not otherwise defined herein shall be defined as that term is defined in RCSA 22a-449(c)-100 thru 119 incorporating 40 CFR 264 through 279.

1. "Active Portion" shall mean the portion of the Facility where wastes are being or have been managed, placed and which has not undergone closure in accordance with the requirements of this Permit.
2. "Annual" means that sampling and analysis shall occur no later than December 31st of the calendar year. The results of such sampling and analysis shall be submitted to the Commissioner no later than March 1st of the subsequent year.
3. "CFR" means the Code of Federal Regulations in effect on the date that this Permit is issued.
4. "Commissioner" means the Commissioner of Environmental Protection as defined in CGS Section 22a-2 or the Commissioner's duly authorized designee.
5. "Facility" shall mean, pursuant to 40 CFR 260.10, all contiguous land, structures, other appurtenances, and improvements on the land, used for treating, storing or disposing of hazardous and solid waste and all contiguous property under control of the owner or operator and subject to the requirements of this Permit.

For the purposes of this Permit, Facility shall include the Land Disposal Units; any areas used for the management of solid wastes; and areas potentially affected by groundwater contamination resulting from waste management activities.

6. "Hazardous Waste" or "Hazardous Wastes" shall mean hazardous waste as identified or listed as hazardous waste pursuant to 42 U.S.C. Section 6901 et. seq. and Section 22a-449(c)-101 of the RCSA.
7. "Land Disposal Units" shall mean for the purposes of this Permit the "Metal Hydroxide Sludge Cell Area" and the Municipal Solid Waste Disposal Area" as defined in this Permit.
8. "Metal Hydroxide Sludge Cell Area" shall mean the 0.1-acre area located within the Municipal Solid Waste Disposal Area, located along the eastern portion of the Facility that was used for the disposal of approximately 4 million pounds of hazardous wastes (EPA hazardous waste codes K063 and F006) from local industries.
9. "Municipal Solid Waste Disposal Area" shall mean the approximate 55-acre area located in the western portion of the Facility northwest of the terminus of Huckleberry Road that is used by the Town of Windsor for the disposal of municipal and bulky solid waste.
10. "Permittee" shall mean the person responsible for the overall operation of the Facility who has been issued a license by the Commissioner. As used herein "person" is defined in Section 22a-2(c), Chapter 439, of the CGS and "license" is defined in Section 4-166, Chapter 54 of the CGS.

11. "Post-Closure Period" means a minimum of thirty (30) years from the date of certification of closure of the Facility. This period shall be extended or shortened by the Commissioner in accordance with 40 CFR 264.117(a)(2).

For the purposes of this Permit, the start date of the post-closure period for the Metal Hydroxide Sludge Cell Area is November 6, 1985.

Please note: For sites in which waste will remain in place, the post-closure period shall be extended at the Commissioner's discretion. In the event the waste is removed, an alternate post-closure period may be approved by the Commissioner.

12. "Quarterly" means that sampling and analysis shall occur once every three (3) consecutive months in a calendar year (i.e. January, April, July, and October). The results of the sampling and analysis shall be submitted to the Commissioner within sixty (60) calendar days of the date of sampling.
13. "Semi-annual" means that sampling and analysis shall occur during the months of April and October each calendar year. The results of the sampling and analysis shall be submitted to the Commissioner within sixty (60) calendar days of the date of sampling.

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SECTION II

Stewardship Permit
Authorized Activities

TOWN OF WINDSOR
WINDSOR-BLOOMFIELD LANDFILL

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Appendices

- B-1 Post-Closure Care Plan
- C-1 Groundwater Monitoring Plan

SECTION II AUTHORIZED ACTIVITIES

A. SOLID WASTE CLOSURE REQUIREMENTS

1. Closure Plan. The Permittee shall prepare and submit a Closure Plan for the closure of the Municipal Solid Waste Disposal Area for the Commissioner's review and written approval in accordance with the requirements of RCSA Section 22a-209-13 and 40 CFR 258 Subparts E and F.
2. Approval of Closure Plan. The Permittee shall close the Municipal Solid Waste Area in accordance with the Closure Plan submitted and approved pursuant to Condition No. II.A.1. (herein after, the "approved Closure Plan").
3. Modifications to Approved Closure Plan. The Permittee shall submit a written notification or request for a Permit modification to authorize a change in the approved Closure Plan in accordance with the applicable requirements of 40 CFR 124 and 40 CFR 270. The written notification or request must include a copy of the amended closure plan for the Commissioner's review and written approval.
4. Copy of Approved Closure Plan. The Permittee shall ensure that a copy of the approved Closure Plan is kept at Windsor Bloomfield Landfill Office or at an alternate location acceptable to the Commissioner until Final Closure has been completed and certified in accordance with the requirements of this Permit.
5. Notification of Closure.
 - (a) The Permittee shall notify the Commissioner in writing at least sixty (60) calendar days prior to the date it expects to cease the receipt of waste at the Municipal Solid Waste Area.
 - (b) The Permittee shall notify the Commissioner in writing at least sixty (60) calendar days prior to the date it expects to cease the receipt of waste at the Transfer Station.
6. Schedule for Closure. The Permittee shall complete closure activities, as applicable, in accordance with the approved Closure Plan. The Commissioner may approve a longer period for closure if the Permittee demonstrates to the Commissioner's satisfaction that the activities required to comply with the approved Closure Plan will of necessity take longer than twenty-four (24) months to complete and that the Permittee has taken and will continue to take all steps needed to prevent threats to human health and the environment and will comply with any additional conditions deemed necessary by the Commissioner arising from the closure.
7. Completion of Closure. Within ninety (90) calendar days of the completion of closure, the Permittee shall submit to the Commissioner by registered mail, a certification signed by both the Permittee and by an independent registered professional engineer stating that the Municipal Solid Waste Area, as applicable, have been closed in accordance with the approved Closure Plan and a complete set of as-built drawings of the Facility. Documentation supporting the independent, registered professional engineer's certification shall be furnished to the Commissioner upon request.

8. Filing on Land Records. Upon closure of the Municipal Solid Waste Area, the Permittee shall record a detailed description of the Facility on the municipal land records for the Town of Windsor in accordance with the requirements of RCSA Section 22a-209-13.

B. POST-CLOSURE REQUIREMENTS

1. Post-Closure Care Plan. The Permittee shall perform post-closure care of the Metal Hydroxide Sludge Cell Area in accordance with the Post-Closure Plan, included in the application and as Appendix B-1 of this Permit, until it is superseded by the approval of a revised Post-Closure Plan submitted pursuant to Condition No. II.B.2. of this Permit (herein after, the "approved Post-Closure Plan").

The Permittee shall perform all post-closure care of the Facility in accordance with the requirements of the approved Post-Closure Plan.

2. Revised Post-Closure Care Plan. The Permittee shall prepare and submit for the Commissioner's review and written approval a revised post-closure care plan incorporating the post-closure care of the Municipal Solid Waste Disposal Area developed in accordance with the requirements set forth in RCSA Section 22a-209-13, 40 CFR 258 Subparts E and F and 40 CFR 264 Subparts F, G and N. The revised post-closure care plan shall include:
 - (a) A description and frequency of the planned maintenance and inspection activities that will be performed to ensure: (A) the integrity of the cap/final cover and/or other containment systems; and (B) the function of the monitoring equipment;
 - (b) A compliance monitoring program developed in accordance with the requirements of RCSA Sections 22a-209-13 and 22a-449(c)-104 incorporating 40 CFR 264.99, and an evaluation of the existing monitoring data to determine if compliance is achievable;
 - (c) If it is determined that compliance can not be achieved the Permittee shall include a description of how corrective action, required pursuant to 40 CFR 264.100, will be integrated into Facility-wide corrective activities.
 - (d) The name, address and phone number of the Facility contact person during the Post-Closure Care Period;
 - (e) A schedule for the reporting requirements, including but not limited to, groundwater monitoring reports, scheduled and unscheduled inspection and maintenance reports, and corrective action reports resulting from inspection and maintenance activities; and
 - (f) A detailed estimate of the cost of performing post-closure care of the land disposal units developed in accordance with the 40 CFR 265 Subpart H.
3. Modifications to Approved Post-Closure Care Plan. The Permittee shall submit a written notification or request for a Permit modification to authorize a change in the approved Post-Closure Care Plan in accordance with the applicable requirements of 40 CFR 124 and 40 CFR 270. The written notification or request must include a copy of the amended post-closure care plan for the Commissioner's review and written approval.

4. Copy of Post-Closure Care Plan. The Permittee shall ensure that a copy of the approved Post-Closure Care Plan is kept at the Windsor Bloomfield Landfill Office or at an alternate location acceptable to the Commissioner, until the Post-Closure Care Period has been completed and certified in accordance with the requirements of this Permit.

5. Completion of Post-Closure Period.
 - (a) The Permittee shall notify the Commissioner in writing two (2) calendar years prior to the anticipated end date of the Post-Closure Period for the "Municipal Solid Waste Disposal Area".

 - (b) Within sixty (60) calendar days after the completion of the Post-Closure Period, the Permittee shall submit to the Commissioner by registered mail, a certification signed by both the Permittee and by an independent registered professional engineer stating that the post-closure care for the Land Disposal Units, was performed in accordance with the specifications in the approved Post-Closure Plan. Documentation supporting the independent, registered professional engineer's certification shall be furnished to the Commissioner upon request.

6. Notification Requirements for Newly Discovered Releases.
 - (a) The Permittee shall notify the Commissioner in writing of any newly discovered release(s) of solid or hazardous waste or hazardous waste constituents discovered during the course of post-closure care, groundwater monitoring, environmental audits, or other means, within fifteen (15) calendar days of the date of discovery.

 - (b) If the Commissioner determines that further investigation of the Facility is needed, the Permittee shall be required to prepare a plan for further investigation within sixty (60) calendar days of notification by the Commissioner.

7. Inspections.
 - (a) The Permittee shall inspect the Facility for malfunctions, deterioration, and discharges, which may lead to any release of hazardous or solid wastes. The Permittee shall remedy any deterioration which an inspection reveals, to ensure that the problem does not lead to an environmental hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately.

 - (b) The Permittee shall ensure inspections are performed on a quarterly basis by or under the direction of a registered professional engineer. Such inspections shall include, but not be limited to:
 - (i) Odors and dust control;
 - (ii) Conditions of the access road;
 - (iii) Erosion, settling, subsidence or other events that may affect the grading;
 - (iv) Integrity of the final cover soils and vegetation;
 - (v) Drainage control;
 - (vi) Leachate seeps; and
 - (vii) Groundwater monitoring systems.

 - (c) The Permittee shall record all inspections in an inspection log. The inspection logs shall include: the date and time of the inspection, the name of the inspector and company or affiliation, a notation of the observations made, and the date and nature of any repairs. Such records shall be kept for at least three (3) years from

the date of inspection or for longer if a more stringent condition applies, and maintained in either an electronic format with a copy available to the Commissioner upon request, or a written copy in the Facility's Operating Record.

8. **Maintenance of Final Cover.** The Permittee shall ensure that the final cover for the Land Disposal Units is properly maintained and repaired when necessary in accordance with the approved Post-Closure Plan. Proper maintenance shall include, but not be limited to, ensuring that:
- (a) Established vegetation is cut to the proper length to ensure that the root depth is less than six (6) inches for the "Metal Hydroxide Sludge Disposal Cell Area".
 - (b) For areas in which erosion has occurred, the lost material shall be replaced and the area re-seeded; and
 - (c) Obstructions to the drainage structures are removed and properly disposed.
9. **Public Participation Plan.** The Permittee shall prepare and submit for the Commissioner's review and written approval a Public Participation Plan. Such plan shall include:
- (a) The development of a Facility mailing list that at a minimum includes: the Chief Elected Official, the Director of Health, the Fire Chief, and Planning and Zoning Department for the Towns of Windsor and Bloomfield; the State Representative(s) and Senator(s) that represent the Towns of Windsor and Bloomfield; and the property owners identified in Condition No. II.B.9.(b) and (c).
 - (b) A provision for notifying the owners and/or occupants of the properties identified in Appendix A-1 of this Permit at least thirty (30) calendar days prior to the start or completion of remediation work or when there is a significant change in the environmental conditions of the Facility or area(s) affected by the Facility.
 - (c) A provision for notifying the owners and/or occupants of any additional properties identified by the US EPA or the Department to be within the area in which the ground waters can reasonably be expected to become polluted as the result of any pollution emanating from the Facility; and
 - (d) A proposal for the provision of semi-annual written updates via a letter or newsletter or any other means to the Facility mailing list regarding the status of corrective action at the Facility and areas affected by the Facility.
 - (e) A public notice prior to the start of or completion of remedial activities or the completion of post-closure care inclusive of landfill decomposition gas monitoring, and surface and groundwater monitoring at the Facility or area affected by the Facility or any portion thereof consistent with Condition No. II.A.9. of this Permit and the requirements of CGS Section 22a-134(i);
 - (f) The submittal of a copy of such notice to the Commissioner ten (10) calendar days prior to the date of the publication; and
 - (g) The submittal of a written summary of all comments received and responses thirty (30) calendar days after the end of the comment period.

The Permittee shall submit a revised plan sixty (60) calendar days after the installment of any future remedial system of treatment and control, or any significant change in Facility conditions.

The Commissioner shall review the summary of the comments and the Permittee's responses and shall either: adopt the responses, adopt the responses with modifications, or reject the responses and prepare a response to each comment.

In the event of substantial changes in the remedial or post-closure care approach, the Commissioner may require an additional opportunity for public comment with respect to such changes.

10. **Public Notice Requirements.** The Permittee shall provide public notice of closure, any proposed remediation and the Commissioner's tentative determination that remediation and/or post-closure care of the Land Disposal Units inclusive of landfill gas decomposition and surface and groundwater monitoring is complete. Each public notice must provide a forty-five (45) calendar day comment period and a public information meeting no earlier than thirty (30) calendar days from the date of the public notice and no later than forty five (45) calendar days after the public notice.
- (a) Prior to the commencement of any proposed remedial action, the public notice shall summarize the investigations undertaken, the results of the investigations, clearly identify the proposed remedial activities, and include an address and telephone number for a contact person. The Permittee shall:
 - (i) Publish the notice in a newspaper having substantial circulation in the municipality in which the Facility or the affected area is located;
 - (ii) Broadcast the notice on a radio station during the high volume listening times on the same day the notice is published;
 - (iii) Provide a copy of the notice to the Chief Elected Official and the Director of Health of the municipality where the Facility or affected area is located;
 - (iv) Provide a copy of the notice to the owner or operator of the Facility (if the Permittee is not the Facility owner or operator) and to all persons on the Facility mailing list maintained pursuant to 40 CFR 124.10(c)(1)(ix); and
 - (v) Erect and maintain a sign at least six (6) feet by four (4) feet for at least thirty (30) calendar days in a legible condition at the Facility, clearly visible from the public highway and including the words "ENVIRONMENTAL CLEAN-UP IN PROGRESS AT THIS FACILITY. FOR FURTHER INFORMATION CONTACT:", and a telephone number at which any interested person may obtain additional information about the remediation.
 - (b) Prior to the Commissioner's final determination that remediation and/or post-closure care of the Land Disposal Units inclusive of landfill gas decomposition and surface and groundwater monitoring is complete, the Permittee shall:

- (i) Publish the notice in a newspaper having substantial circulation in the municipality in which the Facility or the affected area is located;
 - (ii) Broadcast the notice on a radio station during the high volume listening times on the same day the notice is published;
 - (iii) Provide a copy of the notice to the owner or operator of the Facility (if the Permittee is not the Facility owner or operator) and to all persons on the Facility mailing list maintained pursuant to 40 CFR 124.10(c)(1)(ix); and
 - (iv) Include a summary of the basis for the Commissioner's determination.
- (c) Upon the completion of the public comment period the Commissioner shall make a final determination. If the final determination is that post-closure care and/or remediation is complete then the Stewardship Permit will be terminated and a Certificate of Completion will be issued.

C. WATER QUALITY MONITORING REQUIREMENTS

1. Water Quality Monitoring Plan. The Permittee shall perform surface and groundwater monitoring in accordance with the Water Quality Monitoring Plan, included in the application and as Appendix C-1 of this Permit; until it is superseded by the approval of a revised Water Quality Monitoring Plan submitted pursuant to Condition No. II.C.2 of this Permit. Herein after, the "approved Water Quality Monitoring Plan".

The Permittee shall complete all surface and groundwater monitoring in accordance with the approved Water Quality Monitoring Plan.

2. Revised Water Quality Monitoring Plan.
 - (a) The Permittee shall prepare and submit for the Commissioner's review and written approval a revised water quality monitoring plan for the Facility that incorporates the requirements of CGS Section 22a-430 and Consent Order No. WC5149 issued on July 12, 1994.
 - (b) If at any time the Commissioner or the Permittee determines that a revision to the approved Water Quality Monitoring Plan is needed or required, the Permittee shall prepare and submit for the Commissioner's review and written approval a revised Water Quality Monitoring Plan for the Facility developed in accordance with the requirements set forth in RCSA Sections 22a-209-13 and 40 CFR 264 Subpart F and incorporates surface water monitoring.
3. Modifications to Approved Water Quality Monitoring Plan. The Permittee shall submit a written notification or request for a Permit modification to authorize a change in the approved Water Quality Monitoring Plan in accordance with the applicable requirements of 40 CFR 124 and 270. The written notification or request must include a copy of the amended water quality monitoring plan for the Commissioner's review and written approval.
4. Copy of Approved Water Quality Monitoring Plan. The Permittee shall ensure that a copy of the approved Water Quality Monitoring Plan is kept at the Windsor Bloomfield Landfill Office or at an alternate location acceptable to the Commissioner, until the surface and groundwater monitoring has been completed and certified in accordance with the requirements of this Permit.
5. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all monitoring wells which are installed or used by the Permittee to achieve compliance with this Permit. Proper maintenance, at a minimum, includes inspections to detect existing and potential problems and adequate funding to maintain proper conditions and repair any problems at the Facility.
6. Quality Assurance Project Plan. The Permittee shall prepare and submit for the Commissioner's review and written approval a Quality Assurance Project plan ("QAPP"), prepared in accordance with the document titled: *Quality Assurance Guidance for Conducting Brownfields Site Assessments*, US Environmental Protection Agency OSWER Directive No. 9230.0-83P, and incorporating Connecticut's Reasonable Confidence Protocols. The Permittee shall ensure that the data is of sufficient quality to make decisions regarding investigation, potential remediation, and monitoring of the Site.

7. Monitoring Frequency. The Permittee shall perform surface and groundwater monitoring on a quarterly basis. Upon the Commissioner's written approval of the revised Water Quality Monitoring Plan, submitted pursuant to Condition No. II.C.2., the Permittee shall perform the surface and groundwater monitoring in accordance with the frequency specified in the approved Water Quality Monitoring Plan.
8. Future Corrective Action. If the Commissioner determines that the surface and groundwater monitoring data indicates the soil and/or groundwater remediation was not effective, the Permittee shall within one hundred eighty (180) days of the Commissioner's notice, submit for the Commissioner's review and written approval, a plan for additional soil and groundwater characterization and establishment of a corrective action program consistent with the objectives of 40 CFR 264.100.
9. Completion of Water Quality Monitoring. Within sixty (60) calendar days after the completion of surface and groundwater monitoring (i.e the end of the Post-Closure Period), the Permittee shall submit to the Commissioner by registered mail, a certification signed by both the Permittee and by an independent registered professional engineer stating that the surface and groundwater monitoring for the Facility was performed in accordance with the specifications in the approved Water Quality Monitoring Plan. Documentation supporting the independent, registered professional engineer's certification shall be furnished to the Commissioner upon request.

D. CORRECTIVE ACTION REQUIREMENTS

1. Performance of Corrective Action. The Permittee shall perform corrective action in accordance with the requirements of this Permit, the Remedial Action Plan(s) ("RAPs") submitted and approved pursuant to Condition No. II.E.4. of this Permit, and any other plan(s) submitted and approved by the Commissioner pursuant to this Permit.

The Permittee shall ensure that further investigations for each Solid Waste Management Unit ("SWMU") and Area Of Concern ("AOC") are completed within two (2) years from the date of initiation of such investigation; and that remediation is initiated within three (3) years from the date of initiation of investigation of any SWMU or AOC and completed within ten (10) years of issuance of this Permit or in accordance with an alternative schedule approved in writing by the Commissioner.

The conditions of this section apply to:

- (a) Any additional SWMUs and AOCs discovered during the course of corrective action, site characterization, groundwater monitoring, field investigations, environmental audits, or other means; and

(As used in this Permit, the terms "discover," "discovery," or "discovered" refer to the date on which the Permittee either: (i) visually observes evidence of a new SWMU or AOC, (ii) visually observes evidence of a previously unidentified release of hazardous constituents to the environment, (iii) receives information which suggests the presence of a new release of hazardous waste or hazardous constituents to the environment, or (iv) receives information which suggests the presence of a previously undocumented release of hazardous waste or hazardous waste constituents to the environment.)

- (b) Contamination that has migrated or may migrate beyond the Facility boundary, as necessary to protect human health and the environment.

The Permittee shall implement corrective actions beyond the Facility boundary where necessary to protect human health and the environment consistent with RCOSA Section 22a-449(c)-104 incorporating 40 CFR 264.101(c), unless the Permittee demonstrates, to the satisfaction of the Commissioner, that despite the Permittee's best efforts, as determined by the Commissioner, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for completion of such off-site corrective action will be required.

2. Remedial Options Assessment.

- (a) The Permittee shall evaluate the feasibility and environmental impacts of various potential corrective measures to address leachate emanating from the Facility. Such assessment shall include a public involvement process as part of the assessment and recommendation of the preferred course of action. Such

assessment shall include documentation in support of the technical criteria expected to be achieved by each option and detail the degree of community acceptance for each option.

- (b) Such remedial option assessment shall include an Ecological Risk Assessment prepared pursuant to RCSA Section 22a-133k-2(i), for the Commissioner's review and written approval evaluating the potential for ecological receptors to be exposed to contaminants and to ensure that any remedial goals and objectives address protection for those receptors from existing or potential contaminant exposure
3. Preferred Remedial Option. The Permittee shall submit reports detailing the evaluation of all remedial options considered by the Permittee and recommend a preferred option with justification resulting from Condition No. ILD.2. for the Commissioner's review and written approval. The preferred course(s) of action shall be to the satisfaction of the Commissioner and in accordance with the requirements of this Permit.
4. Remedial Action Plan(s). The Permittee shall prepare and submit for the Commissioner's review and written approval one or more RAP(s) which details the steps to be taken to perform corrective action and the associated cost estimates, developed in accordance with Condition No. ILE.1. of this Permit. The RAP(s) shall address releases to all environmental media at the entire Facility or any portion thereof affected by contamination from the waste handling activities and shall include:
 - (a) Description of the areas at which the remediation will take place identifying the SWMUs and AOCs addressed and the environmental media being remediated;
 - (b) Description of the remedial alternatives considered for performing the specified remediation and the most expeditious schedule for performing each alternative;
 - (c) Proposed preferred alternative with supporting justification thereof;
 - (d) Proposed detailed implementation plan and schedule to perform the preferred remedial options, including the generation and collection of any supplemental site information needed to support completion of remedial design. Such schedule shall include a timeframe for the Permittee to apply for and obtain all Permits and approvals required for such remedial actions and describe the establishment of financial assurance for each proposed phase of remedial activity;
 - (e) Identify the data gaps and describe the rationale used for determining whether (1) no further investigation is required, or (2) additional investigation is necessary to fill any significant data gaps. If additional investigation is needed, the Permittee shall include a plan for the implementation of such investigations and a report summarizing the findings; and
 - (f) Ecologically based and human health based criteria for sediment, an identification of all areas exceeding such criteria and a proposed implementation plan and schedule addressing such areas.

The RAP and associated schedule may propose that activities be conducted in phases associated with a focus on a particular environmental medium, and may reasonably deferring filling any data gap to the remedial design stage where appropriate.

Any RAP containing monitored natural attenuation as the selected remedy for contaminated groundwater emanating from the Facility shall include: 1) an evaluation of the need for source mitigation to achieve remedial criteria; 2) a monitoring and data evaluation plan designed to evaluate the remedy performance; and 3) a contingency remedy conceptual approach in the event that monitored natural attenuation does not perform as anticipated and a schedule for implementation.

5. Implementation of Remedial Action Plan(s). The Permittee shall perform all remedial actions in accordance with the Remedial Action Plan(s) submitted and approved pursuant to Condition No. II.D.4. (herein after, the "approved Remedial Action Plan(s)").
6. Modification of Approved Remedial Action Plan(s). The Permittee shall submit a written request for any modification to an approved Remedial Action Plan for the Commissioner's review and written approval. The request shall include a copy of the amended remedial action plan for the Commissioner's review and written approval.

The Permittee shall continue to take all steps necessary to prevent threats to human health and the environment and shall comply with any additional conditions deemed necessary by the Commissioner arising from the implementation of an approved Remedial Action Plan.

7. Monitoring of Remedial Activities. The Permittee shall perform any operations, management, monitoring and reporting associated with the approved Remedial Action Plan. Monitoring requirements associated with remedial activities shall be incorporated into the Water Quality Monitoring Plan required pursuant to Condition No. II.C.2. of this Permit.

E. FINANCIAL RESPONSIBILITY

1. **Cost Estimates.** The Permittee shall submit for the Commissioner's review and written approval written estimate(s) of the cost of performing closure, post-closure of the Land Disposal Units inclusive of surface and groundwater monitoring and landfill decomposition gas monitoring for the Post-Closure Period and Facility-wide environmental investigation and remediation in accordance with the requirements of this Permit. The Permittee shall ensure that such written estimates are prepared in accordance with the methodology specified in RCSA 22a-449(c)-104 incorporating 40 CFR 264.142(a) and 40 CFR 264.144(a), as applicable.

Note: a fifteen percent (15%) contingency shall be applied to the estimates for unforeseeable elements or events which may increase the cost of performing closure, post-closure care and corrective action.

2. **Establishment of Financial Assurance.** The Permittee shall establish and continually maintain financial assurance using one or more of the instrument formats prescribed by the Commissioner's for post-closure care of the Land Disposal Units and investigation and remediation of the Facility or areas affected by the Facility inclusive of closure of the Municipal Solid Waste Area.

Instrument formats for financial assurance include, but are not limited to: Trust Agreement, Irrevocable Letter of Credit, Payment or performance Bond, Certificate of Insurance, Financial Test (including Local Government Financial Test) and the Corporate Guarantee.

3. **Inflationary Adjustments.** The Permittee shall adjust amounts of financial assurance to reflect inflationary costs as required by RCSA Section 22a-449(c)-104 incorporating 40 CFR 264.142, and any factors that bear on the cost of performing the work that remains to be completed under this Permit. Adjustments shall be made each year, on the anniversary of the establishment of the mechanism(s) for financial assurance until the Commissioner releases the Permittee from the financial assurance requirements of this Permit.

The latest adjusted cost estimate(s) shall be kept at the Facility and a signed original shall be submitted to the Commissioner within fourteen (14) calendar days of preparation.

4. **Periodic Reductions.** Upon request by the Permittee, the Commissioner may approve periodic reductions in the amount of financial assurance commensurate with the completion of post-closure care and corrective action activities. Such request shall include a revised cost estimate and demonstration of completed work activities which equates to at least a fifteen percent (15%) reduction in the estimate costs.
5. **Maintenance of Financial Assurance.** The Permittee shall maintain such financial assurances in effect until the Commissioner notifies the Permittee in writing that it is no longer required to maintain such a mechanism for financial assurances as provided for in Condition No II.D.6. of this Permit.

6. Release of Financial Assurance.

- (a) Within sixty (60) calendar days after receiving the certification, submitted pursuant to Condition No. II.A.5., that closure of the Municipal Solid Waste Disposal Area has been completed in accordance with the approved Closure Plan, the Commissioner will notify the Permittee in writing that it is no longer required to maintain financial assurance for closure of the Municipal Solid Waste Area, unless the Commissioner has reason to believe that closure has not been performed and/or completed in accordance with the approved Closure Plan. The Commissioner shall provide the Permittee with a detailed written statement of any such reason(s) to believe that closure has not been performed and/or completed in accordance with the approved Closure Plan.
- (b) Within sixty (60) calendar days after receiving the certification, submitted pursuant to Condition No. II.B.5., that post-closure care of the Land Disposal Units has been completed in accordance with the approved Post-Closure Plan, the Commissioner will notify the Permittee in writing that it is no longer required to maintain financial assurance for post-closure care of the Land Disposal Units, unless the Commissioner has reason to believe that post-closure care has not been performed and/or completed in accordance with the approved Post-Closure Plan. The Commissioner shall provide the Permittee with a detailed written statement of any such reason(s) to believe that post-closure has not been performed and/or completed in accordance with the approved Post-Closure Plan.
- (c) Within sixty (60) calendar days after receiving the certification, submitted pursuant to Condition No. II.C.9., that water quality monitoring of the Facility has been completed in accordance with the approved Water Quality Monitoring Plan, the Commissioner will notify the Permittee in writing that it is no longer required to maintain financial assurance for water quality monitoring of the Facility, unless the Commissioner has reason to believe that water quality monitoring has not been performed and/or completed in accordance with the approved Water Quality Monitoring Plan. The Commissioner shall provide the Permittee with a detailed written statement of any such reason(s) to believe that water quality monitoring has not been performed and/or completed in accordance with the approved Water Quality Monitoring Plan.

7. Failure to Perform. If the Permittee fails to perform any of the terms or conditions of this Permit, the financial assurance shall be available to the Commissioner to perform such terms or conditions of this Permit provided that, prior to drawing upon any mechanism(s) for financial assurance, the Commissioner shall notify Permittee, in writing, of the alleged failure to perform and provide Permittee with a reasonable period of not less than fifteen (15) calendar days in which to remedy the alleged non-performance.

F. MISCELLANEOUS

1. The Permittee shall not operate the Facility in any manner that stores, treats, or disposes of hazardous or solid wastes or in any way manages hazardous or solid wastes other than hazardous or solid wastes that may be generated during Facility maintenance, authorized closure and/or corrective action activities. Such waste shall be managed in accordance with all applicable regulations. The Permittee shall comply with all applicable requirements of RCRA Section 22a-449(c)-102 incorporating 40 CFR Part 262 "Standards Applicable to Generators of Hazardous Waste".

SECTION III

Stewardship Permit
Compliance Schedule

TOWN OF WINDSOR
WINDSOR-BLOOMFIELD LANDFILL

EPA ID No. CTD991289133
Permit No. DEP/HWM/CS-164-014

SECTION III COMPLIANCE SCHEDULE

A. All conditions set forth in Section III.A. of this Permit shall be conducted within thirty (30) calendar days of the effective date of this Permit. Otherwise, the Permittee may be subject to formal enforcement actions.

1. Retention of LEP(s) or Consultant(s). The Permittee shall designate and assign an environmental compliance expert who may be a full-time employee of the Permittee, and/or retain one or more qualified consultant(s) or LEP(s), acceptable to the Commissioner to prepare the documents required by Condition Nos. II.A.1., II.B.2., II.B.9., II.C.2., II.C.6., II.D.2, II.D.3., II.D.4. and II.E.1. and shall, by that date, notify the Commissioner in writing of the identity of such environmental compliance expert, LEP(s) and/or consultant(s). The Permittee shall assign such environmental compliance expert and/or retain such qualified consultant(s) or LEP(s), acceptable to the Commissioner, until Condition Nos. II.A.1., II.B.2., II.B.9., II.C.2., II.C.6., II.D.2, II.D.3., II.D.4. and II.E.1. of this Permit is fully complied with. The Permittee shall notify the Commissioner in writing of the identity of any environmental compliance expert(s), or consultant(s) or LEP(s) other than those approved by the Commissioner, within ten (10) days after assigning or retaining any environmental compliance expert(s), or consultant for the purpose of addressing the actions required by this Permit. The Permittee shall submit to the Commissioner a description of the assigned environmental compliance expert's, LEP and/or consultant's education, experience and training which is relevant to the work required by this Permit within ten (10) days after a request for such a description has been made. Nothing in this paragraph shall preclude the Commissioner from finding a previously acceptable environmental compliance expert(s), or consultant(s) or LEP(s) unacceptable.

B. All conditions set forth in Section III.B. of this Permit, shall be conducted within one hundred twenty (120) calendar days of the effective date of this Permit. Otherwise, the Permittee may be subject to formal enforcement actions.

7. Submittal of Schedule. The Permittee shall submit for the Commissioner's review and written approval a schedule for the submission of:

- (a) Closure Plan. A Closure Plan and associated cost estimate prepared in accordance with the requirements of Condition Nos. II.A.1. and II.E.1. of this Permit.
- (b) Revised Post-Closure Plan. A revised Post Closure Plan and associated cost estimate prepared in accordance with the requirements of Condition Nos. II.B.2. and II.E.1. of this Permit.
- (c) Ecological Risk Assessment. An Ecological Risk Assessment prepared in accordance with the requirements of Condition No. II.D.2.(b) of this Permit.
- (d) Public Participation Plan. A public participation plan prepared in accordance with the requirements of Condition No. II.B.10. of this Permit.

- (e) Revised Water Quality Monitoring Plan. A revised Water Quality Monitoring Plan prepared in accordance with the requirements of Condition No. II.C.2. of this Permit.
- (f) Quality Assurance Project Plan. A Quality Assurance Project Plan prepared in accordance with the requirements of Condition No. II.C.6. of this Permit.
- (g) Remedial Action Plan(s). The Permittee shall develop and submit for the Commissioner's review and written approval a Remedial Action Plan(s) developed in accordance with the requirements of Condition No. II.D.4. of this Permit.
- (h) Preferred Remedial Option. The Permittee shall submit a report detailing the evaluation of all remedial options considered by The Pemrittee and recommendation of a preferred remedial option pursuant to the requirements of Condition No. II.D.3. of this Permit.
- C. All conditions set forth in Section III.C. of this Permit, shall be conducted within three hundred sixty five (365) calendar days of the effective date of this Permit. Otherwise, the Permittee may be subject to formal enforcement actions.
1. Progress Reports. The Permittee shall submit a progress report for the Commissioner's review describing the actions which the Permittee has taken to date to comply with the terms and conditions of this Permit and annually thereafter until all actions required by this Permit have been completed to the Commissioner's satisfaction.
- D. All conditions set forth in Section III.D. of this Permit, shall be conducted within the timeframe specified. Otherwise, the Permittee may be subject to formal enforcement actions.
1. Financial Assurance. Within one hundred fifty (150) calendar days of the Commissioner's written approval of the cost estimate submitted in accordance with Condition No. II.E.2. of this Permit, the Permittee shall establish and continually maintain financial assurance using one or more financial assurance mechanisms prescribed by the Commissioner for post-closure care inclusive of surface and groundwater monitoring and landfill decomposition gas monitoring of the Facility or areas affected by the Facility.
2. Retention of Additional or Replacement Consultant(s) or LEP(s). The Permittee shall notify the Commissioner in writing within ten (10) calendar days of retaining any additional or replacement consultant(s) or LEP(s) other than those approved in writing by the Commissioner pursuant to Condition No. III.A.1. of this Permit. Such notification shall include a description of the consultant's or LEP's education, experience and training which is relevant to the work required by thus Permit.
- Any consultant(s) or LEP(s) retained to perform all investigation and remediation activities in response to this Permit, must be an independent, licensed environmental professional, and must provide professional services in accordance with RCSA Section 22a-133v-1 through 8 (the Licensed Environmental Professional Regulations). Nothing in this paragraph shall preclude the Commissioner from finding a previously consultant(s) or LEP(s) unacceptable.

Appendix B

Environmental Condition Assessment Form AOC Table



ECAF Addendum 2
Areas of Concern
Windsor-Bloomfield Landfill
Windsor, Connecticut

AOC No.	AOC Description	COPCs	Release Details	Investigation Status	Identified Release Constituents
1	Municipal Solid Waste Landfill (includes cells A, B, C and D) and closed metal hydroxide sludge cell.	VOCs Metals Leachate Indicator parameters	Releases from MSW Landfill from approximately 1973 to the present.	Landfill is scheduled to be closed and capped	See COPCs
2	Transfer Station/Recycling Area	Petroleum hydrocarbons VOCs SVOCs Metals	No documented releases.	Not yet investigated	None
3	Former 2,000-gallon Gasoline UST	Petroleum hydrocarbons VOCs Lead	No documented releases.	UST was removed from the site in 1997, no evidence of a release observed. Soil samples were collected and all analytical results were below CT RSRs.	MTBE (however, below RSR criteria)
4	Former 3,000-gallon diesel fuel UST	Petroleum hydrocarbons VOCs SVOCs	No documented releases.	UST was removed from the site in 1997, no evidence of a release observed. Soil samples were collected and all analytical results below CT RSRs.	None
5	Former 1,000-gallon Fuel Oil UST	Petroleum hydrocarbons VOCs SVOCs	No documented releases.	UST was removed from the site in 1997, no evidence of a release observed. Soil samples were collected and all analytical results below CT RSRs.	None.
6	Former (2) 275-gallon Waste Oil USTs	Petroleum hydrocarbons VOCs SVOCs PCBs	No documented releases.	These two waste oil tanks were contained within a 2,000-gallon concrete vault. The tanks were removed from the site in 1995 and the concrete vault was broken up and disposed of at the landfill.	None.

**ECAF Addendum 2
Areas of Concern
Windsor-Bloomfield Landfill
Windsor, Connecticut**

AOC No.	AOC Description	COPCs	Release Details	Investigation Status	Identified Release Constituents
7	Dry Well	Petroleum hydrocarbons VOCs SVOCs Metals	The maintenance garage at the landfill used to have a dry well. Discharges to this dry well include, degreaser and cleanser products used within the maintenance garage since.	The area in the vicinity of this dry well was investigated during August 2000 prior to the installation of municipal sewer connection to the landfill in 2001 and during July of 2003.	Petroleum hydrocarbons Metals (all results below applicable RSR criteria)
8	Area of tornado debris	Petroleum hydrocarbons VOCs SVOCs Metals	This area encompasses approximately one acre and was used for the disposal of tornado debris which swept through the area during 1979. No documented releases	Area of tornado debris was investigated and delineated during June and July of 2003.	Metals and Petroleum Hydrocarbons (all results below applicable RSR criteria)
9	Area of Maintenance Garage	Petroleum hydrocarbons VOCs SVOCs Metals	This garage was constructed in 1972 and is used to perform routine maintenance on landfill equipment and vehicles. The garage area AOC also includes a 2,000-gallon diesel.	Not yet investigated.	None

Notes:

1. AOC = Area of Concern
2. COPCs = Constituents of Potential Concern
3. VOCs = Volatile Organic Compounds
4. SVOCs = Semivolatile Organic Compounds
5. Leachate Indicator Parameters – alkalinity, ammonia, chloride, total dissolved solids, total iron, total manganese, hardness
6. NA = Not applicable

Appendix C

Sampling Report for 2,000 & 3,000 gallon USTs





Excavation Technologies, Inc.

135 Commerce Court • Cheshire, Connecticut 06410 • 203-271-2233 • Fax 203-271-0657

Corr. file 751267H10
Clyde Charles
Tom R
Rob D.

January 7, 1998

Mr. Thomas Lenehan
Town of Windsor
275 Broad Street
Windsor, Connecticut 06095

**Re: Soil Sampling Report for Underground Storage Tank (UST)
Closure at Windsor-Bloomfield Landfill
Huckleberry Road
Windsor, Connecticut.**

Dear Mr. Lenehan

The following is a letter report of sampling activities performed by Excavation Technologies Inc. (ETI). ETI was contracted to remove a 2,000 gallon unleaded gasoline tank, and a 3,000 gallon diesel fuel tank. The tanks were removed on December 15, 1997. Mr. Raymond A. Walker Jr. made an inspection of the tank grave on the same day. All tank liquids were removed and legally disposed of by *United Industrial Services* of Meriden, Connecticut. (SEE ENCLOSED MANIFEST # CTF 0648631). The tanks were cleaned and triple rinsed by ETI staff. The tanks were then transported to *Albert Brothers* scrap yard in Waterbury, Connecticut for final disposal. Five verification soil samples were collected from each of the excavations. The samples consisted of one composite sample from the north, south, east, west walls and one from the bottom of the excavations. These samples were submitted to *Connecticut Testing Laboratories* in Meriden, Connecticut on December 15, 1997, for analysis of total petroleum hydrocarbons (TPH) by United States Environmental Protection Agency (EPA) method 418.1, EPA method 8260 with MTBE and an additional lead sample for the gasoline EPA method. 7421. The test results indicate that the confirmation samples taken from, both the gasoline and diesel tank, were none detectable with the exception of MTBE found in the south side wall of gasoline tank excavation. The concentrations of BTBE in this sample although do not exceed the DEP criteria.

If you have any questions regarding this letter report, please call us at your convenience.

Sincerely yours,

Timothy G. Slater
President



DEPARTMENT OF ENVIRONMENTAL PROTECTION

Hazardous Waste MANIFEST PROGRAM 79 Elm St., Hartford, CT 06106-5127

FOR STATE USE ONLY

Please type (or print) (Form designed for use on elite (12-pitch) typewriter.)

FOR SPILLS WITHIN CONNECTICUT, CONTACT CT DEP - OIL AND CHEMICAL SPILL RESPONSE AT (203) 556-3328
FOR SPILLS OUTSIDE CONNECTICUT, CONTACT THE NATIONAL RESPONSE CENTER U.S. COAST GUARD 1-800-424-8802
IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER U.S. COAST GUARD 1-800-424-8802

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law, but may be required by State law.	
3. Generator's Name and Mailing Address TOWN OF WINDSOR 175 BROAD STREET WINDSOR, CT 06895				A. State Manifest Document Number CT F 0648631		
4. Generator's Phone (860) 439-1832				B. G.S.I. (Gen. Site Address) TOWN OF WINDSOR LANDFILL 100 NUCLEBERY ROAD WINDSOR, CT 06895		
5. Transporter 1 Company Name WATER-CHAMP-INDIAL CONWILES		6. US EPA ID Number 17-0000000-0000		C. S.T.I. (Trans. Lic. Plate #) 17-15207		
7. Transporter 2 Company Name		8. US EPA ID Number		D. Tran. Phone (261) 238-6742		
9. Designated Facility Name and Site Address WRITEN OIL RECOVERY INC. 126 CHACEY AVENUE MIDDLETOWN, CT 06451				E. S.T.I. (Trans. Lic. Plate #)		
				F. Tran. Phone ()		
				G. State Facility's ID (Not Required)		
				H. Facility's Phone 261 238-6745		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers	13. Total Quantity	14. Unit Wt/Vol	Waste No.	
a. NO. WASTE GASOLINE, (EPA IGNITABILITY), UNIDENTIFIED, WINDSOR, CT		No. Type	1000	GA	EPA STATE/DOIS NONE	
b.					EPA STATE	
c.					EPA STATE	
d.					EPA STATE	
J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above				
a. VIRGIN GASOLINE		a. Interim Final		c. Interim Final		
b.		b.		d.		
15. Special Handling Instructions and Additional Information RESCUE EMERGENCY RESPONSE GUIDE #120 EMERGENCY PHONE # 1-800-238-6745 Point of Departure:						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State laws and regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name Thomas J. Truitt		Signature <i>Thomas J. Truitt</i>		Month Day Year 10/15/97		
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>Thomas J. Truitt</i>		Month Day Year 10/15/97		
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.		Signature		Month Day Year		
Printed/Typed Name		Signature		Month Day Year		



Excavation Technologies, Inc.

135 Commerce Court • Cheshire, Connecticut 06410 • 203-271-2233 • Fax 203-271-0657

Date: December 15, 1997

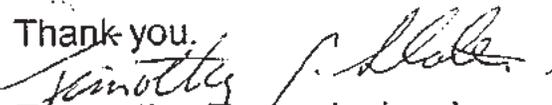
Albert Bros:
Scrap Metal Processors
225 East Aurora Street
P.O. Box 1310
Waterbury, Connecticut 06721

Re: Windsor Town Landfill

Gentlemen:

This is to inform you that on this date the following tank (s) have been cleaned, inspected and delivered by our staff to Albert Bros.:

<i>Quantity</i>	<i>Size/Gallon</i>	<i>Type</i>
1	2,000	gas tank
1	3,000	diesel tank

Thank you.

Excavation Technologies, Inc.
Timothy Slater
President

LAB TRACKING No. 127182

CONNECTICUT TESTING LABORATORIES, INC.
 165 Gracey Avenue / Meriden, CT 06451
 Tel # 203-634-3731 Fax # 203-630-1336

Client Name : ETI
 Send Report To : ↓
 Send Bill To : ↓ PO#: 97151

Samples Collected By (Print) Jim Slater
 Signature: Jim Slater

- FIVE WORKING DAYS 48 HOURS
 PRIORITY 2-4 Day OTHER _____
 TEN WORKING DAYS

LAB USE ONLY ...

#	Field Identifications (PLEASE PRINT NEATLY)	DATE SAMPLED	SAMPLE MATRIX	BOTTLE TYPE	PRESERV. USED	SAMPLE VOLUMES
1	Diesel Tank NORTH	12/15/97	SOIL	GIASS	COOL	402
2	" " South	↓	↓	↓	↓	↓
3	" " EAST	↓	↓	↓	↓	↓
4	" " West	↓	↓	↓	↓	↓
5	" " Bottom	↓	↓	↓	↓	↓
6	" " Composite	↓	↓	↓	↓	↓
7	" "					
8						

ANALYSIS...	1	2	3	4	5	6	7	8	NOTES
METALS, DISS. WTR-8									
METALS, TOTAL WTR-8									
METALS, TOTAL SOIL-8									
EPTOX METALS S/W									
TCLP METALS S/W									
TCLP VOLATILES - 11									
TCLP SEMI VOL. - 13									
TCLP PEST/HERB - 8									
TCLP COMPLETE - 40									
601/8010 SCAN									
602/8020 SCAN									
8015 SCAN									
8240 SCAN									
624 SCAN									
625 SCAN									
604 SCAN									
608/8080 FULL SCAN									
608/8080 PCB ONLY									
8260 SCAN									X
8100 (PAH) SCAN									
TOC									
TOX									
Pb % (PAINT CHIPS)									
WATER POTABILITY									
EDB SCAN									
COLIFORM BACTERIA									

ANALYSIS...	1	2	3	4	5	6	7	8	NOTES
pH / SPEC COND.									
COPPER / NICKEL									
TSS / TDS									
NITRATE-N / NITRITE-N									
CN - TOT. / CN - AMEN.									
BOD (5) (20) / COD									
AMMONIA - N / TKN									
TPH - EPA 418.1	X	A	X	X	X				
OIL & GR. EPA 413.2									
FILTER SAMPLES									
PRESERVE SAMPLES									

EXTRA PARAMETERS - PLEASE LIST SEPARATELY

EXTRA PARAMETERS	1	2	3	4	5	6	7	8	NOTES
MTRB									

RELINQ BY: Jim Slater Date 12/15/97
 REC'D BY: M. McMahon Date 12/15/97
 Time 3:00 Time 1:30

RELINQ BY: _____ Date _____
 REC'D BY: _____ Date _____
 Time _____ Time _____

Please fill in the Field ID's exactly as they appear on the bottle labels. All used samples are kept refrigerated for 45 days from Date Received unless otherwise instructed. The number after the analyt/ refers to the number of tests associated with that parameter. Where there are more than one item per line, please circle the desired test(s).

MATRICES W = WATER S = SOIL O = OIL / HYDROCARBON PRESERVATIONS A = ACID B = BASE C = COOL N = NONE

Client : ETI - Chesire	Date Extracted: 12-18-97
Lab No. : 127182	Date Analyzed : 12-18-97
PO No. : 97151	Analyst : YK
Rep. Date : 1-2-98	

EPA METHOD 8260 GC/MS

Date Samples Rec'd: 12-15-97

Matrix Type :	B
CTL Sample No. :	14983
Field ID :	Diesel
	Tank
	Composite

	MDL				
Styrene	10	BDL			
Bromoform	10	BDL			
Isopropylbenzene	10	BDL			
1,1,2,2-Tetrachloroethane	10	BDL			
Bromobenzene	10	BDL			
1,2,3-Trichloropropane	10	BDL			
n-Propylbenzene	10	BDL			
2-Chlorotoluene	10	BDL			
1,3,5-Trimethylbenzene	10	BDL			
4-Chlorotoluene	10	BDL			
tert-Butylbenzene	10	BDL			
1,2,4-Trimethylbenzene	10	BDL			
sec-Butylbenzene	10	BDL			
p-Isopropyltoluene	10	BDL			
1,3-Dichlorobenzene	10	BDL			
1,2,3-Trimethylbenzene	10	BDL			
1,4-Dichlorobenzene	10	BDL			
n-Butylbenzene	10	BDL			
1,2-Dichlorobenzene	10	BDL			
1,2Dibromo-3-chloropropane	10	BDL			
1,2,4-Trichlorobenzene	10	BDL			
Hexachlorobutadiene	10	BDL			
Naphthalene	10	BDL			
1,2,3-Trichlorobenzene	10	BDL			
MTBE	10	BDL			

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= RPB

Matrix Type : W = Water/Aqueous S = Soil/Solid O = Oil/Hydrocarbons

CONNECTICUT TESTING LABORATORIES, INC.
 165 Gracey Avenue / Meriden, CT 06451-2268
 (203)-634-3731
 Connecticut Certification No. PH-0547

Client : ETI - Chesire
 Lab No. : 127182
 PO No. : 97151
 Rep. Date : 1-2-98

Date Extracted: 12-18-97
 Date Analyzed : 12-18-97
 Analyst : YK

EPA METHOD 8260 GC/MS

Date Samples Rec'd: 12-15-97

Matrix Type :
 CTL Sample No.
 Field ID :

S
 14903
 Diesel
 Tank
 Composite

	MDL				
Dichlorodifluoromethane	10	BDL			
Chloromethane	10	BDL			
Vinyl chloride	10	BDL			
Chloroethane	10	BDL			
Bromomethane	10	BDL			
Trichlorofluoromethane	10	BDL			
1,1-Dichloroethylene	10	BDL			
Methylene chloride	10	BDL			
trans-1,2-Dichloroethylene	10	BDL			
1,1-Dichloroethane	10	BDL			
2,2-Dichloropropane	10	BDL			
cis-1,2-Dichloroethylene	10	BDL			
Chloroform	10	BDL			
Bromochloromethane	10	BDL			
1,1,1-Trichloroethane	10	BDL			
1,1-Dichloropropylene	10	BDL			
Carbon tetrachloride	10	BDL			
Benzene	10	BDL			
1,2-Dichloroethane	10	BDL			
Trichloroethylene	10	BDL			
1,2-Dichloropropane	10	BDL			
Bromodichloromethane	10	BDL			
Dibromomethane	10	BDL			
cis-1,3-Dichloropropylene	10	BDL			
Toluene	10	BDL			
t-1,3-Dichloropropylene	10	BDL			
1,1,2-Trichloroethane	10	BDL			
Tetrachloroethylene	10	BDL			
1,3-Dichloropropane	10	BDL			
Dibromochloromethane	10	BDL			
1,2-Dibromoethane (EDB)	10	BDL			
Chlorobenzene	10	BDL			
Ethylbenzene	10	BDL			
1,1,1,2-Tetrachloroethane	10	BDL			
p/m-Xylene	10	BDL			
o-Xylene	10	BDL			

MDL = Minimum Detectable Level/BDL = Below Detection Level/UNITS = PPB

Matrix Type : W = Water/Aqueous S = Soil/Solid O = Oil/Hydrocarbons

CONNECTICUT TESTING LABORATORIES, INC.
 165 Gracey Avenue / Meriden, CT 06451-2268
 (203)-634-3731

Connecticut Certification No. PH-0547

Date Samples Received : 12-15-97

Client Name: ETI - Chesire	CTL Lab. No. 127182
Report Date: 1-2-98	PO/Job No. 97151

RESULTS OF ANALYSIS

EPA 418.1

Matrix Type: S

Field ID	CTL#	Oil & Grease (TPH) -ppm			
Disel Tank North	14978	ND<25			
Disel Tank South	14979	ND<25			
Disel Tank East	14980	ND<25			
Disel Tank West	14981	ND<25			
Disel Tank Bottom	14982	ND<25			

Matrix Types : W = Water/Aqueous
 S = Soil/Solid
 O = Oil/Hydrocarbons

Post-it* Fax Note	7671	Date	1/5/98	# of pages	3
To	Translate	From	Helm		
Co./Dept.	ETI	Co.	CT		
Phone#	97151	Printer#	127182		
Fax #		Fax #			

CONNECTICUT TESTING LABORATORIES, INC.
 165 Gracey Avenue / Meriden, CT 06451-2268
 (203)-634-3731
 Connecticut Certification No. PH-0547

Date Samples Received : 12-15-97

Client Name: ETI - Chesire	CTL Lab. No. 127183
Report Date: 1-2-98	PO/Job No. 97151

RESULTS OF ANALYSIS

SPLP EPA 1312

Matrix Type: S

Field Id.	CTL #	Lead-mg/L			
Gas Tank North	14984	ND<0.005			
Gas Tank South	14985	ND<0.005			
Gas Tank East	14986	ND<0.005			
Gas Tank West	14987	ND<0.005			
Gas Tank Bottom	14988	ND<0.005			

EPA 418.1

Matrix Type: S

Field Id.	CTL #	Oil & Grease (TPH) -mg/L			
Gas Tank North	14984	ND<25			
Gas Tank South	14985	ND<25			
Gas Tank East	14986	ND<25			
Gas Tank West	14987	ND<25			
Gas Tank Bottom	14988	ND<25			

Matrix Types : W = Water/Aqueous
 S = Soil/Solid
 O = Oil/Hydrocarbons

Post-it® Fax Note	7671	Date	1/5/98	# of pages	5
To	TM	From	John		
Co./Dept.	ETI	Co.	OTL		
Phone #	127183	Phone #			
Fax #		Fax #			

Client : Excavation Technologies, Inc.	Date Extracted : 12/18/97
Lab No. : 127183	Date Analyzed : 12/18-22/97
PO No. : 97151	Analyst : YK
Rep. Date : 1-2-98	

EPA METHOD 8260 GC/MS

Date Samples Rec'd: 12/15/97

Matrix Type :	S	S	S	S	
CTL Sample No. :	14984	14985	14986	14987	
Field ID :	Gas	Gas	Gas	Gas	
	Tank	Tank	Tank	Tank	
	North	South	East	West	
	MDL				
Dichlorodifluoromethane	10	BDL	BDL	BDL	BDL
Chloromethane	10	BDL	BDL	BDL	BDL
Vinyl chloride	10	BDL	BDL	BDL	BDL
Chloroethane	10	BDL	BDL	BDL	BDL
Bromomethane	10	BDL	BDL	BDL	BDL
Trichlorofluoromethane	10	BDL	BDL	BDL	BDL
1,1-Dichloroethylene	10	BDL	BDL	BDL	BDL
Methylene chloride	10	BDL	BDL	BDL	BDL
trans-1,2-Dichloroethylene	10	BDL	BDL	BDL	BDL
1,1-Dichloroethane	10	BDL	BDL	BDL	BDL
2,2-Dichloropropane	10	BDL	BDL	BDL	BDL
cis-1,2-Dichloroethylene	10	BDL	BDL	BDL	BDL
Chloroform	10	BDL	BDL	BDL	BDL
Bromochloromethane	10	BDL	BDL	BDL	BDL
1,1,1-Trichloroethane	10	BDL	BDL	BDL	BDL
1,1-Dichloropropylene	10	BDL	BDL	BDL	BDL
Carbon tetrachloride	10	BDL	BDL	BDL	BDL
Benzene	10	BDL	BDL	BDL	BDL
1,2-Dichloroethane	10	BDL	BDL	BDL	BDL
Trichloroethylene	10	BDL	BDL	BDL	BDL
1,2-Dichloropropane	10	BDL	BDL	BDL	BDL
Bromodichloromethane	10	BDL	BDL	BDL	BDL
Dibromomethane	10	BDL	BDL	BDL	BDL
cis-1,3-Dichloropropylene	10	BDL	BDL	BDL	BDL
Toluene	10	BDL	BDL	BDL	BDL
t-1,3-Dichloropropylene	10	BDL	BDL	BDL	BDL
1,1,2-Trichloroethane	10	BDL	BDL	BDL	BDL
Tetrachloroethylene	10	BDL	BDL	BDL	BDL
1,3-Dichloropropane	10	BDL	BDL	BDL	BDL
Dibromochloromethane	10	BDL	BDL	BDL	BDL
1,2-Dibromoethane (EDB)	10	BDL	BDL	BDL	BDL
Chlorobenzene	10	BDL	BDL	BDL	BDL
Ethylbenzene	10	BDL	BDL	BDL	BDL
1,1,1,2-Tetrachloroethane	10	BDL	BDL	BDL	BDL
p/m-Xylene	10	BDL	BDL	BDL	BDL
o-Xylene	10	BDL	BDL	BDL	BDL

MDL = Minimum Detectable Level/BDL = Below Detection Level/UNITS = PPB

Matrix Type : W = Water/Aqueous S = Soil/Solid O = Oil/Hydrocarbons

CONNECTICUT TESTING LABORATORIES, INC.
 165 Gracey Avenue / Meriden, CT 06450
 (203)-634-3731
 Connecticut Certification No. PH-0547

Client	: Excavation Technologies, Inc.	Date Extracted	12/18/97
Lab No.	: 127183	Date Analyzed	: 12/18-22/97
PO No.	: 97151	Analyst	: YK
Rep. Date	: 1-2-98		

EPA METHOD 8260 GC/MS

Date Samples Rec'd: 12/15/97

Matrix Type :	S	S	S	S	
CTL Sample No.	14984	14985	14986	14987	
Field ID :	Gas	Gas	Gas	Gas	
	Tank	Tank	Tank	Tank	
	North	South	East	West	
	MDL				
Styrene	10	BDL	BDL	BDL	BDL
Bromoform	10	BDL	BDL	BDL	BDL
Isopropylbenzene	10	BDL	BDL	BDL	BDL
1,1,2,2-Tetrachloroethane	10	BDL	BDL	BDL	BDL
Bromobenzene	10	BDL	BDL	BDL	BDL
1,2,3-Trichloropropane	10	BDL	BDL	BDL	BDL
n-Propylbenzene	10	BDL	BDL	BDL	BDL
2-Chlorotoluene	10	BDL	BDL	BDL	BDL
1,3,5-Trimethylbenzene	10	BDL	BDL	BDL	BDL
4-Chlorotoluene	10	BDL	BDL	BDL	BDL
tert-Butylbenzene	10	BDL	BDL	BDL	BDL
1,2,4-Trimethylbenzene	10	BDL	BDL	BDL	BDL
sec-Butylbenzene	10	BDL	BDL	BDL	BDL
p-Isopropyltoluene	10	BDL	BDL	BDL	BDL
1,3-Dichlorobenzene	10	BDL	BDL	BDL	BDL
1,2,3-Trimethylbenzene	10	BDL	BDL	BDL	BDL
1,4-Dichlorobenzene	10	BDL	BDL	BDL	BDL
n-Butylbenzene	10	BDL	BDL	BDL	BDL
1,2-Dichlorobenzene	10	BDL	BDL	BDL	BDL
1,2Dibromo-3-chloropropane	10	BDL	BDL	BDL	BDL
1,2,4-Trichlorobenzene	10	BDL	BDL	BDL	BDL
Hexachlorobutadiene	10	BDL	BDL	BDL	BDL
Naphthalene	10	BDL	BDL	BDL	BDL
1,2,3-Trichlorobenzene	10	BDL	BDL	BDL	BDL
MTBE	10	BDL	114.0	BDL	BDL

MDL = Minimum Detectable Level / BDL = Below Detection Level / UNITS = PPB

Matrix Type : W = Water/Aqueous S = Soil/Solid O = Oil/Hydrocarbons

CONNECTICUT TESTING LABORATORIES, INC.
 165 Gracey Avenue / Meriden, CT 06450
 (203)-634-3731
 Connecticut Certification No. PH-0547

Client : Excavation Technologies, Inc.	Date Extracted : 12/18/97
Lab No. : 127183	Date Analyzed : 12/18-22/97
PO No. : 97151	Analyst : YK
Rep. Date : 1-2-98	

EPA METHOD 8260 GC/MS

Date Samples Rec'd: 12/15/97

Matrix Type :
 CTL Sample No.
 Field ID :

S
 14988
 Gas
 Tank
 Bottom

	MDL				
Dichlorodifluoromethane	10	BDL			
Chloromethane	10	BDL			
Vinyl chloride	10	BDL			
Chloroethane	10	BDL			
Bromomethane	10	BDL			
Trichlorofluoromethane	10	BDL			
1,1-Dichloroethylene	10	BDL			
Methylene chloride	10	BDL			
trans-1,2-Dichloroethylene	10	BDL			
1,1-Dichloroethane	10	BDL			
2,2-Dichloropropane	10	BDL			
cis-1,2-Dichloroethylene	10	BDL			
Chloroform	10	BDL			
Bromochloromethane	10	BDL			
1,1,1-Trichloroethane	10	BDL			
1,1-Dichloropropylene	10	BDL			
Carbon tetrachloride	10	BDL			
Benzene	10	BDL			
1,2-Dichloroethane	10	BDL			
Trichloroethylene	10	BDL			
1,2-Dichloropropane	10	BDL			
Bromodichloromethane	10	BDL			
Dibromomethane	10	BDL			
cis-1,3-Dichloropropylene	10	BDL			
Toluene	10	BDL			
t-1,3-Dichloropropylene	10	BDL			
1,1,2-Trichloroethane	10	BDL			
Tetrachloroethylene	10	BDL			
1,3-Dichloropropane	10	BDL			
Dibromochloromethane	10	BDL			
1,2-Dibromoethane (EDB)	10	BDL			
Chlorobenzene	10	BDL			
Ethylbenzene	10	BDL			
1,1,1,2-Tetrachloroethane	10	BDL			
p/m-Xylene	10	BDL			
o-Xylene	10	BDL			

MDL= Minimum Detectable Level/BDL= Below Detection Level/UNITS= PPB

Matrix Type : W= Water/Aqueous S= Soil/Solid O=Oil/Hydrocarbons

CONNECTICUT TESTING LABORATORIES, INC.
 165 Gracey Avenue / Meriden, CT 06450
 (203)-634-3731
 Connecticut Certification No. PH-0547

Client	: Excavation Technologies, Inc.	Date Extracted	12/18/97
Lab No.	: 127183	Date Analyzed	: 12/18-22/97
PO No.	: 97151	Analyst	: YK
Rep. Date	: 1-2-98		

EPA METHOD 8260 GC/MS

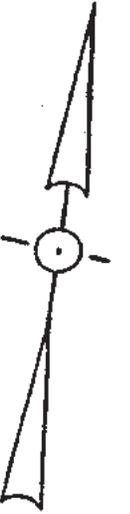
Date Samples Rec'd: 12/15/97

Matrix Type : S
 CTL Sample No. : 14988
 Field ID : Gas
 Tank

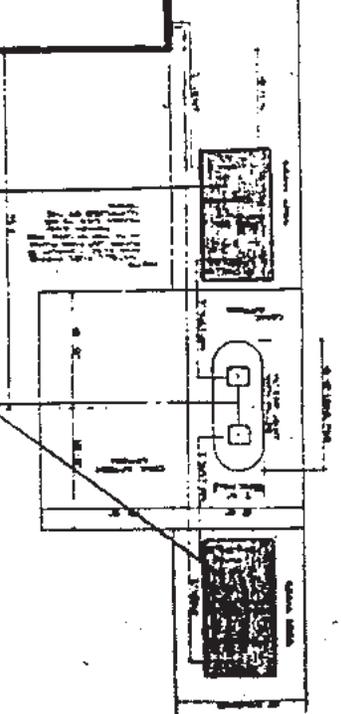
	MDL	Bottom			
Styrene	10	BDL			
Bromoform	10	BDL			
Isopropylbenzene	10	BDL			
1,1,2,2-Tetrachloroethane	10	BDL			
Bromobenzene	10	BDL			
1,2,3-Trichloropropane	10	BDL			
n-Propylbenzene	10	BDL			
2-Chlorotoluene	10	BDL			
1,3,5-Trimethylbenzene	10	BDL			
4-Chlorotoluene	10	BDL			
tert-Butylbenzene	10	BDL			
1,2,4-Trimethylbenzene	10	BDL			
sec-Butylbenzene	10	BDL			
p-Isopropyltoluene	10	BDL			
1,3-Dichlorobenzene	10	BDL			
1,2,3-Trimethylbenzene	10	BDL			
1,4-Dichlorobenzene	10	BDL			
n-Butylbenzene	10	BDL			
1,2-Dichlorobenzene	10	BDL			
1,2Dibromo-3-chloropropane	10	BDL			
1,2,4-Trichlorobenzene	10	BDL			
Hexachlorobutadiene	10	BDL			
Naphthalene	10	BDL			
1,2,3-Trichlorobenzene	10	BDL			
MTBE	10	BDL			

MDL= Minimum Detectable Level/**BDL=** Below Detection Level/**UNITS=** PPB

Matrix Type : W= Water/Aqueous S= Soil/Solid O= Oil/Hydrocarbons



GARAGE / WEIGH STATION



WINDSOR / BLOOMFIELD
LANDFILL

HUCKLEBERRY HILL ROAD

UNDERGROUND STORAGE FACILITY NOTIFICATION

2. PG. 1 of 1



STATE OF CONNECTICUT
Department of Environmental Protection
UNDERGROUND STORAGE FACILITIES PROGRAM
Bureau of Waste Management
165 Capital Avenue, Hartford, CT 06106
TCL 568-4630



EPH16 Rev 12/91

FOR STATE AGENCY USE ONLY
B. DATE RCVD BY D.E.P. _____
C. DATE ENTERED _____

PLEASE TYPE OR PRINT. ALL THREE COPIES MUST BE LEGIBLE.
Refer to INSTRUCTIONS FOR FILING NOTIFICATION before completing form.

D. GRID COORDINATES: YES NO
E. DOES FACILITY MEET NEW REGULATORY REQUIREMENTS? YES NO

SECTION A

SECTION B

SECTION C

1. SITE NAME: Windsor-Bloomfield Landfill

2. BUSINESS NAME AND MAILING ADDRESS: Town of Windsor

3. FACILITY OWNER: Town of Windsor

4. TYPE OF OWNER: PRIVATE STATE MUNICIPAL FEDERAL (G.S.A. NO. _____)

5. OPERATOR/CONTACT PERSON: Tom Lenehan

6. NO. AND STREET: 275 Broad Street

7. CITY OR TOWN: Windsor

8. STATE: Ct. ZIP CODE: 06095

9. TELEPHONE: 860-285-1804

10. DATE OF INSTALLATION: 5/75

11. TOTAL CAPACITY: 5000

12. IN USE: YES NO

13. TYPE OF CONTENTS: Heating fuel #2

14. CHEMICAL NAME OF PRINCIPAL SUBSTANCE: Heating fuel #2

15. CONSTRUCTION MATERIALS: STEEL, UNLINED, CATHODIC PROTECTION

16. PROTECTION: CATHODIC PROTECTION

17. DATE OF REGULATION OR REPLACEMENT: 5/75

18. MONITORING SYSTEM: U

19. FAILURE DETERMINATION CONDUCTED? NO

TANK ID	DATE OF INSTALLATION (Mo./Yr)	TOTAL CAPACITY (Gals)	IN USE	EST. QUANTITY STORED (Gals)	REMOVED	DATE TANK LAST USED (Mo./Yr)	CHEMICAL NAME OF PRINCIPAL SUBSTANCE	STEEL	UNLINED	CATHODIC PROTECTION	DATE OF REGULATION OR REPLACEMENT (Mo./Yr)	MONITORING SYSTEM	FAILURE DETERMINATION CONDUCTED?
Example	5/75	5000	X				Heating fuel #2	X	X	X	5/75	U	NO
Example	7/60	8000		X	8/78		1,1,1 - Trichloroethane CAS #79016	X	X	X	7/60	U	-
11	1973	3000		X	12/97	X	Diesel	X	X	X	7	U	Yes
12	1973	2000		X	12/97	X	Unleaded Gasoline	X	X	X	7	U	Yes

20. HAVE YOU ATTACHED SKETCH OF TANKS AND LOCATION? YES

21. COMMENTS:

22. CERTIFICATION: I certify that the information furnished herein is true and correct to the best of my knowledge and belief, and that I am duly qualified to make such a statement.

SIGNATURE: *Tom Lenehan*

DATE SIGNED: December 15, 1997

OFFICIAL TITLE: *Auth. Rep.*

COPY 2

Appendix D

Characterization Reports for AOCs 4, 7, 8, & 10





Fuss & O'Neill Inc. Consulting Engineers

93-126 J10
CORRES
FILE

■ 146 Hartford Road, Manchester, CT 06040-5921
TEL (860) 646-2469 FAX (860) 643-6313

□ 78 Interstate Drive, West Springfield, MA 01089
TEL (413) 452-0445 FAX (413) 846-0497

□ 140 Sherman Street, Fairfield, CT 06430
TEL (203) 256-1790 FAX (203) 256-5742

□ 410 No. Broadway, East Providence, RI 02916
TEL (401) 434-9760 FAX (401) 434-9920

Letter of Transmittal

To: Dr. Charles Petrillo, Jr.	Date: October 6, 2000
Town of Windsor	Project No: 93-126J10
275 Broad Street	Re: Limited Subsurface Investigation
Windsor, CT 06095	Windsor-Bloomfield Landfill - Sewer Extension
	Telephone No: NA

We are sending you: Attached Under separate cover via Courier the following items

- Shop Drawings
- Prints
- Plans
- Specifications
- Copy of Letter
- Change Order
- Samples
- Other

Copies	Date	No.	Description
1	10/05/00		Above-referenced report

- For approval
- For bids due ___ 19__
- Approved as noted
- For review & comment
- As requested
- For your use
- Returned for corrections
- Submit ___ copies for distribution
- Approved as submitted
- Returned loaned prints
- Resubmit ___ copies for approval
- Returned ___ corrected prints

Remarks: Please contact the undersigned with questions or comments.

C: Mr. Thomas Lenehan, PE - Town of Windsor
Mr. Irv Slike - Windsor-Bloomfield Landfill Office

Signed:
Don E. Wilson



Fuss & O'Neill Inc. *Consulting Engineers*

146 Hartford Road, Manchester, CT 06040-5921
TEL 860 646-2469 FAX 860 643-6313
INTERNET: www.FandO.com

Other Offices:
West Springfield, Massachusetts
Fairfield, Connecticut
East Providence, Rhode Island

October 5, 2000

Mr. Thomas Lenehan, PE
Town of Windsor
275 Broad Street
Windsor, CT 06095

RE: Limited Subsurface Investigation
Windsor-Bloomfield Landfill
Sewer Extension
Windsor, Connecticut

Dear Mr. Lenehan:

Please find attached the analytical results for soil samples that were collected during a limited subsurface soil boring investigation conducted at the above-referenced site on August 15, 2000. The purpose of this investigation was to determine if potentially contaminated soil exists in the vicinity of the future excavation area for the proposed sewer extension to be constructed at the Windsor-Bloomfield Landfill. A sketch showing the locations of the soil borings conducted during the investigation is attached as Figure 1.

FIELD SAMPLING PROGRAM

Soil Sampling and Analysis

To determine if releases have occurred in areas where future excavations will occur, Fuss & O'Neill advanced seven soil borings using GeoPush technology. Locations of these soil borings are shown on Figure 1. Soil was screened in each of the soil borings at two-foot intervals for total petroleum hydrocarbon (TPH) using a PetroFlagg analyzer and for volatile organic compounds (VOCs) with a photoionization detector (PID). All soil borings were advanced to a depth of 12 feet with the exception of B-07, which was an extra boring, and was only advanced to a depth of four feet. Copies of logs detailing each boring log are attached to this letter. Based on the results of the PID readings, and PetroFlagg, one soil sample from each boring was submitted for laboratory analysis. The samples were submitted to Con-test Laboratories (Con-test, a State-certified



Fuss & O'Neill Inc. *Consulting Engineers*

Mr. Thomas Lenehan

October 5, 2000

Page 2

laboratory) for analysis of VOCs by EPA Method 8260A, CT ETPH, and total RCRA 8 Metals by EPA Method 6010A and 7471. The soil sample with the highest TPH concentration out of all the borings was also analyzed for polynuclear aromatic hydrocarbons by EPA Method 8270B, and PCBs by EPA Method 8082. Copies of the laboratory analytical reports, PetroFlagg screening reports, and analytical summary tables are attached to this letter.

ANALYTICAL RESULTS

No VOCs, PCBs or PAHs were detected above the laboratory minimum detection limits (MDLs) However, TPH was detected above the laboratory MDLs from soil collected at every soil boring location with the exception of B-02. The highest TPH concentration by far was 15,000 milligrams per Kilogram (mg/Kg) reported at B-01 at a depth of 0 to 2 feet. Although, deeper samples were not analyzed from this boring, TPH screening results indicate TPH concentrations decrease with depth. This concentration is above the industrial/commercial Direct Exposure Criteria of 2,500 (mg/Kg) established by the Connecticut Department of Environmental Protection (CTDEP) for industrial/commercial areas. The source of TPH in this area is unknown; however, the distribution of TPH suggests surface spillage of oil.

Of the metals reported, only arsenic exceeded the I/C DEC limit of 10 (mg/Kg) established by the CTDEP. Arsenic was reported at a concentration of 14.1 (mg/Kg) for soil collected at B-01, 11.3 (mg/Kg) at B-03, and 12.9 (mg/Kg) at B-06. However, based on these concentrations, and the arsenic concentrations detected from the other borings, it appears that normal background concentrations for arsenic may exceed the I/C DEC limit of 10 (mg/Kg) for this area. Thus, it is our opinion, the arsenic exceedances detected are indicative of normal background concentrations and are not the result of releases to the environment which may have occurred at the landfill.

CONCLUSIONS AND RECOMMENDATIONS

Based on the levels of TPH detected, it appears that soil in the vicinity of part of the future sewer extension line has been impacted by previous site activities. However, the area impacted appears to be restricted to a small area around B-01. TPH was reported at a concentration of 15,000 (mg/Kg) at B-01, above the I/C DEC limit of 2,500 (mg/Kg). To address this TPH, we recommend that an additional section be added to



Fuss & O'Neill Inc. *Consulting Engineers*

Mr. Thomas Lenehan

October 5, 2000

Page 3

the specifications for the future sewer excavation project for contaminated soil management and disposal. Although we anticipate that disposal of this soil can be transferred across the street at the landfill, a special authorization may be required to address this disposal process.

If you should have any questions with regards to this report, please feel free to contact Don Wilson or the undersigned.

Sincerely,

Affirmed:

Robert M. Danielson, LEP, CPG
Senior Hydrogeologist

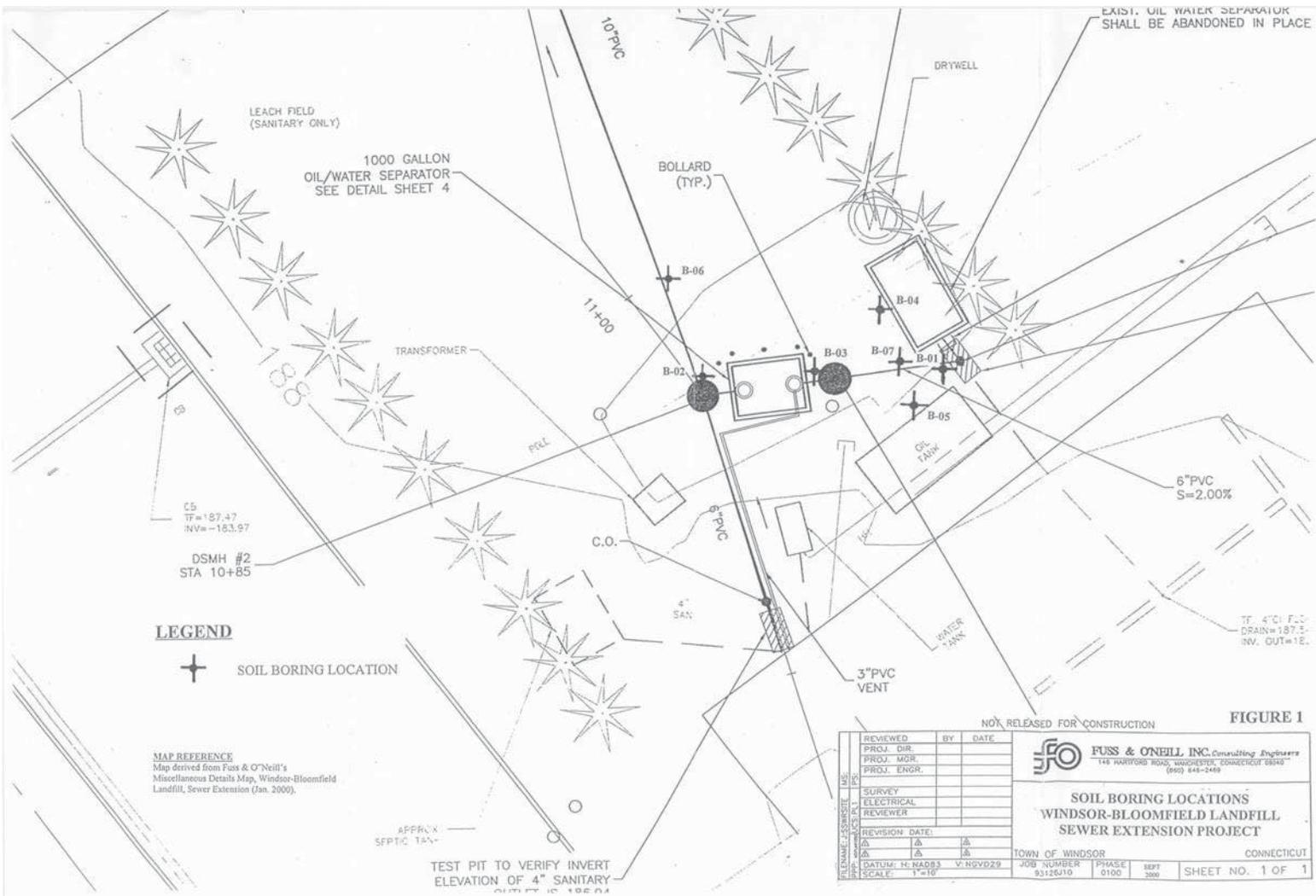
David F. Hurley, LEP, RPG
Vice President

/gml

Attachments

- 1 Figure 1
- 2 Laboratory Reports
- 3 Boring Logs

c: Dr. Charles Petrillo, Jr. - Town of Windsor
Mr. Irv Slike - Windsor-Bloomfield Landfill Office



LEGEND

⊕ SOIL BORING LOCATION

MAP REFERENCE
 Map derived from Fuss & O'Neill's
 Miscellaneous Details Map, Windsor-Bloomfield
 Landfill, Sewer Extension (Jan. 2000).

TEST PIT TO VERIFY INVERT
 ELEVATION OF 4" SANITARY
 CULVERT IS 185.04

NOT RELEASED FOR CONSTRUCTION

FIGURE 1

REVIEWED	BY	DATE	FUSS & O'NEILL INC. Consulting Engineers 144 HARTFORD ROAD, WINDSOR, CONNECTICUT 06095 (860) 648-2489		
PROJ. DIR.					
PROJ. MGR.					
PROJ. ENGR.					
SURVEY			SOIL BORING LOCATIONS WINDSOR-BLOOMFIELD LANDFILL SEWER EXTENSION PROJECT		
ELECTRICAL					
REVIEWER			TOWN OF WINDSOR CONNECTICUT		
REVISION DATE:					
DATUM: N. NAD83	V. NGVD29		JOB NUMBER	PHASE	SEPT
SCALE: 1"=10'			93126J10	0100	2000
					SHEET NO. 1 OF 1

ATTACHMENTS

Project Name: Windsor-Bloomfield Landfill		Site Id: B-01		 FUSS & O'NEILL INC. Consulting Engineers 146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040 (860) 646-2469	
Project Location: Windsor, Connecticut		Project Number: 93-126 J10			
Boring Location: Next to office				Logged By: M. Malczyk	
Description: Soil Boring		Date(s): 08/15/00 - 08/16/00		Checked By:	
Ground Elevation: 0.00'		Datum:		Drilling Co.: Fuss & O'Neill, Inc.	
X Coordinate: 0.00		Y Coordinate: 0.00		Drilling Method: Geopack	
Remarks: Field Instrument: OVM #2		Total Depth: 12.00'		Borehole Dia: 1.00in	
				Backfill type: Native Material to: 0.00' to: 12.00' type: to: to: type: to: to: type: to: to: type: to: to:	

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Blow Count	Water Level	Material Description	Graphic Log	Lithologic Code	Field Testing	
0	0		-01			SAND, F, some M sand, moderate yellowish brown (10YR 5/4).		SP	14 ppm	
	1									
	2		-02			Same as above.				0 ppm
	3									
	4		-03			Same as above.				0 ppm
-5	5									
	6		-04			SAND, F, little M sand, little C sand, moderate yellowish brown (10YR 5/4).				0 ppm
	7									
	8		-05			Same as above.				0 ppm
	9									
-10	10		-06			SAND, F, some M sand, dark yellowish brown (10YR 4/2).				0 ppm
	11									
	12					End of boring at 12 feet.				
	13									
	14									

Project Name: Windsor-Bloomfield Landfill		Site ID: B-02		 FUSS & O'NEILL INC. Consulting Engineers 146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040 (860) 646-2489	
Project Location: Windsor, Connecticut		Project Number: 83-126 JD			
Boring Location: Next to office				Logged By: N. Malczyk	
Description: Soil Boring		Details: 08/15/00 - 08/15/00		Checked By:	
Ground Elevation: 0.00'		Datum:		Drilling Co.: Fuss & O'Neill, Inc.	
X Coordinate: 0.00		Y Coordinate: 0.00		Drilling Method: Geopush	
Remarks: Field Instrument: OVM #2		Total Depth: 12.00'		Borehole Dia: 1.00in	
				Backfill: type: Native Material fr: 0.00' to: 12.00' type: fr: to: type: fr: to: type: fr: to: type: fr: to:	

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Blow Count	Water Level	Material Description	Graphic Log	Lithologic Code	Field Testing	
0	0		07			SAND, F, some M sand, moderate brown (5YR 4/4).		SP	0 ppm	
	1									
	2		08			Same as above.				0 ppm
	3									
	4		09			Same as above.				0 ppm
-5	5									
	6		10			Same as above, dark yellowish brown (10YR 4/2).				0 ppm
	7									
	8		11			Same as above.				0 ppm
	9									
-10	10		12			Same as above.				0 ppm
	11									
	12					End of boring at 12 feet.				
	13									
	14									

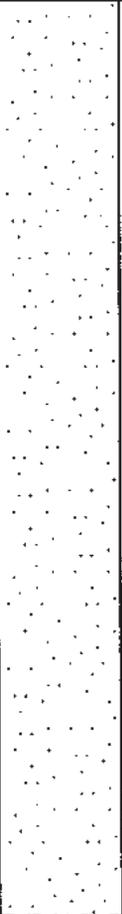
Project Name: Windsor-Bloomfield Landfill		Site Id: B-03		 FUSS & ONEILL INC. Consulting Engineers 146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040 (860) 646-2489	
Project Location: Windsor, Connecticut		Project Number: 03-128 J10			
Boring Location: Next to office				Logged By: N. Malczyk	
Description: Soil Boring		Date(s): 06/15/00 - 06/15/00		Checked By:	
Ground Elevation: 0.00'		Datum:		Drilling Co: Fuss & O'Neill, Inc.	
X Coordinate: 0.00		Y Coordinate: 0.00		Driller: P. Hanton	
Remarks: Field Instrument: OVM #2		Total Depth: 12.00'		Drilling Method: Geopush	
				Borehole Dia: 1.00in	
				Backfill: type Native Material fr: 0.00' to: 12.00' type fr: to: type fr: to: type fr: to: type fr: to:	

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Blow Count	Water Level	Material Description	Graphic Log	Lithologic Code	Field Testing
0			13			SAND, F, some M sand, dark yellowish brown (10YR 4/2).		SP	0 ppm
	1								
	2		14			Same as above.			0 ppm
	3								
	4		15			Same as above.			0 ppm
-5	5								
	6		16			Same as above, pale yellowish brown (10YR 6/2).			0 ppm
	7								
	8		17			Same as above.			0 ppm
	9								
-10	10		18			Same as above.			0 ppm
	11								
	12					End of boring at 12 feet.			
	13								
	14								

Project Name: Windsor-Bloomfield Landfill		Site Id: B-04		 FUSS & O'NEILL INC. Consulting Engineers 145 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040 (860) 646-2469	
Project Location: Windsor, Connecticut		Project Number: 03-128 J10			
Boring Location: Next to office				Logged By: M. Malczyk	
Description: Soil Boring		Dates: 08/15/00 - 08/15/00		Checked By:	
Ground Elevation: 0.00'		Datum:		Drilling Co.: Fuss & O'Neill, Inc.	
X Coordinate: 0.00		Y Coordinate: 0.00		Drilling Method: Geopush	
Remarks: Field Instrument: CVM #2		Total Depth: 12.00'		Borehole Dia.: 100in	
Backfill type: Native Material from: 0.00' to: 12.00' type: from: to: type: from: to: type: from: to: type: from: to:					

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Blow Count	Water Level	Material Description	Graphic Log	Lithologic Code	Field Testing
0			-10			SAND, F, some M sand, dark yellowish brown (10YR 4/2).		SP	0 ppm
	1					Same as above.			0 ppm
	2		-20			Same as above.			0 ppm
	3								
	4		-21			Same as above.			0 ppm
-5	5								
	6		-22			Same as above, pale yellowish brown (10YR 6/2).			0 ppm
	7								
	8		-23			Same as above.			0 ppm
	9								
-10	10		-24			Same as above.			0 ppm
	11								
	12					End of boring at 12 feet.			
	13								
	14								

Project Name: Windsor-Bloomfield Landfill		Site ID: B-06		 FUSS & O'NEILL INC. Consulting Engineers 145 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040 (860) 648-2469	
Project Location: Windsor, Connecticut		Project Number: 93-128 J10			
Boring Location: Next to office				Logged By: N. Malczyk	
Description: Soil Boring		Dates: 08/15/00 - 08/15/00		Checked By:	
Ground Elevation: 0.00'		Datum:		Drilling Co.: Fuss & O'Neill, Inc.	
X Coordinate: 0.00		Y Coordinate: 0.00		Drilling Method: Geopush	
Remarks: Field Instrument: OVM #2		Total Depth: 12.00'		Borehole Dia.: 100in	
				Backfill type: Native Material fr: 0.00' to: 12.00' type: fr: to: type: fr: to: type: fr: to: type: fr: to:	

Elevation (ft)	Depth (ft)	Recovery	Sample No.	Row Count	Water Level	Material Description	Graphic Log	Lithologic Code	Field Testing
0			-31			SAND, F, some M sand, dark yellowish brown (10YR 4/2).		SP	0 ppm
1						Same as above.		0 ppm	
2			-32			Same as above.		0 ppm	
3						Same as above.		0 ppm	
4			-33			Same as above.		0 ppm	
5						Same as above.		0 ppm	
6			-34			Same as above, pale yellowish brown (10YR 6/2).		0 ppm	
7						Same as above.		0 ppm	
8			-35			Same as above.		0 ppm	
9						Same as above.		0 ppm	
10			-36			Same as above.		0 ppm	
11						Same as above.		0 ppm	
12						End of boring at 12 feet.			
13									
14									

Analytical Results
Windsor-Bloomfield Landfill
Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	B-01 295000815-01 08/15/2000 1.00	B-02 295000815-10 08/15/2000 7.00	B-03 295000815-13 08/15/2000 1.00	B-04 295000815-24 08/15/2000 11.00
1,1,1,2-Tetrachloroethane	(mg/kg)	<0.002	<0.002	<0.002	<0.002
1,1,1-Trichloroethane	(mg/kg)	<0.004	<0.004	<0.004	<0.004
1,1,1,2-Tetrachloroethane	(mg/kg)	<0.007	<0.006	<0.006	<0.007
1,1,2-Trichloroethane	(mg/kg)	<0.003	<0.003	<0.003	<0.004
1,1-Dichloroethane	(mg/kg)	<0.003	<0.003	<0.003	<0.004
1,1-Dichloroethylene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
1,1-Dichloropropene	(mg/kg)	<0.007	<0.006	<0.006	<0.007
1,2,3-Trichlorobenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.004
1,2,3-Trichloropropane	(mg/kg)	<0.006	<0.006	<0.006	<0.007
1,2,4-Trichlorobenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.004
1,2,4-Trimethylbenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.004
1,2-Dibromo-3-chloropropane	(mg/kg)	<0.008	<0.007	<0.007	<0.008
1,2-Dibromoethane	(mg/kg)	<0.003	<0.003	<0.003	<0.004
1,2-Dichlorobenzene	(mg/kg)	<0.004	<0.004	<0.004	<0.004
1,2-Dichloroethane	(mg/kg)	<0.004	<0.004	<0.004	<0.004
1,2-Dichloropropane	(mg/kg)	<0.003	<0.003	<0.003	<0.003
1,3,5-Trimethylbenzene	(mg/kg)	<0.005	<0.005	<0.004	<0.005
1,3-Dichlorobenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
1,3-Dichloropropane	(mg/kg)	<0.002	<0.002	<0.002	<0.002
1,4-Dichlorobenzene	(mg/kg)	<0.004	<0.004	<0.004	<0.004
2,2-Dichloropropane	(mg/kg)	<0.004	<0.004	<0.004	<0.004
2-Butanone(MEK)	(mg/kg)	<0.056	<0.055	<0.053	<0.060
2-Chloroethylvinylether	(mg/kg)	<0.045	<0.044	<0.042	<0.048
2-Chlorotoluene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
2-Hexanone	(mg/kg)	<0.046	<0.044	<0.043	<0.049
4-Chlorotoluene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
Acetone	(mg/kg)	<0.235	<0.227	<0.220	<0.250
Acrolein	(mg/kg)	<0.094	<0.091	<0.088	<0.100
Acrylonitrile	(mg/kg)	<0.036	<0.035	<0.033	<0.038
Benzene	(mg/kg)	<0.003	<0.003	<0.003	<0.003

---=Not analyzed

Analytical Results
Windsor-Bloomfield Landfill
Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	B-01 295000815-01 08/15/2000 1.00	B-02 295000815-10 08/15/2000 7.00	B-03 295000815-13 08/15/2000 1.00	B-04 295000815-24 08/15/2000 11.00
Bromobenzene	(mg/kg)	<0.002	<0.002	<0.002	<0.002
Bromochloromethane	(mg/kg)	<0.003	<0.003	<0.003	<0.004
Bromodichloromethane	(mg/kg)	<0.002	<0.002	<0.002	<0.002
Bromoform	(mg/kg)	<0.006	<0.005	<0.005	<0.006
Bromomethane	(mg/kg)	<0.006	<0.005	<0.005	<0.006
Carbon disulfide	(mg/kg)	<0.014	<0.014	<0.013	<0.015
Carbon tetrachloride	(mg/kg)	<0.002	<0.002	<0.002	<0.002
Chlorobenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
Chloroethane	(mg/kg)	<0.004	<0.004	<0.004	<0.004
Chloroform	(mg/kg)	<0.004	<0.004	<0.004	<0.004
Chloromethane	(mg/kg)	<0.070	<0.068	<0.066	<0.075
Dibromochloromethane	(mg/kg)	<0.002	<0.002	<0.002	<0.002
Dibromomethane	(mg/kg)	<0.005	<0.005	<0.005	<0.005
Dichlorodifluoromethane	(mg/kg)	<0.005	<0.005	<0.004	<0.005
Ethyl benzene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
Ethylmethacrylate	(mg/kg)	<0.004	<0.004	<0.004	<0.004
Hexachlorobutadiene	(mg/kg)	<0.006	<0.006	<0.006	<0.007
Iodomethane	(mg/kg)	<0.004	<0.004	<0.004	<0.004
Isopropylbenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
M/P-xylenes	(mg/kg)	<0.006	<0.006	<0.006	<0.007
MIBK	(mg/kg)	<0.041	<0.040	<0.039	<0.044
MTBE	(mg/kg)	<0.004	<0.004	<0.004	<0.004
Methylene chloride	(mg/kg)	<0.070	<0.068	<0.066	<0.075
Naphthalene	(mg/kg)	<0.005#	<0.005	<0.004	<0.005
Styrene	(mg/kg)	<0.003	<0.003	<0.003	<0.004
Tetrachloroethylene	(mg/kg)	<0.002	<0.002	<0.002	<0.002
Toluene	(mg/kg)	<0.003	<0.003	<0.003	<0.004
Trichloroethylene	(mg/kg)	<0.005	<0.005	<0.004	<0.005
Trichlorofluoromethane	(mg/kg)	<0.003	<0.003	<0.003	<0.004
Vinyl Acetate	(mg/kg)	<0.077	<0.075	<0.072	<0.082

#=Constituent in more than one test method, highest result reported.
—=Not analyzed

Analytical Results
Windsor-Bloomfield Landfill
Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	B-01 295000815-01 08/15/2000 1.00	B-02 295000815-10 08/15/2000 7.00	B-03 295000815-13 08/15/2000 1.00	B-04 295000815-24 08/15/2000 11.00
Vinyl Chloride	(mg/kg)	<0.002	<0.002	<0.002	<0.002
cis-1,2-Dichloroethylene	(mg/kg)	<0.002	<0.002	<0.002	<0.002
cis-1,3-Dichloropropene	(mg/kg)	<0.002	<0.002	<0.002	<0.002
cis-1,4-Dichloro-2-butene	(mg/kg)	<0.011	<0.011	<0.011	<0.012
n-Butylbenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.004
n-Propylbenzene	(mg/kg)	<0.004	<0.004	<0.004	<0.004
o-Xylene	(mg/kg)	<0.002	<0.002	<0.002	<0.002
p-Isopropyltoluene	(mg/kg)	<0.003	<0.003	<0.003	<0.004
sec-Butylbenzene	(mg/kg)	<0.003	<0.003	<0.003	<0.003
tert-Butylbenzene	(mg/kg)	<0.004	<0.004	<0.004	<0.004
trans-1,2-Dichloroethylene	(mg/kg)	<0.004	<0.004	<0.004	<0.004
trans-1,3-Dichloropropene	(mg/kg)	<0.002	<0.002	<0.002	<0.002
trans-1,4-Dichloro-2-butene	(mg/kg)	<0.010	<0.010	<0.009	<0.010
Aroclor 1232	(mg/kg)	<0.250	---	---	---
Aroclor 1242	(mg/kg)	<0.250	---	---	---
Aroclor 1254	(mg/kg)	<0.250	---	---	---
Aroclor 1260	(mg/kg)	<0.250	---	---	---
Aroclor 1248	(mg/kg)	<0.250	---	---	---
Aroclor 1221	(mg/kg)	<0.250	---	---	---
PCB's	(mg/kg)	<0.250	---	---	---
Arsenic	(mg/kg)	14.1	7.04	11.3	5.11
Barium	(mg/kg)	15.1	12.1	18.4	13.6
Cadmium	(mg/kg)	<0.05	0.08	<0.05	<0.05
Chromium	(mg/kg)	5.27	4.43	5.94	4.92
Lead	(mg/kg)	6.58	3.00	6.40	<2.50
Mercury	(mg/kg)	0.010	<0.006	<0.009	<0.008
Selenium	(mg/kg)	<5.00	<5.00	<5.00	<5.00
Silver	(mg/kg)	<0.50	<0.50	<0.50	<0.50
Acenaphthene	(mg/kg)	<0.33	---	---	---
Acenaphthylene	(mg/kg)	<0.33	---	---	---

---Not analyzed

Analytical Results
Windsor-Bloomfield Landfill
Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE	B-01	B-02	B-03	B-04
	SAMPLE ID	295000815-01	295000815-10	295000815-13	295000815-24
	DATE	08/15/2000	08/15/2000	08/15/2000	08/15/2000
	DEPTH (ft)	1.00	7.00	1.00	11.00
Anthracene	(mg/kg)	<0.33	---	---	---
Benzo(a)anthracene	(mg/kg)	<0.33	---	---	---
Benzo(b)fluoranthene	(mg/kg)	<0.33	---	---	---
Benzo(ghi)perylene	(mg/kg)	<1.00	---	---	---
Benzo(k)fluoranthene	(mg/kg)	<0.67	---	---	---
Chrysene	(mg/kg)	<0.67	---	---	---
Dibenzo(a,h)anthracene	(mg/kg)	<0.67	---	---	---
Fluoranthene	(mg/kg)	<0.33	---	---	---
Fluorene	(mg/kg)	<0.33	---	---	---
2-Methylnaphthalene	(mg/kg)	<0.33	---	---	---
Phenanthrene	(mg/kg)	<0.33	---	---	---
Pyrene	(mg/kg)	<1.00	---	---	---
Extractable Petroleum Hydrocarbons	(mg/kg)	15000.	<2.5	30.	37.

---=Not analyzed

Analytical Results
Windsor-Bloomfield Landfill
Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	B-05 295000815-25 08/15/2000 1.00	B-06 295000815-32 08/15/2000 3.00
1,1,1,2-Tetrachloroethane	(mg/kg)	<0.002	<0.002
1,1,1-Trichloroethane	(mg/kg)	<0.004	<0.004
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.007	<0.007
1,1,2-Trichloroethane	(mg/kg)	<0.003	<0.003
1,1-Dichloroethane	(mg/kg)	<0.003	<0.003
1,1-Dichloroethylene	(mg/kg)	<0.003	<0.003
1,1-Dichloropropene	(mg/kg)	<0.007	<0.007
1,2,3-Trichlorobenzene	(mg/kg)	<0.003	<0.003
1,2,3-Trichloropropane	(mg/kg)	<0.006	<0.006
1,2,4-Trichlorobenzene	(mg/kg)	<0.003	<0.003
1,2,4-Trimethylbenzene	(mg/kg)	<0.003	<0.003
1,2-Dibromo-3-chloropropane	(mg/kg)	<0.007	<0.008
1,2-Dibromoethane	(mg/kg)	<0.003	<0.003
1,2-Dichlorobenzene	(mg/kg)	<0.004	<0.004
1,2-Dichloroethane	(mg/kg)	<0.004	<0.004
1,2-Dichloropropane	(mg/kg)	<0.003	<0.003
1,3,5-Trimethylbenzene	(mg/kg)	<0.005	<0.005
1,3-Dichlorobenzene	(mg/kg)	<0.003	<0.003
1,3-Dichloropropane	(mg/kg)	<0.002	<0.002
1,4-Dichlorobenzene	(mg/kg)	<0.004	<0.004
2,2-Dichloropropane	(mg/kg)	<0.004	<0.004
2-Butanone(MEK)	(mg/kg)	<0.056	<0.057
2-Chloroethylvinylether	(mg/kg)	<0.045	<0.046
2-Chlorotoluene	(mg/kg)	<0.003	<0.003
2-Hexanone	(mg/kg)	<0.045	<0.046
4-Chlorotoluene	(mg/kg)	<0.003	<0.003
Acetone	(mg/kg)	<0.234	<0.238
Acrolein	(mg/kg)	<0.093	<0.095
Acrylonitrile	(mg/kg)	<0.036	<0.036
Benzene	(mg/kg)	<0.003	<0.003

---Not analyzed

Analytical Results
Windsor-Bloomfield Landfill
Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	B-05 295000815-25 08/15/2000 1.00	B-06 295000815-32 08/15/2000 3.00
Bromobenzene	(mg/kg)	<0.002	<0.002
Bromochloromethane	(mg/kg)	<0.003	<0.003
Bromodichloromethane	(mg/kg)	<0.002	<0.002
Bromoform	(mg/kg)	<0.006	<0.006
Bromomethane	(mg/kg)	<0.006	<0.006
Carbon disulfide	(mg/kg)	<0.014	<0.014
Carbon tetrachloride	(mg/kg)	<0.002	<0.002
Chlorobenzene	(mg/kg)	<0.003	<0.003
Chloroethane	(mg/kg)	<0.004	<0.004
Chloroform	(mg/kg)	<0.004	<0.004
Chloromethane	(mg/kg)	<0.070	<0.071
Dibromochloromethane	(mg/kg)	<0.002	<0.002
Dibromomethane	(mg/kg)	<0.005	<0.005
Dichlorodifluoromethane	(mg/kg)	<0.005	<0.005
Ethyl benzene	(mg/kg)	<0.003	<0.003
Ethylmethacrylate	(mg/kg)	<0.004	<0.004
Hexachlorobutadiene	(mg/kg)	<0.006	<0.006
Iodomethane	(mg/kg)	<0.004	<0.004
Isopropylbenzene	(mg/kg)	<0.003	<0.003
M/P-xylenes	(mg/kg)	<0.006	<0.006
MIBK	(mg/kg)	<0.041	<0.042
MTBE	(mg/kg)	<0.004	<0.004
Methylene chloride	(mg/kg)	<0.070	<0.071
Naphthalene	(mg/kg)	<0.005	<0.005
Styrene	(mg/kg)	<0.003	<0.003
Tetrachloroethylene	(mg/kg)	<0.002	<0.002
Toluene	(mg/kg)	<0.003	<0.003
Trichloroethylene	(mg/kg)	<0.005	<0.005
Trichlorofluoromethane	(mg/kg)	<0.003	<0.003
Vinyl Acetate	(mg/kg)	<0.077	<0.078

—=Not analyzed

Analytical Results
Windsor-Bloomfield Landfill
Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive
SAMPLE TYPE: Soil

CONSTITUENT	SITE SAMPLE ID DATE DEPTH (ft)	B-05 295000815-25 08/15/2000 1.00	B-06 295000815-32 08/15/2000 3.00
Vinyl Chloride	(mg/kg)	<0.002	<0.002
cis-1,2-Dichloroethylene	(mg/kg)	<0.002	<0.002
cis-1,3-Dichloropropene	(mg/kg)	<0.002	<0.002
cis-1,4-Dichloro-2-butene	(mg/kg)	<0.011	<0.011
n-Butylbenzene	(mg/kg)	<0.003	<0.003
n-Propylbenzene	(mg/kg)	<0.004	<0.004
o-Xylene	(mg/kg)	<0.002	<0.002
p-Isopropyltoluene	(mg/kg)	<0.003	<0.003
sec-Butylbenzene	(mg/kg)	<0.003	<0.003
tert-Butylbenzene	(mg/kg)	<0.004	<0.004
trans-1,2-Dichloroethylene	(mg/kg)	<0.004	<0.004
trans-1,3-Dichloropropene	(mg/kg)	<0.002	<0.002
trans-1,4-Dichloro-2-butene	(mg/kg)	<0.010	<0.010
Aroclor 1232	(mg/kg)	---	---
Aroclor 1242	(mg/kg)	---	---
Aroclor 1254	(mg/kg)	---	---
Aroclor 1260	(mg/kg)	---	---
Aroclor 1248	(mg/kg)	---	---
Aroclor 1221	(mg/kg)	---	---
PCB's	(mg/kg)	---	---
Arsenic	(mg/kg)	8.06	12.9
Barium	(mg/kg)	21.4	16.5
Cadmium	(mg/kg)	<0.05	<0.05
Chromium	(mg/kg)	6.62	7.75
Lead	(mg/kg)	8.29	6.22
Mercury	(mg/kg)	0.012	0.013
Selenium	(mg/kg)	<5.00	<5.00
Silver	(mg/kg)	<0.50	<0.50
Acenaphthene	(mg/kg)	---	---
Acenaphthylene	(mg/kg)	---	---

---=Not analyzed

Analytical Results
 Windsor-Bloomfield Landfill
 Sewer Extension Project

September 2000

PERIOD: From 08/15/2000 thru 08/15/2000 - Inclusive

SAMPLE TYPE: Soil

CONSTITUENT	SITE	B-05	B-06
	SAMPLE ID	295000815-25	295000815-32
	DATE	08/15/2000	08/15/2000
	DEPTH (ft)	1.00	3.00
Anthracene	(mg/kg)	---	---
Benzo(a)anthracene	(mg/kg)	---	---
Benzo(b)fluoranthene	(mg/kg)	---	---
Benzo(ghi)perylene	(mg/kg)	---	---
Benzo(k)fluoranthene	(mg/kg)	---	---
Chrysene	(mg/kg)	---	---
Dibenzo(a,h)anthracene	(mg/kg)	---	---
Fluoranthene	(mg/kg)	---	---
Fluorene	(mg/kg)	---	---
2-Methylnaphthalene	(mg/kg)	---	---
Phenanthrene	(mg/kg)	---	---
Pyrene	(mg/kg)	---	---
Extractable Petroleum Hydrocarbons	(mg/kg)	5.8	4.2

---=Not analyzed



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REPORT DATE 8/24/00

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040
ATTN: DON WILSON

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-50429

JOB NUMBER: 930126J10

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: WBLF, WINDSOR, CT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
295000815-01	00821470	SOIL	NOT SPECIFIED	8260 solid <i>B-01 (0-2')</i>
295000815-01	00821470	SOIL	NOT SPECIFIED	etph solid
295000815-01	00821470	SOIL	NOT SPECIFIED	metals-8rcra sol
295000815-01	00821470	SOIL	NOT SPECIFIED	pah - solid
295000815-01	00821470	SOIL	NOT SPECIFIED	pcb - soil

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 8/25/00
SIGNATURE DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

Pmb
8/13/00 DMS



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 FUSS & O'NEILL
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 MANCHESTER, CT 06040

8/24/00
 Page 1 of 10

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-01
 Sample ID: 00B21470

LIMS-BAT #: LIMS-50429
 Job Number: 930126J10

B-01(0-2')
 Sampled: 8/15/00
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
Acetone	mg/kg	ND	08/22/00	BGL	0.235		
Acrolein	mg/kg	ND	08/22/00	BGL	0.094		
Acrylonitrile	mg/kg	ND	08/22/00	BGL	0.036		
Benzene	mg/kg	ND	08/22/00	BGL	0.003		
Bromobenzene	mg/kg	ND	08/22/00	BGL	0.002		
Bromochloromethane	mg/kg	ND	08/22/00	BGL	0.003		
Bromodichloromethane	mg/kg	ND	08/22/00	BGL	0.002		
Bromomethane	mg/kg	ND	08/22/00	BGL	0.006		
Bromoform	mg/kg	ND	08/22/00	BGL	0.006		
2-Butanone (MEK)	mg/kg	ND	08/22/00	BGL	0.056		
n-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003		
sec-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003		
tert-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.004		
Carbon Disulfide	mg/kg	ND	08/22/00	BGL	0.014		
Carbon Tetrachloride	mg/kg	ND	08/22/00	BGL	0.002		
Chlorobenzene	mg/kg	ND	08/22/00	BGL	0.003		
Chlorodibromomethane	mg/kg	ND	08/22/00	BGL	0.002		
Chloroethane	mg/kg	ND	08/22/00	BGL	0.004		
2-Chloroethylvinylether	mg/kg	ND	08/22/00	BGL	0.045		
Chloroform	mg/kg	ND	08/22/00	BGL	0.004		
Chloromethane	mg/kg	ND	08/22/00	BGL	0.070		

RL = Reporting Limit
 ND = Not Detected
 NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample



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8/24/00
 Page 2 of 10

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-01
 Sample ID: 00B21470
 Sample Matrix: SOIL

LIMS-BAT #: LIMS-50429
 Job Number: 930126J10

B-01 (0-2')
 Sampled: 8/15/00
 NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
2-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003		
4-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	08/22/00	BGL	0.008		
1,2-Dibromoethane	mg/kg	ND	08/22/00	BGL	0.003		
Dibromomethane	mg/kg	ND	08/22/00	BGL	0.005		
1,2-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004		
1,3-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003		
1,4-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.011		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.010		
Dichlorodifluoromethane	mg/kg	ND	08/22/00	BGL	0.005		
1,1-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.003		
1,2-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.004		
1,1-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.004		
1,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.003		
1,3-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.002		
2,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.004		
1,1-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.007		
cis-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002		

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8/24/00
Page 3 of 10

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-01
Sample ID: 00B21470

LIMS-BAT #: LIMS-50429
Job Number: 930126J10

B-01 (0-2')

Sampled: 8/15/00
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
trans-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002		
Ethyl Benzene	mg/kg	ND	08/22/00	BGL	0.003		
Ethyl Methacrylate	mg/kg	ND	08/22/00	BGL	0.004		
Hexachlorobutadiene	mg/kg	ND	08/22/00	BGL	0.006		
2-Hexanone	mg/kg	ND	08/22/00	BGL	0.046		
Iodomethane	mg/kg	ND	08/22/00	BGL	0.004		
Isopropylbenzene	mg/kg	ND	08/22/00	BGL	0.003		
p-Isopropyltoluene	mg/kg	ND	08/22/00	BGL	0.003		
MTBE	mg/kg	ND	08/22/00	BGL	0.004		
Methylene Chloride	mg/kg	ND	08/22/00	BGL	0.070		
MIBK	mg/kg	ND	08/22/00	BGL	0.041		
Naphthalene	mg/kg	ND	08/22/00	BGL	0.005		
n-Propylbenzene	mg/kg	ND	08/22/00	BGL	0.004		
Styrene	mg/kg	ND	08/22/00	BGL	0.003		
1,1,1,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.007		
Tetrachloroethylene	mg/kg	ND	08/22/00	BGL	0.002		
Toluene	mg/kg	ND	08/22/00	BGL	0.003		
1,2,3-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003		
1,2,4-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003		
1,1,1-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.004		

RL = Reporting Limit

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8/24/00
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Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-01
Sample ID: 00B21470
Sample Matrix: SOIL

LIMS-BAT #: LIMS-50429
Job Number: 930126J10

B-01 (0-2')

Sampled: 8/15/00
NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
1,1,2-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.003		
Trichloroethylene	mg/kg	ND	08/22/00	BGL	0.005		
Trichlorofluoromethane	mg/kg	ND	08/22/00	BGL	0.003		
1,2,3-Trichloropropane	mg/kg	ND	08/22/00	BGL	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.003		
1,3,5-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.005		
Vinyl Acetate	mg/kg	ND	08/22/00	BGL	0.077		
Vinyl Chloride	mg/kg	ND	08/22/00	BGL	0.002		
m + p Xylene	mg/kg	ND	08/22/00	BGL	0.006		
o-Xylene	mg/kg	ND	08/22/00	BGL	0.002		

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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8/24/00
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Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-01
Sample ID: 00B21470
Sample Matrix: SOIL

LIMS-BAT #: LIMS-50429
Job Number: 930126J10

B-01(0-2')

Sampled: 8/15/00
NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo HI	P/ F
Extractable TPH (ETPH)	mg/kg	15000.	08/22/00	MFF	1200.		

Analytical Method:

Extractable TPH (CT ETPH)

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE AND ANALYZED BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION (GC/FID).

RL = Reporting Limit

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* = See end of report for comments and notes applying to this sample



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8/24/00
 Page 6 of 10

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-01
 Sample ID: 00B21470
 Sample Matrix: SOIL

LIMS-BAT #: LIMS-50429
 Job Number: 930126J10

B-01 (0-2')
 Sampled: 8/15/00
 NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo HI	P/ F
Arsenic	mg/kg	14.1	08/22/00	PM	5.00		
Barium	mg/kg	15.1	08/22/00	PM	0.10		
Cadmium	mg/kg	ND	08/22/00	PM	0.05		
Chromium	mg/kg	5.27	08/22/00	PM	0.35		
Lead	mg/kg	6.58	08/22/00	PM	2.50		
Mercury	mg/kg	0.010	08/20/00	MS	0.008		
Selenium	mg/kg	ND	08/22/00	PM	5.00		
Silver	mg/kg	ND	08/22/00	PM	0.50		

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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Purchase Order No.:

8/24/00
Page 7 of 10

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50429
Job Number: 930126J10

Analytical Method: Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Chromium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Lead
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Mercury
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Analytical Method: Selenium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Silver
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

SPEC LIMIT = a client specified recommended or
regulatory level for comparison with data to
determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample



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8/24/00
 Page 8 of 10

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-01
 Sample ID: 00B21470
 Sample Matrix: SOIL

Purchase Order No.:

LIMS-BAT #: LIMS-50429
 Job Number: 930126J10

B-01(0-2')
 Sampled: 8/15/00
 NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
Acenaphthene	mg/kg	ND	08/24/00	BGL	0.33		
Acenaphthylene	mg/kg	ND	08/24/00	BGL	0.33		
Anthracene	mg/kg	ND	08/24/00	BGL	0.33		
Benzo(a)anthracene	mg/kg	ND	08/24/00	BGL	0.33		
Benzo(a)pyrene	mg/kg	ND	08/24/00	BGL	0.67		
Benzo(b)fluoranthene	mg/kg	ND	08/24/00	BGL	0.33		
Benzo(g,h,i)perylene	mg/kg	ND	08/24/00	BGL	1.00		
Benzo(k)fluoranthene	mg/kg	ND	08/24/00	BGL	0.67		
Chrysene	mg/kg	ND	08/24/00	BGL	0.67		
Dibenz(a,h)anthracene	mg/kg	ND	08/24/00	BGL	0.67		
Fluoranthene	mg/kg	ND	08/24/00	BGL	0.33		
Fluorene	mg/kg	ND	08/24/00	BGL	0.33		
Indeno(1,2,3-cd)pyrene	mg/kg	ND	08/24/00	BGL	0.33		
2-Methylnaphthalene	mg/kg	ND	08/24/00	BGL	0.33		
Naphthalene	mg/kg	ND	08/24/00	BGL	0.33		
Phenanthrene	mg/kg	ND	08/24/00	BGL	0.33		
Pyrene	mg/kg	ND	08/24/00	BGL	1.00		

Analytical Method:
 SW846 8270

SAMPLES ARE EXTRACTED IN METHYLENE CHLORIDE/ACETONE AND
 FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit
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SPEC LIMIT = a client specified recommended or
 regulatory level for comparison with data to
 determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample



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8/24/00
Page 9 of 10

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-01
Sample ID: 00B21470
Sample Matrix: SOIL

LIMS-BAT #: LIMS-50429
Job Number: 930126J10

B-01 (0-2')
Sampled: 8/15/00
NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
PCB-1221	mg/kg	ND	08/22/00	JB			
PCB-1232	mg/kg	ND	08/22/00	JB			
PCB-1242	mg/kg	ND	08/22/00	JB			
PCB-1248	mg/kg	ND	08/22/00	JB			
PCB-1254	mg/kg	ND	08/22/00	JB			
PCB-1260	mg/kg	ND	08/22/00	JB			
PCB's	mg/kg	ND	08/22/00	JB	0.250		

Analytical Method:

SW846 8080

SAMPLES ARE EXTRACTED INTO HEXANE AND ANALYZED BY GAS CHROMATOGRAPHY WITH ELECTRON CAPTURE DETECTION.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

Purchase Order No.:

8/24/00
Page 10 of 10

LIMS-BAT #: LIMS-50429
Job Number: 930126J10

** END OF REPORT **

RL = Reporting Limit
ND = Not Detected
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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample



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REPORT DATE 8/24/00

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040
ATTN: DON WILSON

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-50430

JOB NUMBER: 930126J10

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: WBLF, WINDSOR, CT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
295000815-10	00B21471	SOIL	NOT SPECIFIED	8260 solid <i>B-02 (6-8')</i>
295000815-10	00B21471	SOIL	NOT SPECIFIED	etph solid
295000815-10	00B21471	SOIL	NOT SPECIFIED	metals-8rcra sol

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 8/25/00
SIGNATURE DATE

Tod Kopycinski
Director of Operations

Edward Denson
Technical Director

PMB
8/24/00

DON WILSON
 FUSS & O'NEILL
 146 HARTFORD ROAD
 MANCHESTER, CT 06040

8/24/00
 Page 1 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-10
 Sample ID: 00B21471
 Sample Matrix: SOIL

LIMS-BAT #: LIMS-50430
 Job Number: 930126J10

B-0206-81
 Sampled: 8/15/00
 NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Acetone	mg/kg	ND	08/22/00	BGL	0.227			
Acrolein	mg/kg	ND	08/22/00	BGL	0.091			
Acrylonitrile	mg/kg	ND	08/22/00	BGL	0.035			
Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Bromobenzene	mg/kg	ND	08/22/00	BGL	0.002			
Bromochloromethane	mg/kg	ND	08/22/00	BGL	0.003			
Bromodichloromethane	mg/kg	ND	08/22/00	BGL	0.002			
Bromomethane	mg/kg	ND	08/22/00	BGL	0.005			
Bromoform	mg/kg	ND	08/22/00	BGL	0.005			
2-Butanone (MEK)	mg/kg	ND	08/22/00	BGL	0.055			
n-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
sec-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
tert-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Carbon Disulfide	mg/kg	ND	08/22/00	BGL	0.014			
Carbon Tetrachloride	mg/kg	ND	08/22/00	BGL	0.002			
Chlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
Chlorodibromomethane	mg/kg	ND	08/22/00	BGL	0.002			
Chloroethane	mg/kg	ND	08/22/00	BGL	0.004			
2-Chloroethylvinylether	mg/kg	ND	08/22/00	BGL	0.044			
Chloroform	mg/kg	ND	08/22/00	BGL	0.004			
Chloromethane	mg/kg	ND	08/22/00	BGL	0.068			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

* = See end of report for comments and notes applying to this sample

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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8/24/00
 Page 2 of 8

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-10

Purchase Order No.:

LIMS-BAT #: LIMS-50430
 Job Number: 930126J10

Sample ID: 00B21471

Sampled: 8/15/00
 NOT SPECIFIED

B-02 (6-8')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
2-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003		
4-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003		
1,2-Dibromo-3-Chloropropane	mg/kg	ND	08/22/00	BGL	0.007		
1,2-Dibromoethane	mg/kg	ND	08/22/00	BGL	0.003		
Dibromomethane	mg/kg	ND	08/22/00	BGL	0.005		
1,2-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004		
1,3-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003		
1,4-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004		
cis-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.011		
trans-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.010		
Dichlorodifluoromethane	mg/kg	ND	08/22/00	BGL	0.005		
1,1-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.003		
1,2-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.004		
1,1-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.003		
cis-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.002		
trans-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.004		
1,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.003		
1,3-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.002		
2,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.004		
1,1-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.006		
cis-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002		

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8/24/00
 Page 3 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-10

LIMS-BAT #: LIMS-50430
 Job Number: 930126J10

Sample ID: 00B21471
 Sampled: 8/15/00
 NOT SPECIFIED

B-02 (6-8')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
trans-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002			
Ethyl Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Ethyl Methacrylate	mg/kg	ND	08/22/00	BGL	0.004			
Hexachlorobutadiene	mg/kg	ND	08/22/00	BGL	0.006			
2-Hexanone	mg/kg	ND	08/22/00	BGL	0.044			
Iodomethane	mg/kg	ND	08/22/00	BGL	0.004			
Isopropylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
p-Isopropyltoluene	mg/kg	ND	08/22/00	BGL	0.003			
MTBE	mg/kg	ND	08/22/00	BGL	0.004			
Methylene Chloride	mg/kg	ND	08/22/00	BGL	0.068			
MIBK	mg/kg	ND	08/22/00	BGL	0.040			
Naphthalene	mg/kg	ND	08/22/00	BGL	0.005			
n-Propylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Styrene	mg/kg	ND	08/22/00	BGL	0.003			
1,1,1,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.002			
1,1,2,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.006			
Tetrachloroethylene	mg/kg	ND	08/22/00	BGL	0.002			
Toluene	mg/kg	ND	08/22/00	BGL	0.003			
1,2,3-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,2,4-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,1,1-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.004			

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Purchase Order No.:

8/24/00
 Page 4 of 8

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-10
 Sample ID: 00B21471

LIMS-BAT #: LIMS-50430
 Job Number: 930126J10

B-02 (6-8')
 Sampled: 8/15/00
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
1,1,2-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.003			
Trichloroethylene	mg/kg	ND	08/22/00	BGL	0.005			
Trichlorofluoromethane	mg/kg	ND	08/22/00	BGL	0.003			
1,2,3-Trichloropropane	mg/kg	ND	08/22/00	BGL	0.006			
1,2,4-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,3,5-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.005			
Vinyl Acetate	mg/kg	ND	08/22/00	BGL	0.075			
Vinyl Chloride	mg/kg	ND	08/22/00	BGL	0.002			
m + p Xylene	mg/kg	ND	08/22/00	BGL	0.006			
o-Xylene	mg/kg	ND	08/22/00	BGL	0.002			

Analytical Method:
 SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

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8/24/00
Page 5 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-10
Sample ID: 00B21471
Sample Matrix: SOIL

LIMS-BAT #: LIMS-50430
Job Number: 930126J10

B-02 (6-8')

Sampled: 8/15/00
NOT SPECIFIED

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Extractable TPH (ETPH)	mg/kg	ND	08/22/00	MFF	2.5			

Analytical Method:

Extractable TPH (CT ETPH)

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE AND ANALYZED BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION (GC/FID).

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8/24/00
Page 6 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-10

LIMS-BAT #: LIMS-50430
Job Number: 930126J10

B-02 (6-8')

Sample ID: 00B21471

Sampled: 8/15/00
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo HI	P/ F
Arsenic	mg/kg	7.04	08/22/00	PM	5.00		
Barium	mg/kg	12.1	08/22/00	PM	0.10		
Cadmium	mg/kg	0.08	08/22/00	PM	0.05		
Chromium	mg/kg	4.43	08/22/00	PM	0.35		
Lead	mg/kg	3.00	08/22/00	PM	2.50		
Mercury	mg/kg	ND	08/20/00	MS	0.006		
Selenium	mg/kg	ND	08/22/00	PM	5.00		
Silver	mg/kg	ND	08/22/00	PM	0.50		

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Purchase Order No.:

8/24/00
Page 7 of 8

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50430
Job Number: 930126J10

Analytical Method: Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Chromium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Lead
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Mercury
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Analytical Method: Selenium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Silver
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

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determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample



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8/24/00
Page 8 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50430
Job Number: 930126J10

** END OF REPORT **

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REPORT DATE 8/24/00

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040
ATTN: DON WILSON

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-50431
JOB NUMBER: 930126J10

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: WBLF, WINDSOR, CT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
295000815-13	00821472	SOIL	NOT SPECIFIED	8260 solid <i>B-03 (0-2')</i>
295000815-13	00821472	SOIL	NOT SPECIFIED	etph solid
295000815-13	00821472	SOIL	NOT SPECIFIED	metals-8rcra sol

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AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 8/25/00

SIGNATURE

DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

PMP
9/21/2000
D.D.



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8/24/00
 Page 1 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-13
 Sample ID: 00B21472

LIMS-BAT #: LIMS-50431
 Job Number: 930126J10

B-03 (0-2')

Sampled: 8/15/00
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Acetone	mg/kg	ND	08/23/00	BGL	0.220		
Acrolein	mg/kg	ND	08/23/00	BGL	0.088		
Acrylonitrile	mg/kg	ND	08/23/00	BGL	0.033		
Benzene	mg/kg	ND	08/23/00	BGL	0.003		
Bromobenzene	mg/kg	ND	08/23/00	BGL	0.002		
Bromochloromethane	mg/kg	ND	08/23/00	BGL	0.003		
Bromodichloromethane	mg/kg	ND	08/23/00	BGL	0.002		
Bromomethane	mg/kg	ND	08/23/00	BGL	0.005		
Bromoform	mg/kg	ND	08/23/00	BGL	0.005		
2-Butanone (MEK)	mg/kg	ND	08/23/00	BGL	0.053		
n-Butylbenzene	mg/kg	ND	08/23/00	BGL	0.003		
sec-Butylbenzene	mg/kg	ND	08/23/00	BGL	0.003		
tert-Butylbenzene	mg/kg	ND	08/23/00	BGL	0.004		
Carbon Disulfide	mg/kg	ND	08/23/00	BGL	0.013		
Carbon Tetrachloride	mg/kg	ND	08/23/00	BGL	0.002		
Chlorobenzene	mg/kg	ND	08/23/00	BGL	0.003		
Chlorodibromomethane	mg/kg	ND	08/23/00	BGL	0.002		
Chloroethane	mg/kg	ND	08/23/00	BGL	0.004		
2-Chloroethylvinylether	mg/kg	ND	08/23/00	BGL	0.042		
Chloroform	mg/kg	ND	08/23/00	BGL	0.004		
Chloromethane	mg/kg	ND	08/23/00	BGL	0.066		

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8/24/00
Page 2 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-13

LIMS-BAT #: LIMS-50431
Job Number: 930126J10

Sample ID: 00B21472

B-03 (0-2')
Sampled: 8/15/00
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
- 2-Chlorotoluene	mg/kg	ND	08/23/00	BGL	0.003			
- 4-Chlorotoluene	mg/kg	ND	08/23/00	BGL	0.003			
- 1,2-Dibromo-3-Chloropropane	mg/kg	ND	08/23/00	BGL	0.007			
- 1,2-Dibromoethane	mg/kg	ND	08/23/00	BGL	0.003			
- Dibromomethane	mg/kg	ND	08/23/00	BGL	0.005			
- 1,2-Dichlorobenzene	mg/kg	ND	08/23/00	BGL	0.004			
- 1,3-Dichlorobenzene	mg/kg	ND	08/23/00	BGL	0.003			
- 1,4-Dichlorobenzene	mg/kg	ND	08/23/00	BGL	0.004			
cis-1,4-Dichloro-2-Butene	mg/kg	ND	08/23/00	BGL	0.011			
trans-1,4-Dichloro-2-Butene	mg/kg	ND	08/23/00	BGL	0.009			
Dichlorodifluoromethane	mg/kg	ND	08/23/00	BGL	0.004			
1,1-Dichloroethane	mg/kg	ND	08/23/00	BGL	0.003			
1,2-Dichloroethane	mg/kg	ND	08/23/00	BGL	0.004			
1,1-Dichloroethylene	mg/kg	ND	08/23/00	BGL	0.003			
cis-1,2-Dichloroethylene	mg/kg	ND	08/23/00	BGL	0.002			
trans-1,2-Dichloroethylene	mg/kg	ND	08/23/00	BGL	0.004			
1,2-Dichloropropane	mg/kg	ND	08/23/00	BGL	0.003			
1,3-Dichloropropane	mg/kg	ND	08/23/00	BGL	0.002			
2,2-Dichloropropane	mg/kg	ND	08/23/00	BGL	0.004			
1,1-Dichloropropene	mg/kg	ND	08/23/00	BGL	0.006			
cis-1,3-Dichloropropene	mg/kg	ND	08/23/00	BGL	0.002			

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8/24/00
 Page 3 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-13

LIMS-BAT #: LIMS-50431
 Job Number: 930126J10

Sample ID: 00B21472

Sampled: 8/15/00
 NOT SPECIFIED

B-43 (0-2')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
trans-1,3-Dichloropropene	mg/kg	ND	08/23/00	BGL	0.002		
Ethyl Benzene	mg/kg	ND	08/23/00	BGL	0.003		
Ethyl Methacrylate	mg/kg	ND	08/23/00	BGL	0.004		
Hexachlorobutadiene	mg/kg	ND	08/23/00	BGL	0.006		
2-Hexanone	mg/kg	ND	08/23/00	BGL	0.043		
Iodomethane	mg/kg	ND	08/23/00	BGL	0.004		
Isopropylbenzene	mg/kg	ND	08/23/00	BGL	0.003		
p-Isopropyltoluene	mg/kg	ND	08/23/00	BGL	0.003		
MTBE	mg/kg	ND	08/23/00	BGL	0.004		
Methylene Chloride	mg/kg	ND	08/23/00	BGL	0.066		
MIBK	mg/kg	ND	08/23/00	BGL	0.039		
Naphthalene	mg/kg	ND	08/23/00	BGL	0.004		
n-Propylbenzene	mg/kg	ND	08/23/00	BGL	0.004		
Styrene	mg/kg	ND	08/23/00	BGL	0.003		
1,1,1,2-Tetrachloroethane	mg/kg	ND	08/23/00	BGL	0.002		
1,1,2,2-Tetrachloroethane	mg/kg	ND	08/23/00	BGL	0.006		
Tetrachloroethylene	mg/kg	ND	08/23/00	BGL	0.002		
Toluene	mg/kg	ND	08/23/00	BGL	0.003		
1,2,3-Trichlorobenzene	mg/kg	ND	08/23/00	BGL	0.003		
1,2,4-Trichlorobenzene	mg/kg	ND	08/23/00	BGL	0.003		
1,1,1-Trichloroethane	mg/kg	ND	08/23/00	BGL	0.004		

RL = Reporting Limit

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NM = Not Measured

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* = See end of report for comments and notes applying to this sample



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146 HARTFORD ROAD
MANCHESTER, CT 06040

8/24/00
Page 4 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT

LIMS-BAT #: LIMS-50431

Date Received: 8/16/00

Job Number: 930126J10

Field Sample #: 295000815-13

B-03 (0-2')

Sample ID: 00B21472

Sampled: 8/15/00

NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo HI	P/ F
1,1,2-Trichloroethane	mg/kg	ND	08/23/00	BGL	0.003		
Trichloroethylene	mg/kg	ND	08/23/00	BGL	0.004		
Trichlorofluoromethane	mg/kg	ND	08/23/00	BGL	0.003		
1,2,3-Trichloropropane	mg/kg	ND	08/23/00	BGL	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	08/23/00	BGL	0.003		
1,3,5-Trimethylbenzene	mg/kg	ND	08/23/00	BGL	0.004		
Vinyl Acetate	mg/kg	ND	08/23/00	BGL	0.072		
Vinyl Chloride	mg/kg	ND	08/23/00	BGL	0.002		
m + p Xylene	mg/kg	ND	08/23/00	BGL	0.006		
o-Xylene	mg/kg	ND	08/23/00	BGL	0.002		

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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8/24/00
Page 5 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-13

LIMS-BAT #: LIMS-50431
Job Number: 930126J10

Sample ID: 00B21472
--
Sample Matrix: SOIL

Sampled: 8/15/00
NOT SPECIFIED

B-63 (0-2')

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Extractable TPH (ETPH)	mg/kg	30.	08/22/00	MFF	2.5		

Analytical Method:

Extractable TPH (CT ETPH)

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE AND ANALYZED BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION (GC/FID).

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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8/24/00
Page 6 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-13

LIMS-BAT #: LIMS-50431
Job Number: 930126J10

Sample ID: 00B21472

B-03 (0-2')
Sampled: 8/15/00
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Arsenic	mg/kg	11.3	08/22/00	PM	5.00			
Barium	mg/kg	18.4	08/22/00	PM	0.10			
Cadmium	mg/kg	ND	08/22/00	PM	0.05			
Chromium	mg/kg	5.94	08/22/00	PM	0.35			
Lead	mg/kg	6.40	08/22/00	PM	2.50			
Mercury	mg/kg	ND	08/20/00	MS	0.009			
Selenium	mg/kg	ND	08/22/00	PM	5.00			
Silver	mg/kg	ND	08/22/00	PM	0.50			

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8/24/00
Page 7 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50431
Job Number: 930126J10

Analytical Method: Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Chromium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Lead
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Mercury
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Analytical Method: Selenium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Silver
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

RL = Reporting Limit

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Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

Purchase Order No.:

8/24/00
Page 8 of 8

LIMS-BAT #: LIMS-50431
Job Number: 930126J10

** END OF REPORT **

RL = Reporting Limit
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REPORT DATE 8/24/00

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040
ATTN: DON WILSON

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-50432
JOB NUMBER: 930126J10

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: WBLF, WINDSOR, CT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
295000815-24	00B21473	SOIL	NOT SPECIFIED	8260 solid B-04 (10-12')
295000815-24	00B21473	SOIL	NOT SPECIFIED	etph solid
295000815-24	00B21473	SOIL	NOT SPECIFIED	metals-8rcra sol

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 8/25/00

SIGNATURE

DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

PMB
9/12/00



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Purchase Order No.:

8/24/00
 Page 1 of 8

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-24

LIMS-BAT #: LIMS-50432
 Job Number: 930126J10

Sample ID: 00B21473
 Sampled: 8/15/00
 NOT SPECIFIED

B-04 (10-12')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P / F
						Lo	Hi	
Acetone	mg/kg	ND	08/22/00	BGL	0.250			
Acrolein	mg/kg	ND	08/22/00	BGL	0.100			
Acrylonitrile	mg/kg	ND	08/22/00	BGL	0.038			
Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Bromobenzene	mg/kg	ND	08/22/00	BGL	0.002			
Bromochloromethane	mg/kg	ND	08/22/00	BGL	0.004			
Bromodichloromethane	mg/kg	ND	08/22/00	BGL	0.002			
Bromomethane	mg/kg	ND	08/22/00	BGL	0.006			
Bromoform	mg/kg	ND	08/22/00	BGL	0.006			
2-Butanone (MEK)	mg/kg	ND	08/22/00	BGL	0.060			
n-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
sec-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
tert-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Carbon Disulfide	mg/kg	ND	08/22/00	BGL	0.015			
Carbon Tetrachloride	mg/kg	ND	08/22/00	BGL	0.002			
Chlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
Chlorodibromomethane	mg/kg	ND	08/22/00	BGL	0.002			
Chloroethane	mg/kg	ND	08/22/00	BGL	0.004			
2-Chloroethylvinylether	mg/kg	ND	08/22/00	BGL	0.048			
Chloroform	mg/kg	ND	08/22/00	BGL	0.004			
Chloromethane	mg/kg	ND	08/22/00	BGL	0.075			

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8/24/00
Page 2 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-24

LIMS-BAT #: LIMS-50432
Job Number: 930126J10

B-04 (10-12')

Sample ID: 00B21473
Sampled: 8/15/00
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
2-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003			
4-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003			
1,2-Dibromo-3-Chloropropane	mg/kg	ND	08/22/00	BGL	0.008			
1,2-Dibromoethane	mg/kg	ND	08/22/00	BGL	0.004			
Dibromomethane	mg/kg	ND	08/22/00	BGL	0.005			
1,2-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
1,3-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,4-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
cis-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.012			
trans-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.010			
Dichlorodifluoromethane	mg/kg	ND	08/22/00	BGL	0.005			
1,1-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.004			
1,2-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.004			
1,1-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.003			
cis-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.002			
trans-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.004			
1,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.003			
1,3-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.002			
2,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.004			
1,1-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.007			
cis-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002			

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8/24/00
 Page 3 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-24
 Sample ID: 00B21473

LIMS-BAT #: LIMS-50432
 Job Number: 930126J10

B-04 (10-12')

Sampled: 8/15/00
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
trans-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002			
Ethyl Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Ethyl Methacrylate	mg/kg	ND	08/22/00	BGL	0.004			
Hexachlorobutadiene	mg/kg	ND	08/22/00	BGL	0.007			
2-Hexanone	mg/kg	ND	08/22/00	BGL	0.049			
Iodomethane	mg/kg	ND	08/22/00	BGL	0.004			
Isopropylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
p-Isopropyltoluene	mg/kg	ND	08/22/00	BGL	0.004			
MTBE	mg/kg	ND	08/22/00	BGL	0.004			
Methylene Chloride	mg/kg	ND	08/22/00	BGL	0.075			
MIBK	mg/kg	ND	08/22/00	BGL	0.044			
Naphthalene	mg/kg	ND	08/22/00	BGL	0.005			
n-Propylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Styrene	mg/kg	ND	08/22/00	BGL	0.004			
1,1,1,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.002			
1,1,2,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.007			
Tetrachloroethylene	mg/kg	ND	08/22/00	BGL	0.002			
Toluene	mg/kg	ND	08/22/00	BGL	0.004			
1,2,3-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
1,2,4-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
1,1,1-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.004			

RL = Reporting Limit
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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Purchase Order No.:

8/24/00
Page 4 of 8

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-24

LIMS-BAT #: LIMS-50432
Job Number: 930126J10

Sample ID: 00B21473

Sampled: 8/15/00
NOT SPECIFIED

B-04 (10-12')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
1,1,2-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.004			
Trichloroethylene	mg/kg	ND	08/22/00	BGL	0.005			
Trichlorofluoromethane	mg/kg	ND	08/22/00	BGL	0.004			
1,2,3-Trichloropropane	mg/kg	ND	08/22/00	BGL	0.007			
1,2,4-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
1,3,5-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.005			
Vinyl Acetate	mg/kg	ND	08/22/00	BGL	0.082			
Vinyl Chloride	mg/kg	ND	08/22/00	BGL	0.002			
m + p Xylene	mg/kg	ND	08/22/00	BGL	0.007			
o-Xylene	mg/kg	ND	08/22/00	BGL	0.002			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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8/24/00
Page 5 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT

LIMS-BAT #: LIMS-50432

Date Received: 8/16/00

Job Number: 930126J10

Field Sample #: 295000815-24

B-c4 (10-12')

Sample ID: 00B21473

Sampled: 8/15/00

NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Extractable TPH (ETPH)	mg/kg	37.	08/22/00	MFF	2.5		

Analytical Method:

Extractable TPH (CT ETPH)

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE AND ANALYZED BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION (GC/FID).

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample



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8/24/00
Page 6 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-24

LIMS-BAT #: LIMS-50432
Job Number: 930126J10

Sample ID: 00B21473

Sampled: 8/15/00
NOT SPECIFIED

B-04 (10-12')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
Arsenic	mg/kg	5.11	08/22/00	PM	5.00			
Barium	mg/kg	13.6	08/22/00	PM	0.10			
Cadmium	mg/kg	ND	08/22/00	PM	0.05			
Chromium	mg/kg	4.92	08/22/00	PM	0.35			
Lead	mg/kg	ND	08/22/00	PM	2.50			
Mercury	mg/kg	ND	08/20/00	MS	0.008			
Selenium	mg/kg	ND	08/22/00	PM	5.00			
Silver	mg/kg	ND	08/22/00	PM	0.50			

RL = Reporting Limit

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

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Purchase Order No.:

8/24/00
Page 7 of 8

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50432
Job Number: 930126J10

Analytical Method: Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Chromium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Lead
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Mercury
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Analytical Method: Selenium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Silver
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample



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DON WILSON
FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040

8/24/00
Page 8 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50432
Job Number: 930126J10

** END OF REPORT **

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REPORT DATE 8/24/00

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040
ATTN: DON WILSON

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-50433
JOB NUMBER: 930126J10

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: WBLF, WINDSOR, CT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
295000815-25	00B21474	SOIL	NOT SPECIFIED	8260 solid <i>B-05 (0-2')</i>
295000815-25	00B21474	SOIL	NOT SPECIFIED	etph solid
295000815-25	00B21474	SOIL	NOT SPECIFIED	metals-8rcra sol

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AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 8/25/00
SIGNATURE DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

Handwritten initials and date



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Purchase Order No.:

8/24/00
 Page 1 of 8

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-25

LIMS-BAT #: LIMS-50433
 Job Number: 930126J10

Sample ID: 00B21474
 Sampled: 8/15/00
 NOT SPECIFIED

B-05 (0-2)

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Acetone	mg/kg	ND	08/22/00	BGL	0.234			
Acrolein	mg/kg	ND	08/22/00	BGL	0.093			
Acrylonitrile	mg/kg	ND	08/22/00	BGL	0.036			
Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Bromobenzene	mg/kg	ND	08/22/00	BGL	0.002			
Bromochloromethane	mg/kg	ND	08/22/00	BGL	0.003			
Bromodichloromethane	mg/kg	ND	08/22/00	BGL	0.002			
Bromomethane	mg/kg	ND	08/22/00	BGL	0.006			
Bromoform	mg/kg	ND	08/22/00	BGL	0.006			
2-Butanone (MEK)	mg/kg	ND	08/22/00	BGL	0.056			
n-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
sec-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
tert-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Carbon Disulfide	mg/kg	ND	08/22/00	BGL	0.014			
Carbon Tetrachloride	mg/kg	ND	08/22/00	BGL	0.002			
Chlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
Chlorodibromomethane	mg/kg	ND	08/22/00	BGL	0.002			
Chloroethane	mg/kg	ND	08/22/00	BGL	0.004			
2-Chloroethylvinylether	mg/kg	ND	08/22/00	BGL	0.045			
Chloroform	mg/kg	ND	08/22/00	BGL	0.004			
Chloromethane	mg/kg	ND	08/22/00	BGL	0.070			

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Purchase Order No.:

8/24/00
 Page 2 of 8

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-25

LIMS-BAT #: LIMS-50433
 Job Number: 930126J10

Sample ID: 00B21474

Sampled: 8/15/00
 NOT SPECIFIED

B-05 (0-2')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
2-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003			
4-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003			
1,2-Dibromo-3-Chloropropane	mg/kg	ND	08/22/00	BGL	0.007			
1,2-Dibromoethane	mg/kg	ND	08/22/00	BGL	0.003			
Dibromomethane	mg/kg	ND	08/22/00	BGL	0.005			
1,2-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
1,3-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,4-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
cis-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.011			
trans-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.010			
Dichlorodifluoromethane	mg/kg	ND	08/22/00	BGL	0.005			
1,1-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.003			
1,2-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.004			
1,1-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.003			
cis-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.002			
trans-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.004			
1,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.003			
1,3-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.002			
2,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.004			
1,1-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.007			
cis-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002			

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8/24/00
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Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-25

LIMS-BAT #: LIMS-50433
 Job Number: 930126J10

Sample ID: 00B21474

B-05 (0-2)
 Sampled: 8/15/00
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
trans-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002			
Ethyl Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Ethyl Methacrylate	mg/kg	ND	08/22/00	BGL	0.004			
Hexachlorobutadiene	mg/kg	ND	08/22/00	BGL	0.006			
2-Hexanone	mg/kg	ND	08/22/00	BGL	0.045			
Iodomethane	mg/kg	ND	08/22/00	BGL	0.004			
Isopropylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
p-Isopropyltoluene	mg/kg	ND	08/22/00	BGL	0.003			
MTBE	mg/kg	ND	08/22/00	BGL	0.004			
Methylene Chloride	mg/kg	ND	08/22/00	BGL	0.070			
MIBK	mg/kg	ND	08/22/00	BGL	0.041			
Naphthalene	mg/kg	ND	08/22/00	BGL	0.005			
n-Propylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Styrene	mg/kg	ND	08/22/00	BGL	0.003			
1,1,1,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.002			
1,1,2,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.007			
Tetrachloroethylene	mg/kg	ND	08/22/00	BGL	0.002			
Toluene	mg/kg	ND	08/22/00	BGL	0.003			
1,2,3-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,2,4-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,1,1-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.004			

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8/24/00
Page 4 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-25

LIMS-BAT #: LIMS-50433
Job Number: 930126J10

Sample ID: 00B21474
Sampled: 8/15/00
NOT SPECIFIED

B-05 (0-2')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
1,1,2-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.003			
Trichloroethylene	mg/kg	ND	08/22/00	BGL	0.005			
Trichlorofluoromethane	mg/kg	ND	08/22/00	BGL	0.003			
1,2,3-Trichloropropane	mg/kg	ND	08/22/00	BGL	0.006			
1,2,4-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,3,5-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.005			
Vinyl Acetate	mg/kg	ND	08/22/00	BGL	0.077			
Vinyl Chloride	mg/kg	ND	08/22/00	BGL	0.002			
m + p Xylene	mg/kg	ND	08/22/00	BGL	0.006			
o-Xylene	mg/kg	ND	08/22/00	BGL	0.002			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

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Page 5 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-25

LIMS-BAT #: LIMS-50433
Job Number: 930126J10

B-05 (0-2')

Sample ID: 00B21474
Sampled: 8/15/00
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
Extractable TPH (ETPH)	mg/kg	5.8	08/22/00	MFF	2.5		

Analytical Method:

Extractable TPH (CT ETPH)

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE AND ANALYZED BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION (GC/FID).

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Purchase Order No.:

8/24/00
 Page 6 of 8

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-25

LIMS-BAT #: LIMS-50433
 Job Number: 930126J10

Sample ID: 00B21474
 Sampled: 8/15/00
 NOT SPECIFIED

B-05 (0-2')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Arsenic	mg/kg	8.06	08/22/00	PM	5.00			
Barium	mg/kg	21.4	08/22/00	PM	0.10			
Cadmium	mg/kg	ND	08/22/00	PM	0.05			
Chromium	mg/kg	6.62	08/22/00	PM	0.35			
Lead	mg/kg	8.29	08/22/00	PM	2.50			
Mercury	mg/kg	0.012	08/20/00	MS	0.009			
Selenium	mg/kg	ND	08/22/00	PM	5.00			
Silver	mg/kg	ND	08/22/00	PM	0.50			

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Purchase Order No.:

8/24/00
Page 7 of 8

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50433
Job Number: 930126J10

Analytical Method: Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Chromium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Lead
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Mercury
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Analytical Method: Selenium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Silver
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

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8/24/00
Page 8 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50433
Job Number: 930126J10

**** END OF REPORT ****

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REPORT DATE 8/24/00

FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040
ATTN: DON WILSON

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-50434
JOB NUMBER: 930126J10

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: WBLF, WINDSOR, CT

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
295000815-32	00B21475	SOIL	NOT SPECIFIED	8260 solid <i>B-06 (2-4')</i>
295000815-32	00B21475	SOIL	NOT SPECIFIED	etph solid
295000815-32	00B21475	SOIL	NOT SPECIFIED	metals-8rcra sol

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations :

AIHA 100033	AIHA ELLAP (LEAD) 100033
MASSACHUSETTS MA0100	NEW HAMPSHIRE 2516
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036
NEW YORK ELAP 10899	RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Edward Denson 8/25/00

SIGNATURE

DATE

Tod Kopyscinski
Director of Operations

Edward Denson
Technical Director

8/25/00 **DEAS**



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Purchase Order No.:

8/24/00
 Page 1 of 8

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-32

LIMS-BAT #: LIMS-50434
 Job Number: 930126J10

Sample ID: 00B21475
 Sampled: 8/15/00
 NOT SPECIFIED

B.06 (2-4)

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/F
						Lo	Hi	
Acetone	mg/kg	ND	08/22/00	BGL	0.238			
Acrolein	mg/kg	ND	08/22/00	BGL	0.095			
Acrylonitrile	mg/kg	ND	08/22/00	BGL	0.036			
Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Bromobenzene	mg/kg	ND	08/22/00	BGL	0.002			
Bromochloromethane	mg/kg	ND	08/22/00	BGL	0.003			
Bromodichloromethane	mg/kg	ND	08/22/00	BGL	0.002			
Bromomethane	mg/kg	ND	08/22/00	BGL	0.006			
Bromoform	mg/kg	ND	08/22/00	BGL	0.006			
2-Butanone (MEK)	mg/kg	ND	08/22/00	BGL	0.057			
n-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
sec-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
tert-Butylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Carbon Disulfide	mg/kg	ND	08/22/00	BGL	0.014			
Carbon Tetrachloride	mg/kg	ND	08/22/00	BGL	0.002			
Chlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
Chlorodibromomethane	mg/kg	ND	08/22/00	BGL	0.002			
Chloroethane	mg/kg	ND	08/22/00	BGL	0.004			
2-Chloroethylvinylether	mg/kg	ND	08/22/00	BGL	0.046			
Chloroform	mg/kg	ND	08/22/00	BGL	0.004			
Chloromethane	mg/kg	ND	08/22/00	BGL	0.071			

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* = See end of report for comments and notes applying to this sample



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Purchase Order No.:

8/24/00
Page 2 of 8

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-32

LIMS-BAT #: LIMS-50434
Job Number: 930126J10

Sample ID: 00B21475
Sampled: 8/15/00
NOT SPECIFIED

B-06(2-4')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
2-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003			
4-Chlorotoluene	mg/kg	ND	08/22/00	BGL	0.003			
1,2-Dibromo-3-Chloropropane	mg/kg	ND	08/22/00	BGL	0.008			
1,2-Dibromoethane	mg/kg	ND	08/22/00	BGL	0.003			
Dibromomethane	mg/kg	ND	08/22/00	BGL	0.005			
1,2-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
1,3-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,4-Dichlorobenzene	mg/kg	ND	08/22/00	BGL	0.004			
cis-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.011			
trans-1,4-Dichloro-2-Butene	mg/kg	ND	08/22/00	BGL	0.010			
Dichlorodifluoromethane	mg/kg	ND	08/22/00	BGL	0.005			
1,1-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.003			
1,2-Dichloroethane	mg/kg	ND	08/22/00	BGL	0.004			
1,1-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.003			
cis-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.002			
trans-1,2-Dichloroethylene	mg/kg	ND	08/22/00	BGL	0.004			
1,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.003			
1,3-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.002			
2,2-Dichloropropane	mg/kg	ND	08/22/00	BGL	0.004			
1,1-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.007			
cis-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002			

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* = See end of report for comments and notes applying to this sample



39 Spruce Street * 2nd Floor * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

DON WILSON
 FUSS & O'NEILL
 146 HARTFORD ROAD
 MANCHESTER, CT 06040

8/24/00
 Page 3 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-32

LIMS-BAT #: LIMS-50434
 Job Number: 930126J10

Sample ID: 00B21475
 Sampled: 8/15/00
 NOT SPECIFIED

B-06 (2-4')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
trans-1,3-Dichloropropene	mg/kg	ND	08/22/00	BGL	0.002			
Ethyl Benzene	mg/kg	ND	08/22/00	BGL	0.003			
Ethyl Methacrylate	mg/kg	ND	08/22/00	BGL	0.004			
Hexachlorobutadiene	mg/kg	ND	08/22/00	BGL	0.006			
2-Hexanone	mg/kg	ND	08/22/00	BGL	0.046			
Iodomethane	mg/kg	ND	08/22/00	BGL	0.004			
Isopropylbenzene	mg/kg	ND	08/22/00	BGL	0.003			
p-Isopropyltoluene	mg/kg	ND	08/22/00	BGL	0.003			
MTBE	mg/kg	ND	08/22/00	BGL	0.004			
Methylene Chloride	mg/kg	ND	08/22/00	BGL	0.071			
MIBK	mg/kg	ND	08/22/00	BGL	0.042			
Naphthalene	mg/kg	ND	08/22/00	BGL	0.005			
n-Propylbenzene	mg/kg	ND	08/22/00	BGL	0.004			
Styrene	mg/kg	ND	08/22/00	BGL	0.003			
1,1,1,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.002			
1,1,2,2-Tetrachloroethane	mg/kg	ND	08/22/00	BGL	0.007			
Tetrachloroethylene	mg/kg	ND	08/22/00	BGL	0.002			
Toluene	mg/kg	ND	08/22/00	BGL	0.003			
1,2,3-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,2,4-Trichlorobenzene	mg/kg	ND	08/22/00	BGL	0.003			
1,1,1-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.004			

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146 HARTFORD ROAD
MANCHESTER, CT 06040

Purchase Order No.:

8/24/00
Page 4 of 8

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-32

LIMS-BAT #: LIMS-50434
Job Number: 930126J10

Sample ID: 00B21475
Sampled: 8/15/00
NOT SPECIFIED

B-06 (2-4')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
1,1,2-Trichloroethane	mg/kg	ND	08/22/00	BGL	0.003		
Trichloroethylene	mg/kg	ND	08/22/00	BGL	0.005		
Trichlorofluoromethane	mg/kg	ND	08/22/00	BGL	0.003		
1,2,3-Trichloropropane	mg/kg	ND	08/22/00	BGL	0.006		
1,2,4-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.003		
1,3,5-Trimethylbenzene	mg/kg	ND	08/22/00	BGL	0.005		
Vinyl Acetate	mg/kg	ND	08/22/00	BGL	0.078		
Vinyl Chloride	mg/kg	ND	08/22/00	BGL	0.002		
m + p Xylene	mg/kg	ND	08/22/00	BGL	0.006		
o-Xylene	mg/kg	ND	08/22/00	BGL	0.002		

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

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8/24/00
Page 5 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00
Field Sample #: 295000815-32

LIMS-BAT #: LIMS-50434
Job Number: 930126J10

Sample ID: 00B21475
Sampled: 8/15/00
NOT SPECIFIED

B-06 (2-4')

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Extractable TPH (ETPH)	mg/kg	4.2	08/22/00	MFF	2.5			

Analytical Method:

Extractable TPH (CT ETPH)

SAMPLES ARE EXTRACTED INTO METHYLENE CHLORIDE AND ANALYZED BY GAS CHROMATOGRAPHY WITH FLAME IONIZATION DETECTION (GC/FID).

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DON WILSON
 FUSS & O'NEILL
 146 HARTFORD ROAD
 MANCHESTER, CT 06040

8/24/00
 Page 6 of 8

Purchase Order No.:

Project Location: WBLF, WINDSOR, CT
 Date Received: 8/16/00
 Field Sample #: 295000815-32 *B-06 (2-4)*

LIMS-BAT #: LIMS-50434
 Job Number: 930126J10

Sample ID: 00B21475
 Sampled: 8/15/00
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg	12.9	08/22/00	PM	5.00		
Barium	mg/kg	16.5	08/22/00	PM	0.10		
Cadmium	mg/kg	ND	08/22/00	PM	0.05		
Chromium	mg/kg	7.75	08/22/00	PM	0.35		
Lead	mg/kg	6.22	08/22/00	PM	2.50		
Mercury	mg/kg	0.013	08/20/00	MS	0.009		
Selenium	mg/kg	ND	08/22/00	PM	5.00		
Silver	mg/kg	ND	08/22/00	PM	0.50		

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MANCHESTER, CT 06040

Purchase Order No.:

8/24/00
Page 7 of 8

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

LIMS-BAT #: LIMS-50434
Job Number: 930126J10

Analytical Method: Arsenic
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Barium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Cadmium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Chromium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Lead
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Mercury
SW846 3050/7471

SAMPLES ARE DIGESTED WITH ACIDS AND THEN ANALYZED BY
COLD VAPOR (FLAMELESS) ATOMIC ABSORPTION SPECTROPHOTOMETRY

Analytical Method: Selenium
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

Analytical Method: Silver
SW846 3050/6010

SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY
INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

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FUSS & O'NEILL
146 HARTFORD ROAD
MANCHESTER, CT 06040

Project Location: WBLF, WINDSOR, CT
Date Received: 8/16/00

Purchase Order No.:

8/24/00
Page 8 of 8

LIMS-BAT #: LIMS-50434
Job Number: 930126J10

** END OF REPORT **

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146 Hartford Road, Manchester, CT 06040-5921
TEL: (860) 646-2469 FAX: (860) 533-5133/5143

78 Interstate Drive, West Springfield, MA 01089
TEL: (413) 452-0445 FAX: (413) 846-0497

56 Quarry Road, Trumbull, CT 06611
TEL: (203) 374-3748 FAX: (203) 374-4391

275 Promenade St., Ste. 350, Providence, RI 02908
TEL: (401) 861-3070 FAX: (401) 861-3076

Letter of Transmittal

To: Mr. Mark Goossens Date: September 25, 2002
Solid Waste Manager Project No: 93126-J10
Windsor-Bloomfield Landfill Re: Windsor-Bloomfield Landfill
500 Huckleberry Road
Windsor, CT 06095 Telephone No: 285-1831

We are sending you: Attached Under separate cover via US Mail the following items

- Shod Drawings Prints Plans Specifications
Copy of Letter Change Order Samples Other

Table with 4 columns: Copies, Date, No., Description. Row 1: 1, Sept. 2002, Sewer Extension Project, Construction Administration Services, Closeout Report, Windsor Bloomfield Landfill, Windsor, Connecticut.

- For approval Returned loaned file Approved as submitted
As requested Returned for corrections Approved as noted
For your use For bids due 20 Rejected
For review & comment Submit copies for distribution Resubmit copies for approval

Remarks:

C: Signed: Nathan Jones
Nathan Jones



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275 Promenade St., Ste. 350, Providence, RI 02908
TEL: (401) 861-3070 FAX: (401) 861-3076

Letter of Transmittal

To: Dr. Charles Petrillo Date: September 25, 2002
Director, Center for Environmental Protection Project No: 93126-J10
Town of Windsor Re: Windsor-Bloomfield Landfill
275 Broad Street
Windsor, CT 06095 Telephone No: 285-1804

We are sending you: Attached Under separate cover via US Mail the following items

- Shon Drawings Prints Plans Specifications
Copy of Letter Change Order Samples Other

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As requested Returned for corrections Approved as noted
For your use For bids due 20 Rejected
For review & comment Submit copies for distribution Resubmit copies for approval

Remarks:

C: Mark Goossens
Tom Lenehan
Brain Funk
MDC

Signed: Nathan Jones

Nathan Jones



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275 Promenade St., Ste. 350, Providence, RI 02908
TEL: (401) 861-3070 FAX: (401) 861-3076

Letter of Transmittal

To: Mr. Thomas Lenehan Date: September 25, 2002
Town Engineer Project No: 93126-J10
Town of Windsor Re: Windsor-Bloomfield Landfill
275 Broad Street
Windsor, CT 06095 Telephone No: 285-1804

We are sending you: Attached Under separate cover via US Mail the following items

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For your use For bids due 20 Rejected
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Remarks:

C: Mark Goossens
Charles Petrillo
Brian Funk
MDC

Signed: Nathan Jones

Nathan Jones



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TEL: (860) 646-2469 FAX: (860) 533-5133/5143

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275 Promenade St., Ste. 350, Providence, RI 02908
TEL: (401) 861-3070 FAX: (401) 861-3076

Letter of Transmittal

To: Mr. Brian Funk Date: September 25, 2002
Director of Public Works Project No: 93126J10
Town of Windsor Re: Windsor-Bloomfield Landfill
Public Works Complex
99 Day Hill Road
Windsor, CT 06095 Telephone No:

We are sending you: Attached Under separate cover via US Mail the following items

- Shon Drawings Prints Plans Specifications
Copy of Letter Change Order Samples Other

Table with 4 columns: Copies, Date, No., Description. Row 1: 1, 9/25/02, Sewer Extension Project, Construction Administration Services, Closeout Report, Windsor Bloomfield Landfill, Windsor, Connecticut.

- For approval Returned loaned prints Approved as submitted
As requested Returned for corrections Approved as noted
For your use For bids due 20 Rejected
For review & comment Submit copies for distribution Resubmit copies for approval

Remarks:

C: Signed: Nathan Jones
Nathan Jones

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT
CONSTRUCTION ADMINISTRATION SERVICES

PROJECT CLOSEOUT REPORT

SEPTEMBER 2002



Fuss & O'Neill Inc. *Consulting Engineers*

146 Hartford Road, Manchester, CT 06040-5921
TEL 860 646-2469 FAX 860 643-6313

78 Interstate Drive, West Springfield, MA 01089
TEL 413 452-0445 FAX 413 846-0497

56 Quarry Road, Trumbull, CT 06611
TEL 203 374-3748 FAX 203 374-4391

The Foundry Corporate Office Center
275 Promenade Street, Suite 350, Providence, RI 02908
TEL 401 861-3070 FAX 401 861-3076



Fuss & O'Neill Inc. *Consulting Engineers*

146 Hartford Road, Manchester, CT 06040-5921
TEL 860 646-2469 FAX 860 643-6313
INTERNET: www.fussandoneill.com

Other Offices:
West Springfield, Massachusetts
Trumbull, Connecticut
Providence, Rhode Island

September 20, 2002

Mr. Thomas Lenehan, P.E.
Town Engineer
Town of Windsor
275 Broad Street
Windsor, CT 06095-2994

Re: Windsor Bloomfield Landfill Sewer Extension Project
Construction Administration Services
Project Closeout Report

Dear Mr. Lenehan:

Fuss & O'Neill, Inc. (F&O) is pleased submit this Project Closeout Report for the Windsor Bloomfield Landfill Sewer Extension Project. The Town of Windsor and the Metropolitan District Commission (MDC) provided construction inspection services for this project. F&O supplemented this effort with part-time contractor oversight and also provided construction administration services. This report documents all phases of the work.

PROJECT OVERVIEW

The objective of this construction project was to connect the office and maintenance garage at the Windsor Bloomfield Landfill to the MDC sewer and abandon the existing oil/water separator and existing septic system. The project also included cleaning the existing maintenance garage floor drain system and installing a new oil/water separator at the outlet. F&O prepared plans and specifications for this project. The project location is shown on the attached Site Location Map (Attachment A). Inspector's Daily Reports and photographs documenting construction activities are provided in Attachment B and Attachment C respectively.

Project Activities included the following:

- Installing and testing 925 linear feet of 12" PVC sanitary sewer extending from the end of existing 18" PVC sanitary sewer in Lantern Way
- Installing and testing 120 linear feet of 8" PVC sanitary sewer extending from the end of the above
- Installing approximately 50 linear feet of 6" PVC sanitary sewer service connection



Fuss & O'Neill Inc. *Consulting Engineers*

Mr. Thomas Lenehan

September 20, 2002

Page 2

- Installing 8 sanitary sewer manholes
- Installing new 1,000-gallon oil/water separator and sand-trap manhole
- Cleaning and testing the existing maintenance garage floor drain piping
- Connecting existing maintenance garage floor drain piping to new sand-trap manhole and oil/water separator
- Installing one gravity sewer cleanout between maintenance garage and sand trap manhole
- Pumping out and abandoning the existing oil/water separator
- Transporting and disposing sludge and wastewater from pumping out and power washing existing oil/water separator
- Abandoning existing septic tank and removing access manway

The work was performed by Simscroft-Echo Farms (Contractor) of Simsbury, Connecticut, under Contract with the Town of Windsor. The Contractor subcontracted some specific tasks as outlined below:

- Jack Farrelly Company – for air testing new sanitary sewer and existing floor drain piping
- PWE, Inc. – for CCTV inspection of the 12" PVC sanitary sewer
- Fleet Environmental Services LLC - for cleaning the maintenance garage floor drain piping and pumping and cleaning the existing oil/water separator

SANITARY SEWER INSTALLATION AND CONNECTION

Work on the sanitary sewer commenced on February 11, 2002 with clearing and grubbing activities. The sanitary sewer was extended from the capped end of the existing 18" PVC sanitary sewer, located in the 20' wide MDC easement northeast of the Lantern Way cul-de-sac, to the Windsor Bloomfield Landfill office and maintenance garage. The diameter of the new sewer is 12 inches most of the way to accommodate potential discharge from a potential future leachate collection system. The 12-inch sewer terminates at a sanitary manhole (SMH #3) approximately 150 feet from the landfill office. An 8-inch PVC sanitary sewer connects SMH #3 to the final sanitary manhole (SMH #2). Flow from the landfill office sanitary sewer service connection and flow from the new oil water separator, which treats water from the maintenance garage floor drains, converge at SMH #2.

The 12-inch sewer was air tested on February 25, 2002, and the 8-inch sewer was air tested on March 26, 2002. The Jack Farrelly Company of Bloomfield, Connecticut performed both tests. The air test consisted of maintaining 3.5 to 4.0 pounds per



Fuss & O'Neill Inc. *Consulting Engineers*

Mr. Thomas Lenehan
September 20, 2002
Page 3

square inch (p.s.i.) of positive pressure in the pipe for a minimum of two minutes. All sections of pipe passed. Test Reports are provided in Attachment D. A closed circuit television inspection was also performed on the 12-inch sewer by PYE, Inc. of Southington, Connecticut.

The service connection to the landfill office was made on April 1, 2002. The existing septic tank was abandoned by filling it with sand and removing the access manway. Since the tank was located six feet below grade, the Town of Windsor Health Department did not require that the tank be crushed.

FLOOR DRAIN CLEANING AND TESTING

On March 3, 2002, personnel from Fleet Environmental Service LLC (Fleet) of Bethel, Connecticut, cleaned the existing floor drain network. First, a vacuum truck extracted the dirt and oil from the floor drain trench and drain pipe. Once the solids were substantially removed, Fleet personnel cleaned the floor drains using power washers. Water was also forced through the existing floor drain pipe and collected in the existing oil/water separator and then removed with the vacuum truck. This effort generated 239 gallons of sludge and wash water. The sludge and wash water were transported to Bridgeport United Recycling in Bridgeport, Connecticut for recycling. Waste manifests are provided in Attachment E.

To determine the integrity of the existing floor drain pipe, The Jack Farrelly Company performed an air test on March 26, 2002. Although the pipe experienced a loss in pressure from 4 p.s.i. to 3 p.s.i. over approximately two minutes, air was leaking out around the plug at the downstream end of the pipe. Despite repeated attempts, personnel from The Jack Farrelly Company were unable to obtain an adequate seal with the plug. Since the quantity of air leaking out around the plug was consistent with the drop in pressure, we concluded that the pipe is sound.

OIL/WATER SEPARATOR

Previously, the garage floor drains discharged to a 1000-gallon oil/water separator prior to ultimately discharging to a drywell north of the maintenance garage. A new 1000-gallon oil/water separator was installed by the Contractor on March 22, 2002, and brought on line on March 26, 2002. Upstream of the new oil/water separator, a sand trap manhole with a two-foot sump was installed to reduce the sediment load to the oil/water separator. The new oil/water separator discharges to the newly installed sanitary sewer. The oil/water separator should be properly maintained in accordance with the General Permit for Motor Vehicle Service Floor Drain Wastewater (Permit



Fuss & O'Neill Inc. *Consulting Engineers*

Mr. Thomas Lenehan
September 20, 2002
Page 4

No. GVS001082), provided as Attachment F. On March 21 and April 1, 2002, Fleet pumped out the sludge and sediment from the existing oil water separator and subsequently power-washed the inside. Fleet transported 953 gallons of sludge and wash water from the oil/water separator to Bridgeport United Recycling. The oil/water separator was then abandoned in place by filling it with 300-500 p.s.i. flowable fill and backfilling. The manways were removed and disposed.

SUMMARY

Construction activities at the Windsor Bloomfield Landfill occurred primarily during the months of February and March 2002 and centered around the connection of the maintenance garage floor drains and the landfill office sanitary to the MDC sewer. All work was substantially performed in accordance with the plans and specifications dated November 2001 prepared by Fuss & O'Neill, Inc. Record Drawings submitted by the Contractor are attached to this report as Attachment G.

Please call us if you have any questions regarding this report.

Sincerely,

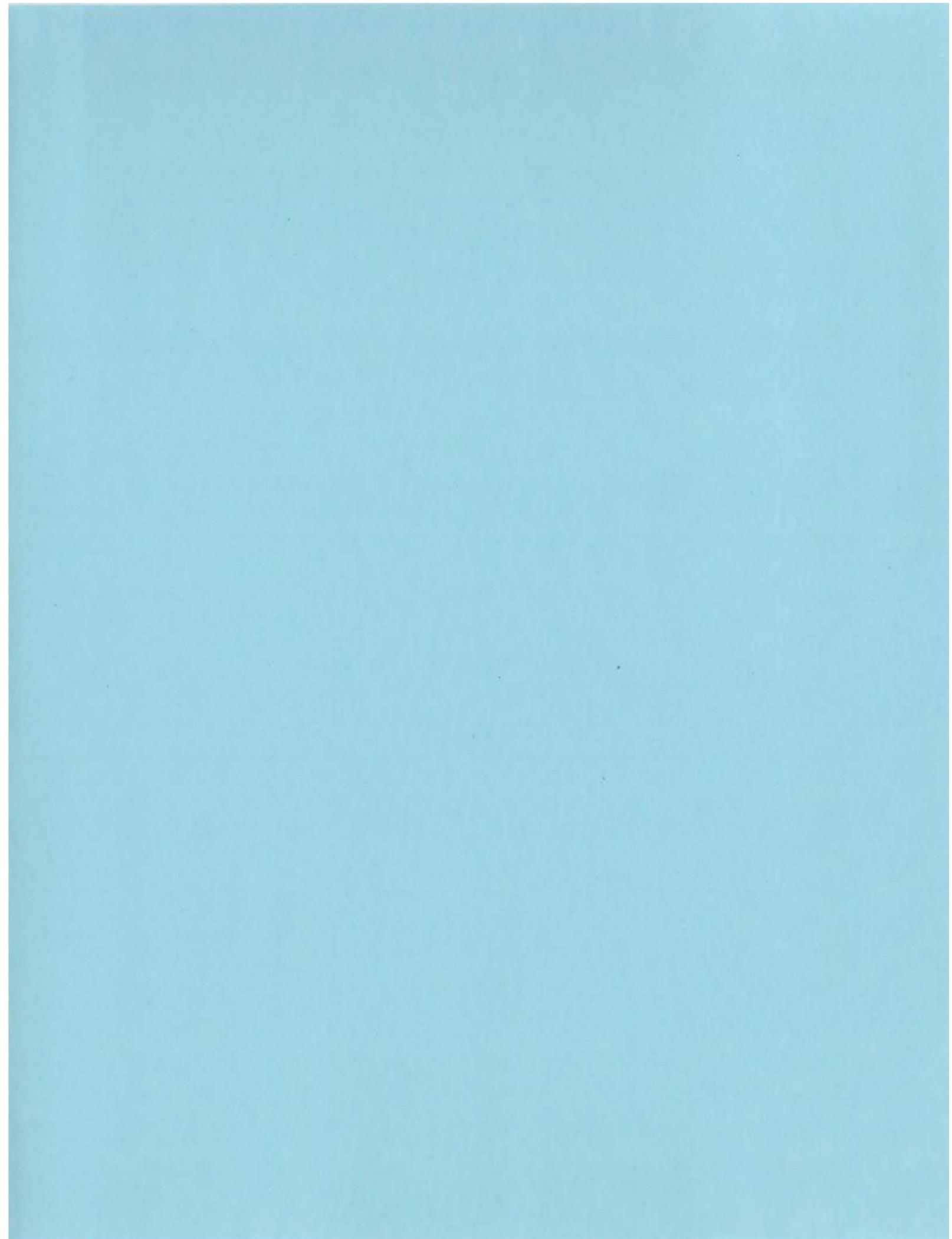
Charles D. Ahles, P.E.
Senior Environmental Engineer

David F. Hurley, LEP, RPG
Vice President

/nej

Attachments: Attachment A: Site Location Map
Attachment B: Inspector's Daily Reports
Attachment C: Photographs
Attachment D: Test Reports
Attachment E: Waste Manifests
Attachment F: General Permit
Attachment G: Contractor's Record Drawings

c: Brian Funk, Town of Windsor
Charles Petrillo, Town of Windsor
Mark Goossens, Town of Windsor
Janice McCaroll, MDC

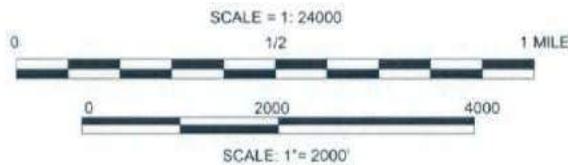
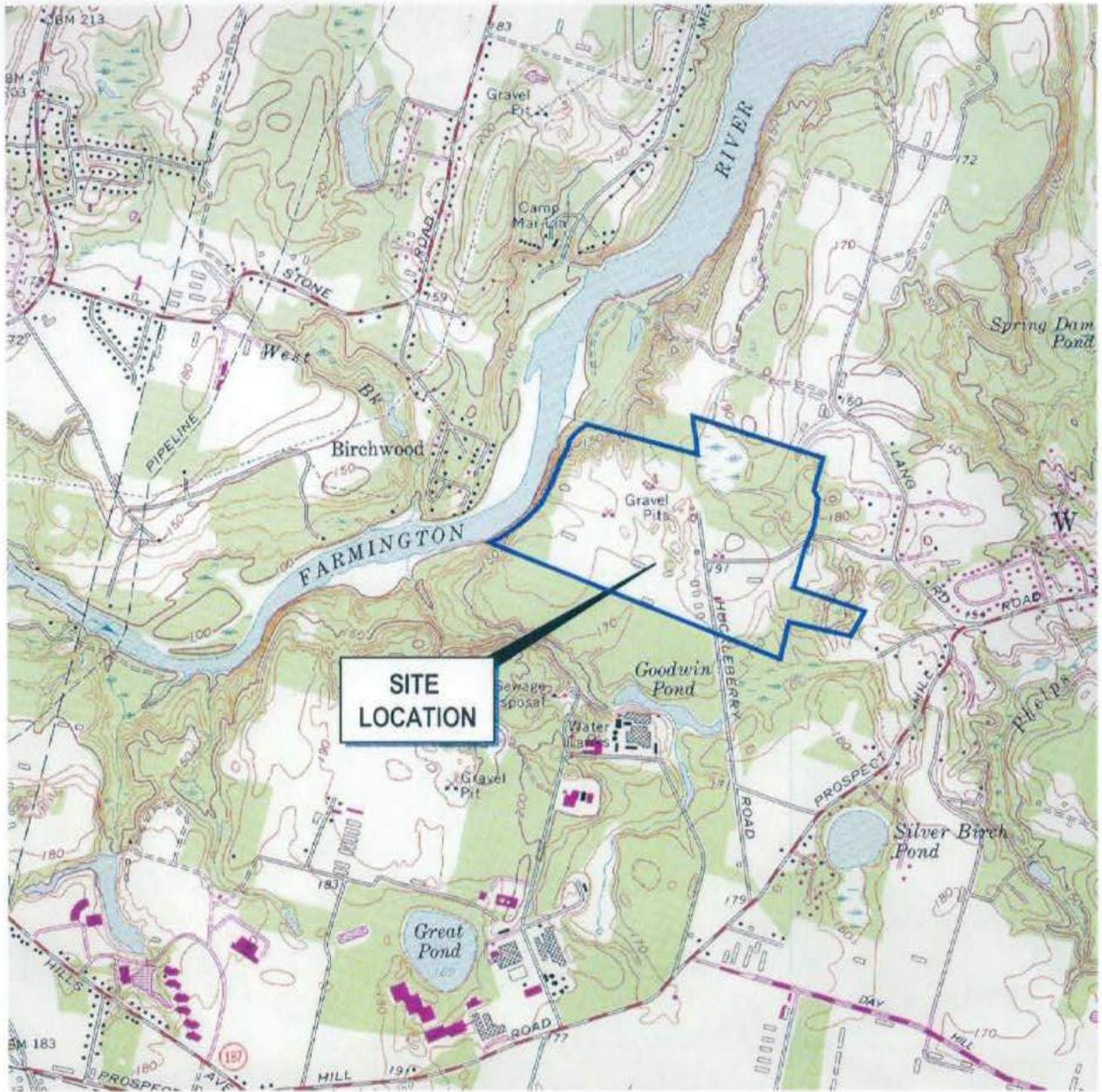


ATTACHMENT A

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

PROJECT CLOSE OUT REPORT

SITE LOCATION MAP



MAP REFERENCE:

THIS MAP WAS PREPARED FROM THE FOLLOWING
7.5 MINUTE SERIES TOPOGRAPHIC MAPS:
WINDSOR LOCKS, CONN. 1964 PHOTOREVISED 1984



Fuss & O'Neill Inc. Consulting Engineer
140 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
(860) 646-2469

SITE LOCATION MAP
WINDSOR-BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

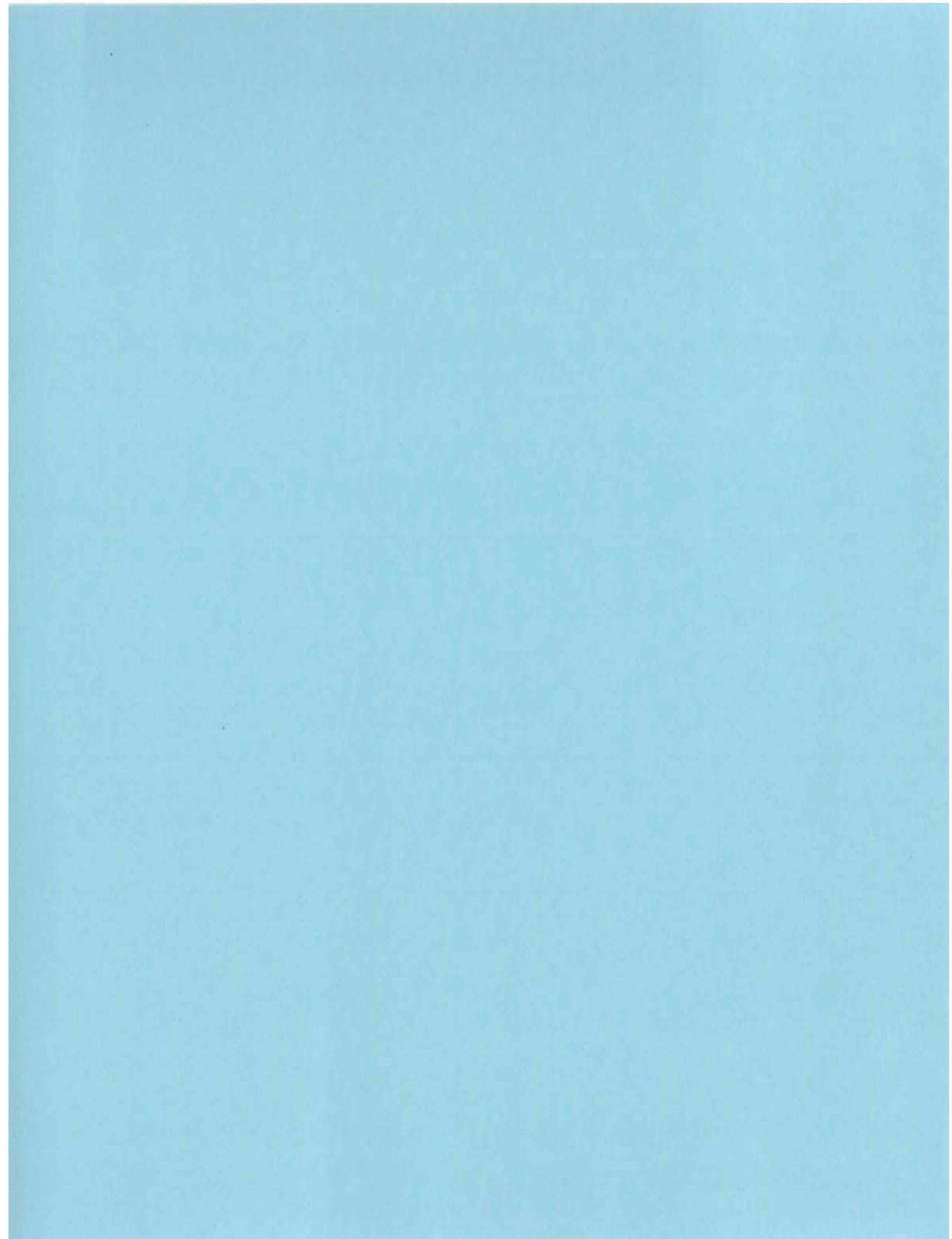
HUCKLEBERRY ROAD

WINDSOR, CONNECTICUT

PROJ. NO. 93-126J10

DATED: AUG 2002

SCALE: 1" = 2000'



ATTACHMENT B

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

PROJECT CLOSE OUT REPORT

INSPECTOR'S DAILY REPORTS



INSPECTOR'S DAILY REPORT

Project No. 93126 J10 Contract No. _____ Project WINDSOR BLOOMFIELD LF-SEWER EXTENSION
 Day of Week TUESDAY Date 2/12/02 Weather SUNNY, WINDY Temp. Range 30-35
 (Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

ARRIVE AT SITE @ 09:45
 CONTRACTOR HAS JUST SET SUMP FOR SMH #8
 AREA HAS BEEN CLEARED FROM SMH #8 (STA 21+30)
 TO STA 17+50 WITHIN THE LIMITS OF EASEMENT.
 THE FOREMAN (GIBBY CREIGHTON) WAS UNAWARE THAT A TEST
 PIT NEEDS TO BE EXCAVATED TO DETERMINE INVERT OF
 GRAVITY SEWER CLEANOUT IN CASE INVERTS NEED TO BE
 MODIFIED.
 - HE WILL EXCAVATE FIRST THING TOMORROW (~ 08:00)
 - HE WILL NOT LAY PIPE BEYOND SMH #7 AS THE
 INVERT OF SMH #6 MAY HAVE TO CHANGE.
 LEAVE SITE @ 10:15

PERSONNEL	EQUIPMENT		
	Idle	Idle	Idle
Subcontractor(s)	Active	Active	Active
Prime	Air Compressor		Saw -
Superintendent			
Foreman	Backhoe	Jackhammer	
Backhoe Opr.	Bulldozer		Step Van
Dozer Opr.		Paver - Bit.	Tractor Backhoe
Loader Opr.	Compactor - Hyd.	Payloader	Trailer
	Compactor - Gas		Trench Shield
	Compactor	Pickup Truck	
Truck Driver		Pump	Truck
	Concrete Saw		
	Concrete Vibrator		
	Dumptruck	Road Tractor	Water Wagon
	Dump Trailer	Roller - Tandem	Welder
	Generator	Roller - Pneumatic	
		Roller - Vibratory	
Intermediate Lab.	Grader	Roller	
Common Laborer	Gradall		

OFFICIAL VISITORS TO JOB SITE

Name/Organization	Name/Organization	<input type="checkbox"/> Information on reverse.
IRV SLIKE, WINDSOR		<input type="checkbox"/> Additional sheets attached.
RED SMITH, WINDSOR		<input type="checkbox"/> Quantities logged for payment

Northey Spence
 INSPECTOR'S SIGNATURE

[Signature]
 REVIEWER'S SIGNATURE

CALENDAR DAY #

I.D.R. # 1



INSPECTOR'S DAILY REPORT

Project No. 93126 710 Contract No. _____ Project WINDSOR BLW MFIELD LF-SEWER EXTENSION
 Day of Week WEDNESDAY Date 2/13/02 Weather SNOW & SLEET Temp. Range 30-35
 (Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

ARRIVE ON SITE @ 07:55

CONTRACTOR IS EXCAVATING TEST PIT TO DETERMINE INVERT AT GRAVITY SEWER CLEANOUT.

- ENCOUNTERS MH COVER FOR EXISTING GRAVITY SEWER CLEANOUT @ APPROXIMATELY 2'

- INVERT OF FLOOR DRAIN COMING OUT OF GARAGE AT THE CLEANOUT WAS MEASURED TO BE 181.70'

- MEASURED ELEVATION IS APPROXIMATELY 1 FOOT BELOW THE ASSUMED ELEVATION OF 182.63 ±

- TELL CONTRACTOR NOT TO LAY PIPE BEYOND SMH #7 UNTIL IT IS DETERMINED HOW THIS WILL BE RESOLVED

LEAVE SITE @ 08:20

PERSONNEL		EQUIPMENT			
Subcontractor(s)		Idle		Idle	
Prime		Active		Active	
Superintendent		Air Compressor			Saw -
Foreman				Jackhammer	
Backhoe Opr.		Backhoe			Step Van
Dozer Opr.		Bulldozer		Paver - Bit.	Tractor Backhoe
Loader Opr.				Payloader	Trailer
		Compactor- Hyd.			Trench Shield
		Compactor - Gas		Pickup Truck	
		Compactor		Pump	Truck
Truck Driver				Road Tractor	Water Wagon
		Concrete Saw		Roller - Tandem	Welder
		Concrete Vibrator		Roller - Pneumatic	
		Dumptruck		Roller - Vibratory	
		Dump Trailer		Roller	
		Generator			
Intermediate Lab.		Grader			
Common Laborer		Gradall			

OFFICIAL VISITORS TO JOB SITE

Name/Organization	Name/Organization
RED SMITH, WINDSOR	

- Information on reverse.
- Additional sheets attached.
- Quantities logged for payment

Nathan Jones
INSPECTOR'S SIGNATURE

[Signature]
REVIEWER'S SIGNATURE

CALENDAR DAY #

2
I.D.R. #



INSPECTOR'S DAILY REPORT

Project No. 93126 J10 Contract No. _____ Project WBL - SEWER EXT.
 Day of Week THURSDAY Date 2/28/02 Weather SUNNY, WINDY Temp. Range 25-30
 (Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

- ARRIVE @ SITE @ 8:30

- RED SMITH, TOWN OF WINDSOR, ON SITE @ 8:40
 - THE AIRTTEST PERFORMED 2/26/02 PASSED (COPY ATTACHED)
 - RED QUESTIONS WHETHER THE SINK AND EYEWASH THAT DRAW INTO THE FLOOR DRAINS IS A HEALTHY CODE VIOLATION.

- PYE CONSTRUCTION IS ON SITE @ 900 TO PERFORM TV TEST
 - GIBBY CRIGHTON, SIMICRET-ECHO, ON SITE AS WELL
 - I INFORM HIM THAT THE MH FRAMES AND COVERS SHOULD BE INSTALLED PER PLANS
 - MRC INSPECTOR ALSO ON SITE

LEFT SITE @ 1000
 PYE HAD COMPLETED TV INSPECTION FROM STM #3 (STA 11+99) TO STM #4 (STA 13+64)

GIBBY WILL DELIVER COPY OF VIDEO TO FFO THIS AFTERNOON

PERSONNEL	EQUIPMENT		
	Idle	Active	Idle
Subcontractor(s)			
Prime			
Superintendent	Air Compressor		Saw -
Foreman			
Backhoe Opr.	Backhoe	Jackhammer	Step Van
Dozer Opr.	Bulldozer		Tractor Backhoe
Loader Opr.		Paver - Bit.	Trailer
	Compactor- Hyd.	Payloader	Trench Shield
	Compactor - Gas		
	Compactor	Pickup Truck	Truck
Truck Driver		Pump	
	Concrete Saw		
	Concrete Vibrator		
	Dumptruck	Road Tractor	Water Wagon
	Dump Trailer		Welder
	Generator	Roller - Tandem	
		Roller - Pneumatic	
		Roller - Vibratory	
Intermediate Lab.	Grader	Roller	
Common Laborer	Gradall		

OFFICIAL VISITORS TO JOB SITE		<input type="checkbox"/> Information on reverse.
Name/Organization	Name/Organization	<input checked="" type="checkbox"/> Additional sheets attached.
		<input type="checkbox"/> Quantities logged for payment

Victoria Spence INSPECTOR'S SIGNATURE *[Signature]* REVIEWER'S SIGNATURE _____ CALENDAR DAY # 3 I.D.R. #



INSPECTOR'S DAILY REPORT

Project No. 93126510 Contract No. _____ Project WBL - LANDFILL SEWER EXPANSION
 Day of Week Monday Date 3/4/02 Weather Sunny, Windy Temp. Range 40s
 (Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

0857 Arrive @ site, meet in landfill conference w/ Ted, Jim Martini, G. Bob, Gregson, Russ Kaffin, and Paul Szymanski.

SUNSCRAFT TO PICK UP VIDEO TODAY & WILL TURN OFF COPY @ F&O

FLEET'S SUBMITTALS ON O/W SED WAY TO ARRIVE MON THIS WEEK. FAIRLY TO DO AIR TEST

SUNSCRAFT WILL BREAK TANK CORNER TO LAY IN LINE. FLOWABLE FILL WOULD BE OK TO MAKE SUBMITTAL.

ALL PIPE INSTALLED TO MH #3.

CONTRACTOR GOING BACK TO SOILING TRENCHES

FLOOR DRAIN CLEANING PLANNED FOR NEXT WEEK.

Leave site @ 10 AM

PERSONNEL		EQUIPMENT			
Subcontractor(s)		Idle		Idle	
Prime	Active	Active	Active	Active	Active
Superintendent	Air Compressor				Saw -
Foreman					
Backhoe Opr.	Backhoe		Jackhammer		
Dozer Opr.	Bulldozer				Step Van
Loader Opr.			Paver - Bit.		Tractor Backhoe
	Compactor - Hyd.		Payloader		Trailer
	Compactor - Gas				Trench Shield
	Compactor		Pickup Truck		
Truck Driver			Pump		Truck
	Concrete Saw				
	Concrete Vibrator				
	Dumptruck				
	Dump Trailer		Road Tractor		Water Wagon
	Generator		Roller - Tandem		Welder
			Roller - Pneumatic		
			Roller - Vibratory		
Intermediate Lab.	Grader		Roller		
Common Laborer	Gradall				

OFFICIAL VISITORS TO JOB SITE

Name/Organization	Name/Organization

- Information on reverse.
- Additional sheets attached.
- Quantities logged for payment

INSPECTOR'S SIGNATURE

REVIEWER'S SIGNATURE

CALENDAR DAY #

I.D.R. #

4



INSPECTOR'S DAILY REPORT

Project No. 93126 J10 Contract No. _____ Project WBL-SEWER EXT
 Day of Week THURSDAY Date 3/21/02 Weather SUNNY Temp. Range 30-45
 (Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

ARRIVE ON SITE @ 8:20
 - FLEET ENVIRONMENTAL IS ON SITE PUMPING OUT EXISTING OIL WATER SEPARATOR
 - NEW OIL WATER SEPARATOR IS DELIVERED TO SITE BY ARROW
 - INSPECT NEW OIL/WATER SEPARATOR
 - SPEAK WITH FLEET'S PROJECT MANAGER → FLEET'S UNDERSTANDING IS THAT THEY ARE NOT GOING TO CLEAN TANK AFTER IT IS PUMPED OUT, THERE IS A LOT OF SLUDGE ADHERED TO THE SIDEWALLS.
 - SPECS SAY TO ABANDON OIL/WATER SEPARATOR IN ACCORDANCE WITH STATE & FEDERAL REGULATIONS
 - SPEAK WITH CHARLIE AHLES @ 10:00, HE WANTS IT CLEANED
 - SPEAK WITH JIM MARTUCCI, SIMSCROFT, HIS POSITION IS THAT CLEANING THE TANK IS AN EXTRA
 10:30 FLEET STICKS THE VAC TRUCK TO DETERMINE QUANTITY OF SLUDGE BEFORE THEY BEGIN CLEANING FLOOR DRAINS AND GENERATING RINSEWATER → 282 GAL SLUDGE (PAY ITEM 02220.2)
 11:00 FLEET CLEANS FLOOR DRAIN TRENCH AND PIPE.
 12:00 SPEAK WITH CHARLIE - HE IS GOING TO AGREE TO A C/O FOR CLEANING TANK - JIM MARTUCCI WILL COME TO SITE TO ESTIMATE PRICE.
 - WILL NOT BE ABLE TO CLEAN TODAY BECAUSE OPEN EXCAVATION PREVENTS ACCESS

PERSONNEL	EQUIPMENT		
	Idle	Active	Idle
Subcontractor(s)			(OVER)
Prime			
Superintendent	Air Compressor		Saw -
Foreman			
Backhoe Opr.	Backhoe	Jackhammer	
Dozer Opr.	Bulldozer		Step Van
Loader Opr.		Paver - Bit.	Tractor Backhoe
	Compactor - Hyd.		Trailer
	Compactor - Gas	Payloader	
	Compactor		Trench Shield
Truck Driver		Pickup Truck	
		Pump	Truck
	Concrete Saw		
	Concrete Vibrator		
	Dumptruck		
	Dump Trailer	Road Tractor	Water Wagon
		Roller - Tandem	Welder
	Generator	Roller - Pneumatic	
		Roller - Vibratory	
Intermediate Lab.	Grader	Roller	
Common Laborer	Gradall		

OFFICIAL VISITORS TO JOB SITE		
Name/Organization	Name/Organization	<input checked="" type="checkbox"/> Information on reverse.
BRIAN FUNK, TOWN OF WINDSOR	TOM LEVEYHAN, TOWN OF WINDSOR	<input checked="" type="checkbox"/> Additional sheets attached.
		<input type="checkbox"/> Quantities logged for payment

INSPECTOR'S SIGNATURE [Signature] REVIEWER'S SIGNATURE [Signature] CALENDAR DAY # 5 I.D.R. # 5

1300 JIM MARTUCCI ON SITE

1315 BRIAN FUNK IS ON SITE - SIGNS MANIFESTS (3) (COPIES ATTACHED)
- 39 GAL DRUM OF SLUDGE/PPE
- 282 GAL SLUDGE (VAC)
- 200 GAL RINSEWATER (VAC)

13:30 CHARLIE AHLES ON SITE

- DISCUSS CLEANING OIL/WATER SEPARATOR W J. MARTUCCI AND CHARLIE. JIM IS GOING TO GET BACK TO US WITH PRICE.
- ALSO DISCUSS WITH THEM APPARENT FLOOR DRAIN THAT RUNS NORTH-SOUTH AT EAST SIDE OF GARAGE THAT IS FULL OF SAND
- DECIDE IT WOULD NOT BE A GOOD IDEA TO REMOVE SAND BECAUSE THE INTEGRITY OF THE CONCRETE FLOOR IS QUESTIONABLE. BUT SHOULD SEAL EAST END OF MAIN FLOOR DRAIN TRENCH WITH CONCRETE

1400 JIM MARTUCCI AND CHARLIE AHLES LEAVE SITE.

1430 TOM LENEHAN IS ON SITE.

- HE AGREES THAT CLEANING OUT SAND FROM EAST FLOOR DRAIN WOULD NOT BE A GOOD IDEA AND CONCURS THAT THE EAST END OF THE MAIN FLOOR DRAIN TRENCH SHOULD BE SEALED WITH CONCRETE.

1445 TOM LENEHAN LEAVES SITE.

SINCE MONDAY, SIMSCROFT HAS LAID PIPE FROM DMH #3 TO DMH #2 AND SET DMH #2.

- CONTRACTOR EXCAVATED FOR NEW OIL/WATER SEPARATOR AND PUT DOWN AND GRADED STONE BEDDING TODAY.
- WILL SET OIL/WATER SEPARATOR FIRST THING TOMORROW MORNING.

1510 LEAVE SITE.



INSPECTOR'S DAILY REPORT

Project No. 93126 J10 Contract No. _____ Project WBL - SEWER EXT.
 Day of Week FRIDAY Date 3/22/02 Weather SUNNY Temp. Range 30-35
 (Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

07:30 ARRIVE ON SITE
 SIMS CROFT IS ON SITE
 RED SMITH ON SITE
 SIMS CROFT NEEDS TO WAIT FOR BIGGE EXCAVATOR
 TO ARRIVE BEFORE THEY CAN INSTALL OIL/WATER
 SEPARATOR
 08:00 LEAVE SITE

14:15 ARRIVE BACK ON SITE
 CONTRACTOR HAS LEFT FOR THE DAY
 OIL WATER SEPARATOR HAS BEEN PLACED

14:30 LEAVE SITE

PERSONNEL	EQUIPMENT			
	Idle	Active	Idle	Active
Subcontractor(s)				
Prime				
Superintendent	Air Compressor			Saw -
Foreman				
Backhoe Opr.	Backhoe		Jackhammer	
Dozer Opr.	Bulldozer			Step Van
Loader Opr.			Paver - Bit.	Tractor Backhoe
	Compactor - Hyd.		Payloader	Trailer
	Compactor - Gas			Trench Shield
	Compactor		Pickup Truck	
Truck Driver			Pump	Truck
	Concrete Saw			
	Concrete Vibrator			
	Dumptruck		Road Tractor	Water Wagon
	Dump Trailer			Welder
	Generator		Roller - Tandem	
			Roller - Pneumatic	
			Roller - Vibratory	
Intermediate Lab.	Grader		Roller	
Common Laborer	Gradall			

OFFICIAL VISITORS TO JOB SITE

Name/Organization	Name/Organization	<input type="checkbox"/> Information on reverse.
		<input type="checkbox"/> Additional sheets attached.
		<input type="checkbox"/> Quantities logged for payment

[Signature] INSPECTOR'S SIGNATURE *[Signature]* REVIEWER'S SIGNATURE _____ CALENDAR DAY # 6 I.D.R. #



INSPECTOR'S DAILY REPORT

Project No. 93126 J10 Contract No. _____ Project WBL-SEWER EXT

Day of Week MONDAY Date 3/25/02 Weather CLOUDY Temp. Range 40 C

(Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

ARRIVE ON SITE @ 0800
 CONTRACTOR IS EXCAVATING TO INSTALL DSM#1 AND INSTALLING 6" SCHEDULE 80 BETWEEN OIL/WATER SEPARATOR AND DMH#2
 -THE INVERT ELEVATIONS OF THE PIPE PENETRATIONS COMING INTO MH#2 WERE REVERSED BY THE MANUFACTURER (PENETRATION FOR PIPE COMING FROM OIL/WATER SEPARATOR WAS TOO HIGH, PENETRATION FOR PIPE FROM SERVICE CONNECTION WAS TOO LOW).
 -CONTRACTOR CORED NEW PENETRATION FOR PIPE FROM OIL/WATER SEPARATOR AND WILL PATCH OTHER PENETRATIONS
 -CONTRACTOR WILL PITCH SERVICE CONNECTION TO MATCH MANUFACTURED INVERT
 -PENETRATIONS TO OIL WATER SEPARATOR ARE BEING SEALED W/LOW-SEAL INSTEAD OF LINK-SEALS
 8:30 HOLD WEEKLY PROGRESS MEETING (SEE MINUTES)
 9:30 LEAVE SITE
 NOTE: FLOOR DRAIN PIPE IS 8" C.I., NOT 4" AS PLAN SAYS
 13:00 ARRIVE BACK ON SITE
 -CONTRACTOR HAS EXPOSED OLD OIL/WATER SEPARATOR -IT IS ONE SOLID UNIT.
 -CONTRACTOR WOULD LIKE TO RUN VENT STRAIGHT TO BUILDING (BETWEEN OIL TANK AND CONCRETE WALK)
 WORK COMPLETED TODAY: SEDIMENT MH #1 INSTALLED, INVERTS FOR MHS #1 + #2 COMPLETE, RISER SECTIONS FOR OIL WATER SEPARATOR AND MHS #1 + #2 BLOCKED UP TO GRADE AND MH FRAMES/LOWERS INSTALLED
 EXTRA PENETRATION IN DSMH #2 PATCHED. [LEFT SITE @ 1430]

PERSONNEL	EQUIPMENT		
	Idle	Active	Idle
Subcontractor(s)			Idle
Prime			Active
Superintendent	Air Compressor		Saw -
Foreman			
Backhoe Opr.	Backhoe	Jackhammer	
Dozer Opr.	Bulldozer		Step Van
Loader Opr.		Paver - Bit.	Tractor Backhoe
	Compactor - Hyd.	Payloader	Trailer
	Compactor - Gas		Trench Shield
	Compactor	Pickup Truck	
Truck Driver		Pump	
	Concrete Saw		Truck
	Concrete Vibrator		
	Dumptruck	Road Tractor	Water Wagon
	Dump Trailer		Welder
	Generator	Roller - Tandem	
		Roller - Pneumatic	
		Roller - Vibratory	
Intermediate Lab.	Grader	Roller	
Common Laborer	Gradall		

OFFICIAL VISITORS TO JOB SITE		<input type="checkbox"/>
Name/Organization	Name/Organization	Information on reverse.
Chris (MDC INSPECTOR)		Additional sheets attached.
RED SMITH (TRAIL INSPECTOR)		Quantities logged for payment

[Signature]
INSPECTOR'S SIGNATURE

[Signature]
REVIEWER'S SIGNATURE

CALENDAR DAY #

7
I.D.R. #



INSPECTOR'S DAILY REPORT

Project No. 93126.710 Contract No. _____ Project WBL - SEWER EXT.

Day of Week TUESDAY Date 3/26/02 Weather CLOUDY Temp. Range 40s

(Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

- ARRIVE ON SITE @ 09:40
- THE JACK FARRELLY COMPANY ON SITE TO PERFORM AIR TEST ON 8" PVC SEWER BETWEEN DSMH #2 AND SMH #3 AND ON THE EXISTING 8" C.I. FLOOR DRAIN PIPE.
- SIMSCROFT-ECHO HAS REMOVED THE SOUTHERN MOST MANHOLE RISER OF THE EXISTING OIL/WATER SEPARATOR AND BROKEN THE TOP OF THE TANK TO PROVIDE ACCESS TO THE 8" C.I. FLOOR DRAIN. THERE IS ALSO NOW ADEQUATE ACCESS FOR CLEANING THE TANK.
- THE LINE BETWEEN DSMH #2 AND SMH #3 PASSED.
- THE 8" C.I. FLOOR DRAIN FAILED TO HOLD 4 P.S.I. FOR 7 MINUTES, HOWEVER FARRELLY WAS UNABLE TO GET AN ADEQUATE SEAL ON THE DOWNSTREAM SIDE OF THE FLOOR DRAIN DUE TO OIL/GREASE AND SAND. AIR WAS OBSERVED LEAKING OUT FROM AROUND THE PLUG. SINCE THE PRESSURE DROP IN THE LINE WAS SO SLOW (1 P.S.I. DROP IN 2 MINUTES) THE PIPE WOULD MOST LIKELY HAVE PASSED IF THE PLUG HAD MADE A GOOD SEAL.
- LEFT SITE @ 10:40

TEST REPORT ATTACHED

PERSONNEL	EQUIPMENT			
	Idle	Active	Idle	Active
Subcontractor(s)				
Prime				
Superintendent	Air Compressor			Saw -
Foreman				
Backhoe Opr.	Backhoe		Jackhammer	
Dozer Opr.	Bulldozer			Step Van
Loader Opr.			Paver - Bit.	Tractor Backhoe
	Compactor - Hyd.		Payloader	Trailer
	Compactor - Gas			Trench Shield
	Compactor			
Truck Driver			Pickup Truck	
	Concrete Saw		Pump	Truck
	Concrete Vibrator			
	Dumptruck			
	Dump Trailer		Road Tractor	Water Wagon
			Roller - Tandem	Welder
	Generator		Roller - Pneumatic	
			Roller - Vibratory	
Intermediate Lab.	Grader		Roller	
Common Laborer	Gradall			

OFFICIAL VISITORS TO JOB SITE		
Name/Organization	Name/Organization	
Red Smith, Town of Windsor		<input type="checkbox"/> Information on reverse.
Chris, MOC		<input checked="" type="checkbox"/> Additional sheets attached.
		<input type="checkbox"/> Quantities logged for payment

Nathan Spens
INSPECTOR'S SIGNATURE

[Signature]
REVIEWER'S SIGNATURE

CALENDAR DAY #

8
I.D.R. #



INSPECTOR'S DAILY REPORT

Project No. 93126 J10 Contract No. _____ Project WBL - SEWER EXT.
 Day of Week MONDAY Date 4/01/02 Weather CLOUDY Temp. Range 40-45°
 (Sub) Contractor(s); Location(s); Nature of Work; Pay Items; Notes

ARRIVE ON SITE @ 7:50
 SIMSCROET ON SITE TO MAKE CONNECTION TO LF OFFICE
 FLEET ENVIRONMENTAL ARRIVES @ 0855 TO PUMP OUT REMAINING CONTENTS OF EXISTING OIL WATER SEPARATOR AND CLEAN TANK
 HOLD WEEKLY PROGRESS MEETING @ 0900 (SEE MINUTES)
 FLEET BEGINS PUMPING OUT REMAINING CONTENTS OF EXISTING OIL WATER SEPARATOR @ 09:30.
 - APPROXIMATELY 4 CY OF OIL/SEDIMENT TO BE PUMPED
 FAX FLOWABLE FILL SUBMITAL TO CHARLIE AHLES FOR APPROVAL.
 - 1000 CHARLIE CALLS - FEELS 50-200 PSI RANGE IS WEAK WOULD LIKE 500 PSI. HE HAS ALREADY TOLD DM MARTULLI.
 11:00 TANK SUBSTANTIALLY PUMPED OUT - FLEET BEGINS CLEANING TANK
 → 586 GALLONS IN TRUCK (MANIFEST ATTACHED)
 12:45 SUBURBAN SANITARY SERVICE ON SITE TO PUMP TANK (SEPTIC)
 12:50 SEWER CONNECTION TO OFFICE COMPLETE - (SEE ATTACHED DETAIL)
 MDC INSPECTOR CHRIS ON SITE TO INSPECT → OKS CONNECTION
 13:00 TANK CLEANING COMPLETED SATISFACTORILY (SEE MAN HOUR BREAKDOWN)
 13:05 SUBURBAN FINISHES PUMPING OUT SEPTIC - LOSS CLEAN (OVER)

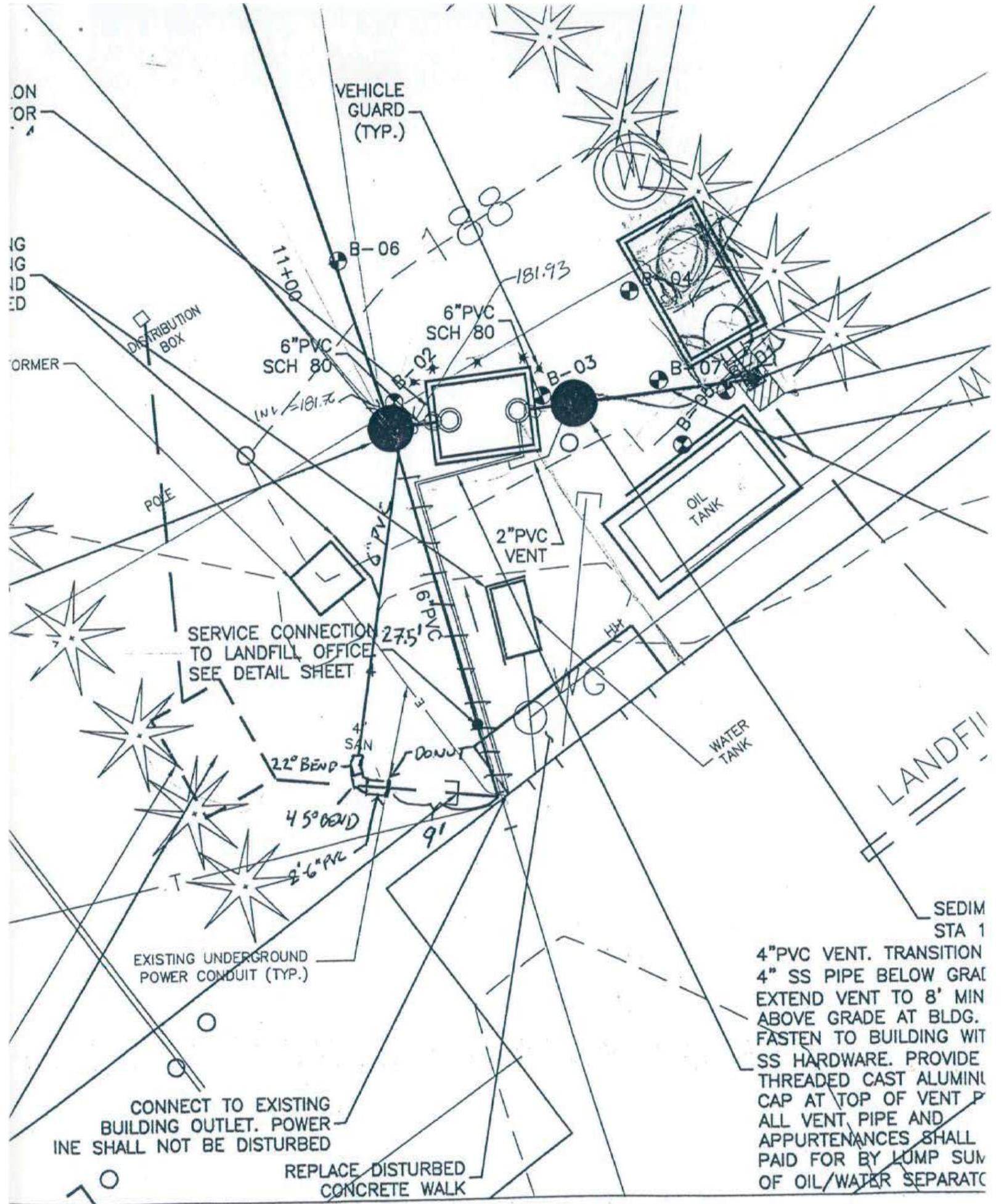
PERSONNEL	MAN (HOURS)	EQUIPMENT					
		Idle		Active		Idle	
Subcontractor(s)		Air Compressor	Backhoe	Bulldozer	Jackhammer	Paver - Bit.	Saw -
Prime							
Superintendent							
Foreman	3						
Backhoe Opr.							
Dozer Opr.							Step Van
Loader Opr.		Compactor - Hyd.					Tractor Backhoe
		Compactor - Gas					Trailer
		Compactor					Trench Shield
Truck Driver					Pickup Truck		
					Pump		
		Concrete Saw			VAC TRUCK	3 HRS	Truck
		Concrete Vibrator			OVM	3 HRS	
		Dumptruck			Road Tractor		Water Wagon
		Dump Trailer			Roller - Tandem		Welder
		Generator			Roller - Pneumatic		
					Roller - Vibratory		
Intermediate Lab.	6	Grader			Roller		
Common Laborer		Gradall					

OFFICIAL VISITORS TO JOB SITE		<input checked="" type="checkbox"/> Information on reverse. <input checked="" type="checkbox"/> Additional sheets attached. <input checked="" type="checkbox"/> Quantities logged for payment FOR ACTIVITIES RELATED TO CLEANING TANK ONLY.
Name/Organization	Name/Organization	
REN SMITH, TOWN INSPECTOR		
CHRIS, MDC INSPECTOR		

Nathan Egan INSPECTOR'S SIGNATURE *[Signature]* REVIEWER'S SIGNATURE _____ CALENDAR DAY # 9 I.D.R. #

671 GALLONS SLUDGE - TOTAL
(89 GALLONS - RINSE WATER)

- PER KEVIN CLEMENS, SIMSCROFT SUPER, TOWN HEALTH DEPT. IS OK WITH FUSS & O'NEILL WITNESSING CRUSHING OF OLD SEPTIC TANK.
- 1310 CALL CHARLIE AHLES, ASK HIM TO VERIFY ABOVE
- THE SEPTIC IS 6' BELOW GRADE
 - REN SMITH CALLS HEALTH DEPT. → THEY SAY TO FILL WITH SAND AND REMOVE MANWAYS. SINCE IT IS SO DEEP, CRUSHING ISN'T NECESSARY.
- 1345 TILCON ON SITE. STILL HAVE NOT RECEIVED A SUBMITTAL DEMONSTRATING STRENGTH OF FLOWABLE FILL.
 - MIX DESIGN ON TRUCK IS WEAKER THAN WHAT WAS SUBMITTED
 - TILCON TO SEND ANOTHER TRUCK WITH STRONGER FILL.
- 1400 SEPTIC HAS BEEN FILLED WITH SAND AND MANWAY HAS BEEN REMOVED.
- 1430 TILCON ARRIVES - MIX DESIGN: 15486 LBS/6 CY SAND
1770 LBS/6 CY CEMENT
SLUMP = FLOWABLE
SPEAK W/ CHARLIE - HE HAS RECEIVED AND APPROVED SUBMITTAL - MIX DELIVERED MATCHES SUBMITTAL
- 1500 POUR COMPLETE
- 1515 LEAVE SITE

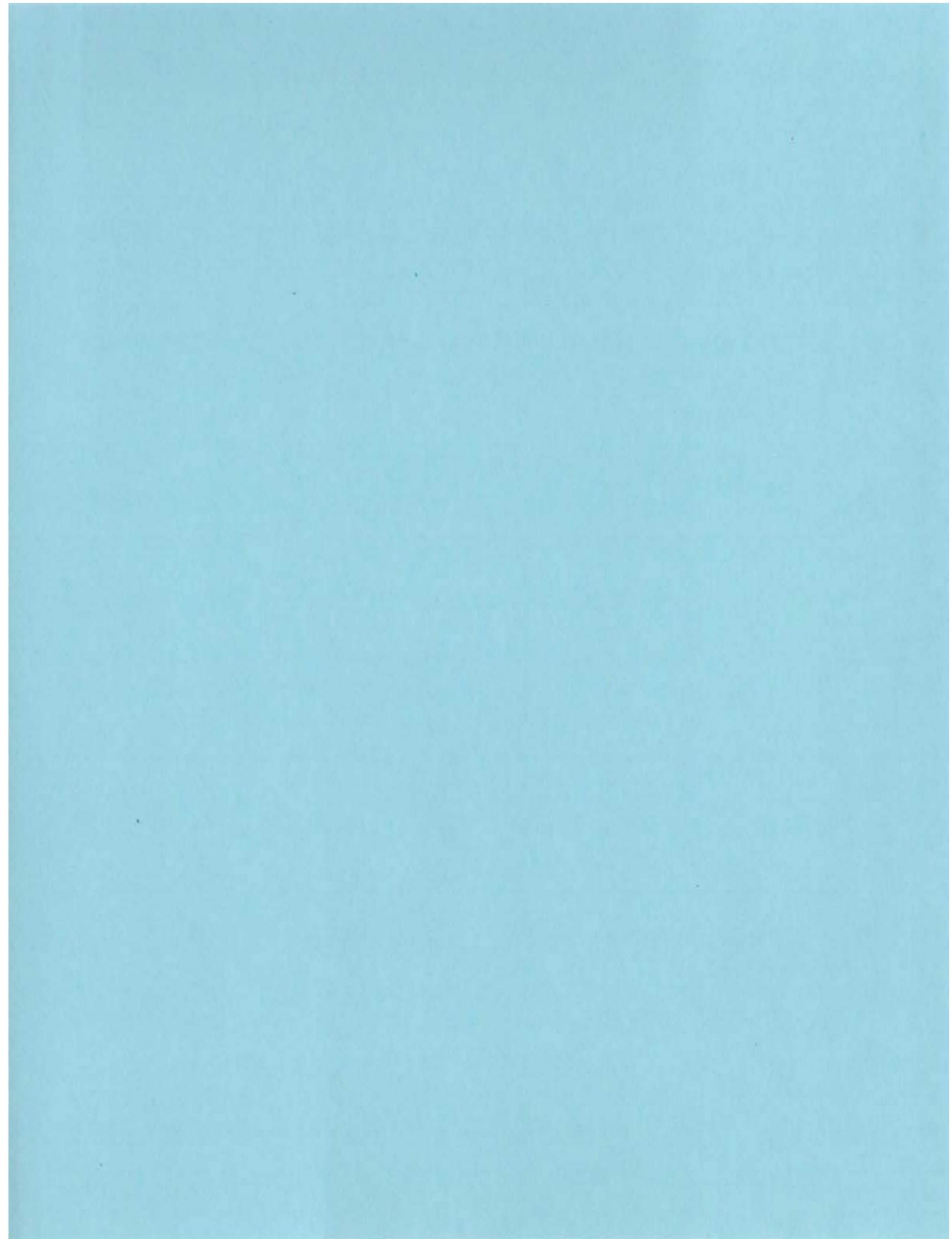


SERVICE CONNECTION TO LANDFILL OFFICE SEE DETAIL SHEET

SEDIM STA 1
 4" PVC VENT. TRANSITION 4" SS PIPE BELOW GRADE
 EXTEND VENT TO 8' MIN ABOVE GRADE AT BLDG.
 FASTEN TO BUILDING WITH SS HARDWARE. PROVIDE
 THREADED CAST ALUMINUM CAP AT TOP OF VENT PIPE
 ALL VENT PIPE AND APPURTENANCES SHALL
 BE PAID FOR BY LUMP SUM OF OIL/WATER SEPARATOR

SCALE: 1" = 10'

E OF THIS AREA



ATTACHMENT C

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

PROJECT CLOSE OUT REPORT

PHOTOGRAPHS



Cleaning Existing Oil/water Separator



Abandoning Existing Oil/water Separator with Flowable Fill



Cleaning Maintenance Garage Floor Drains



Floor Drain Trench after Power-washing



Sanitary Sewer Installation



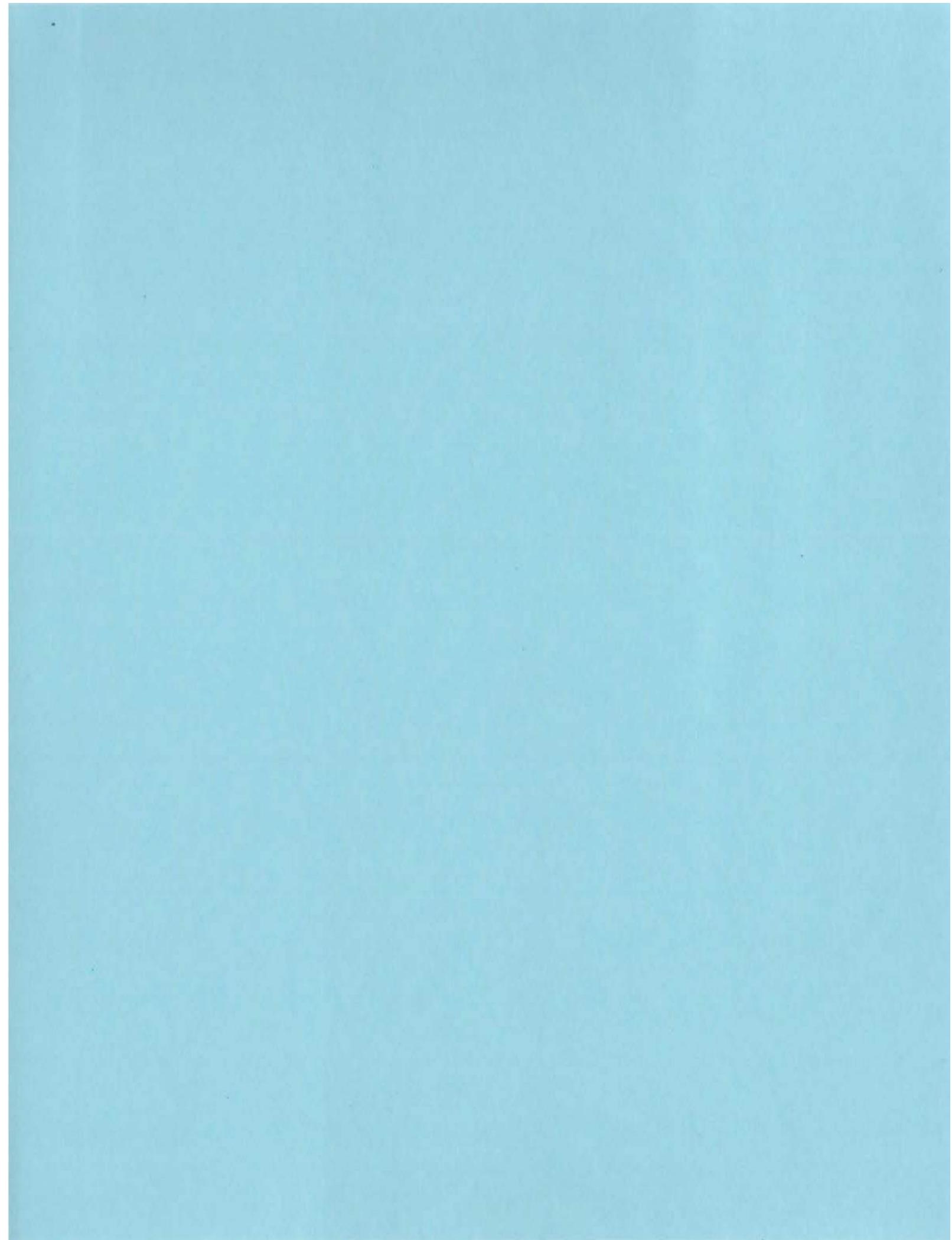
Off-loading New Oil/water Separator



Installing Sand Trap Manhole (Manhole #1)



Site Restoration



ATTACHMENT D

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

PROJECT CLOSE OUT REPORT

TEST REPORTS



BLOOMFIELD, CONN. 06002 FAX 860-286-0867
 150 UNIVERSAL DRIVE (Rear) PHONE 203-777-5548
 NORTH HAVEN, CT 06473 FAX 203-777-3147
 COLTON ROAD PHONE 860-739-5457
 EAST LYME, CT 06333 FAX 860-739-8513
 149 SOUTH WEST CUTOFF PHONE 508-752-PIPE
 WORCESTER, MA 01604 FAX 508-797-4455

WATER/SEWER TEST REPORT

PROJECT/LOCATION: Windsor Landfill Sewer EXT Windsor
 INSPECTOR: Rich Johnson TESTED BY: Fred Malone
 DATE OF TEST: 2-25-02 CONTRACTOR: Simscroft Echo Farms inc

HYDROSTATIC TEST

WATER MAIN TEST SEWER MAIN TEST LENGTH OF TEST: _____
 STATIC PRESSURE: _____ TEST PRESSURE: _____
 ALLOWABLE LEAKAGE: _____ ACTUAL LEAKAGE: _____
 TEST RESULTS: PASSED FAILED
 REMARKS: _____

AIR TEST

MANHOLE NUMBER OR STATION	TEST PRESSURE IN P.S.I.			TEST TIME IN MIN.	RESULTS OF TEST	REMARKS
	START	STOP	DROP			
00	195	3.5	3.5	0	11:40+	Pass
195	398	3.5	3.5	0	11:40+	Pass
398	580	3.5	3.5	0	11:40+	Pass
580	766	3.5	3.5	0	11:40+	Pass
766	921	3.5	3.5	0	11:40+	Pass
921	13FT PVC	2	2	0	10:00	Pass

I certify that the above information is a true and accurate account of the tests performed at this location.
 SIGNED: [Signature] INSPECTOR [Signature] TESTER



CONSTRUCTION MATERIALS
97 OLD POQUONOCK ROAD
BLOOMFIELD, CONN. 06002

PHONE 860-243-9714
1-800-423-0112
FAX 860-286-0867

150 UNIVERSAL DRIVE (Rear)
NORTH HAVEN, CT 06473

PHONE 203-777-5548
FAX 203-777-3147

COLTON ROAD
EAST LYME, CT 06333

PHONE 860-739-5457
FAX 860-739-8513

149 SOUTH WEST CUTOFF
WORCESTER, MA 01604

PHONE 508-752-PIPE
FAX 508-797-4455

WATER/SEWER TEST REPORT

PROJECT/LOCATION: Windsor Landfill, Windsor Ct
 INSPECTOR: Paul Smith TESTED BY: Eric Gray / Ryan Farrelly
 DATE OF TEST: 6/26/02 CONTRACTOR: Simscraft + Echo Farms

HYDROSTATIC TEST

WATER MAIN TEST SEWER MAIN TEST LENGTH OF TEST: _____
 STATIC PRESSURE: _____ TEST PRESSURE: _____
 ALLOWABLE LEAKAGE: _____ ACTUAL LEAKAGE: _____
 TEST RESULTS: PASSED FAILED
 REMARKS: _____

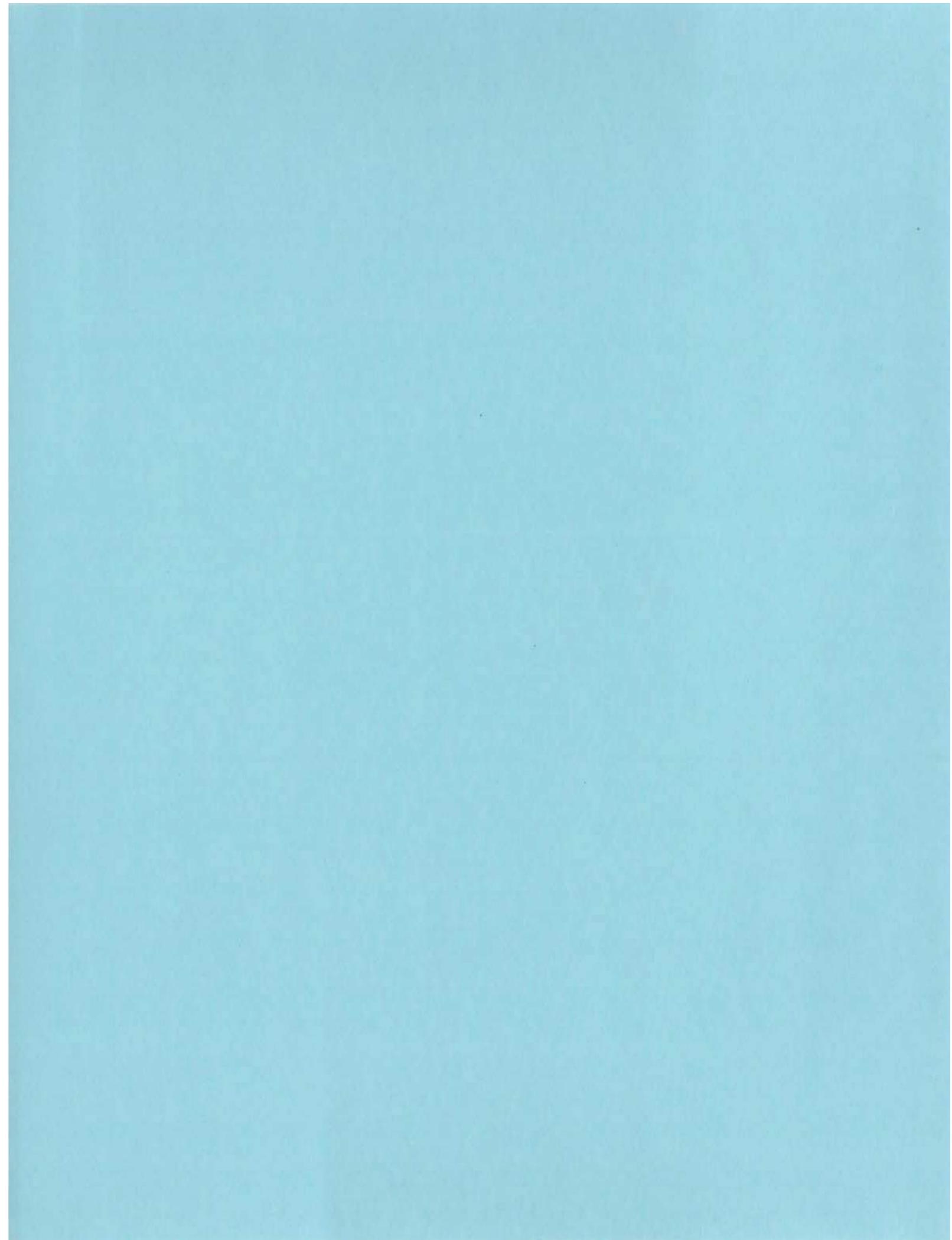
AIR TEST

MANHOLE NUMBER OR STATION	TEST PRESSURE IN P.S.I.			TEST TIME IN MIN.	RESULTS OF TEST	REMARKS
	START	STOP	DROP			
M11-2 M11-3	4	4	0	2 min	Pass	
# Floor Drain	4	3	1	2 min	Fail	Due to oil and sand in line, Plug could not make good seal

I certify that the above information is a true and accurate account of the tests performed at this location.

SIGNED: Paul Smith
INSPECTOR

Eric Gray
TESTER



ATTACHMENT E

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

PROJECT CLOSE OUT REPORT

WASTE MANIFESTS



DEPARTMENT OF ENVIRONMENTAL PROTECTION

Hazardous Waste MANIFEST PROGRAM
79 Elm St., Hartford, CT 06106-5127

FOR STATE USE ONLY

Please type (or print) (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST form with sections for generator information, transporter information, waste description, and signatures.

FOR SPILLS WITHIN CONNECTICUT, CONTACT CT DEP - OIL AND CHEMICAL SPILL RESPONSE AT (203) 566-3336.

COPY 6: GENERATOR MAILED TO DESTINATION STATE

CT F0818874



STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Hazardous Waste MANIFEST PROGRAM
79 Elm St., Hartford, CT 06106-5127

FOR STATE USE ONLY

Please type (or print) (Form designed for use on elite (12-pitch) typewriter.)

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD, 1-800-424-8802. FROM SPILLS WITHIN CONNECTICUT, CONTACT CT DEP - OIL AND CHEMICAL SPILL RESPONSE AT (203) 438-1238.

COPY 6: GENERATOR MAILS TO DESTINATION STATE

CT F0818875

UNIFORM HAZARDOUS WASTE MANIFEST form with handwritten entries for generator, transporter, and facility information.



STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Hazardous Waste MANIFEST PROGRAM
79 Elm St., Hartford, CT 06106-5127

FOR STATE USE ONLY

Please type (or print) (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST form with handwritten entries including Generator's Name (Town of Windsor), Transporter 1 (Planet Environmental Services), and Facility Name (Windsor Landfill). Includes sections for containers, handling codes, and certifications.

COPY 6: GENERATOR MAILED TO DESTINATION STATE

CT F0818873

FOR SPILLS WITHIN CONNECTICUT, CONTACT U.S. COAST GUARD 1-800-424-8882. IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8882.



UNIFORM HAZARDOUS WASTE MANIFEST

79 Elm St., Hartford, CT 06106-5127

Use type (or print) (Form designed for use on elite (12-pitch) typewriter)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CRW02424890077XV	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law, but may be required by State law.
3. Generator's Name and Mailing Address Town of Windsor 275 Broad St. Windsor, CT 06095		A. State Manifest Document Number CT F 0818878		B. State Facility Site Address Windsor Landfill Hudgins Road Windsor, CT 06095	
4. Generator's Phone 860-285-1804		6. US EPA ID Number MA 50 000 04531		C. S.T.E. (Trans. Lic. Plate #) 200-57-1932	
5. Transporter 1 Company Name Fleet Environmental Services		7. US EPA ID Number		D. Trans. Phone (State)	
6. Designated Facility Name and Site Address Bridgport United Recycling 50 Cross Street Bridgport, CT 06610		8. US EPA ID Number CTP 002593887		E. S.T.E. (Trans. Lic. Plate #)	
9. Transporter 2 Company Name		9. US EPA ID Number		F. Trans. Phone (State)	
10. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity	
a. Non DOT Regulated Material		No. of Type		Waste No.	
None, None, None		001TTax671G		None EPA STATE KOS	
11. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above		Interim Final Interim Final	
a.		a.		c.	
b.		b.		d.	
15. Special Handling Instructions and Additional Information United # DL1772A Job # 2436 PO# 71448		24 Hour Emergency 800-562-7611		Point of Departure:	
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled; and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State laws and regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name		Signature		Month Day Year	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name		Signature		Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name		Signature		Month Day Year	
9. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Month Day Year	

FOR SPILLERS WITHIN CONNECTICUT, CONTACT CT DEP - OIL AND CHEMICAL SPILL RESPONSE AT (203) 566-3377

FOR SPILLERS OUTSIDE CONNECTICUT, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

FOR FACILITY OWNERS, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

COPY 6: GENERATOR MAILS TO DESTINATION STATE

CT F0818878

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion.

As a result of the demographic changes, the number of people in the world who are 65 years of age and older is expected to increase from 200 million in 1990 to 500 million in 2025.

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ATTACHMENT F

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

PROJECT CLOSE OUT REPORT

GENERAL PERMIT

**STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

MOTOR VEHICLE SERVICE FLOOR DRAIN WASTEWATER

APPROVAL LETTER AND GENERAL PERMIT



Town of Windsor
275 Broad Street
Windsor, CT 06095

Facility Location: Windsor Bloomfield Landfill, 500 Huckleberry Road, Windsor

Re: Application No. 200100164
Permit No. GVS001082

Dear Applicant:

Public notice for this category of general permit has been published in accordance with Section 22a-430-3 (b)(6)(C) of the Regulations of Connecticut State Agencies.

The Commissioner of Environmental Protection has found that the referenced application is in compliance with all applicable Department requirements and is hereby APPROVED, subject to the condition that the facilities are properly maintained and operated in accordance with all applicable conditions of the referenced application and Sections 22a-430-3 and 4 of the Regulations of Connecticut State Agencies. This APPROVAL does not apply to those sites which have been issued a separate APPROVAL letter.

The applicant is hereby authorized to install oil separators and associated appurtenances at:

- (1) the site or sites specified in the referenced application, and
- (2) any site or sites which are added to the referenced application in the future, and for which this department has received a COMPLETE application (NOTE: it is the responsibility of the Applicant to ensure that a COMPLETE application is received by this department before the commencement of installation of oil separators and associated appurtenances),

for the treatment of a maximum flow of one thousand (1,000) gallons per day at each site of vehicle service floor drain wastewater prior to being discharged to the sanitary sewer.

This APPROVAL does not relieve you of the obligation to obtain any other authorizations as may be required by Federal, State or Local laws or regulations.

The following Permit shall not be effective for a site until receipt by the applicant of Certification Form VS2 for that site, stamped by the Department of Environmental Protection.

II) GENERAL PERMIT

This permit is issued in accordance with Section 22a-430 of Chapter 446k of the Connecticut General Statutes and regulations adopted thereunder, as amended. The Commissioner of Environmental Protection (hereinafter "the Commissioner") has found that the system installed for the treatment of the discharge will protect the waters of the state from pollution, except for those sites for which a signed final certification form has been submitted, in which case the Commissioner has found, by virtue of the signed certifications submitted by the Applicant as part of the referenced application, that the system installed for the treatment of the discharge will protect the waters of the state from pollution. This action is further found to be consistent with the applicable policies of the Connecticut Coastal Management Act (Section 22a-92 of the Connecticut General Statutes).

The Commissioner, acting under Section 22a-430 hereby permits the applicant to discharge Vehicle Service Floor Drain Wastewater at the site specified in the referenced application, in accordance with the following conditions:

- 1) The wastewater shall be collected, pretreated and discharged in accordance with the above referenced application and all approvals issued by the Commissioner or her agent for the discharges and/or activities authorized by or associated

79 Elm Street • Hartford, CT 06106 - 5127
<http://dep.state.ct.us>

An Equal Opportunity Employer

with this permit.

2) The discharges shall not exceed and shall otherwise conform to specific terms and conditions listed below.

A. Discharge Serial No. 001
Description: Vehicle Service Floor Drain Wastewater
Code 5250000
Maximum Flow: 1,000 gallons per day

(1) The pH of the discharge shall not be less than 5.0 or greater than 10.0.

<u>Parameter</u>	<u>Code</u>	<u>Maximum Concentration Limits</u>
Oil and Grease - Hydrocarbon Fraction	623-019	100 mg/l

- 3) The oil separator tank shall be properly maintained in order that the above limitation will be met. The oil separator tank shall be pumped out and cleaned by a firm licensed by the Department of Environmental Protection at least once per year. Records of such servicing shall be kept on site for a minimum of seven years.
- 4) All waste oil and antifreeze solutions shall be collected in separate waste holding tanks and disposed of by a licensed waste hauler. Records of such waste hauling shall be kept for a minimum of seven years.
- 5) No vehicle washing, either exterior or interior, is permitted at this facility except for the washing of vehicles by hand as part of normal servicing operations, unless a separate permit has been obtained for a car washing discharge.

This permit is issued under Section 22a-430 and shall expire on January 25, 2011.

This permit shall be subject to the following sections of the Regulations of Connecticut State Agencies which are hereby incorporated into this permit:

Section 22a-430-3 General Conditions

- (a) Definitions
- (b) General
- (c) Inspection and Entry
- (d) Effect of a Permit
- (e) Duty
- (f) Proper Operation and Maintenance
- (g) Sludge Disposal
- (h) Duty to Mitigate
- (i) Facility Modifications; Notification
- (j) Monitoring, Records and Reporting Requirements
- (k) Bypass
- (l) Conditions Applicable to POTWs
- (m) Effluent Limitation Violations (Upsets)
- (n) Enforcement
- (o) Resource Conservation
- (p) Spill Prevention and Control
- (q) Instrumentation, Alarms, Flow Recorders
- (r) Equalization

22a-430-4 Procedures and Criteria

- (a) Duty to Apply
- (b) Duty to Reapply
- (c) Application Requirements
- (d) Preliminary Review
- (e) Tentative Determination
- (f) Draft Permits, Fact Sheets
- (g) Public Notice, Notice of Hearing
- (h) Public Comments
- (i) Final Determination
- (j) Public Hearings
- (k) Submission of Plans and Specifications. Approval.
- (l) Establishing Effluent Limitations and Conditions
- (m) Case by Case Determinations
- (n) Permit issuance or renewal
- (o) Permit Transfer
- (p) Permit revocation, denial or modification
- (q) Variances
- (r) Secondary Treatment Requirements
- (s) Treatment Requirements for Metals and Cyanide
- (t) Discharges to POTWs - Prohibitions

Your attention is especially drawn to the notification requirements of subsections (i)(2), (i)(3), (j)(9)(C), (k)(3), (k)(4) and (l)(2) of Section 22a-430-3.

The Commissioner reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Clean Water Act or the Connecticut General Statutes or regulations adopted thereunder, as amended. The permit as modified or renewed under this paragraph may also contain any other requirements of the Clean Water Act or Connecticut General Statutes or regulations adopted thereunder which are then applicable.

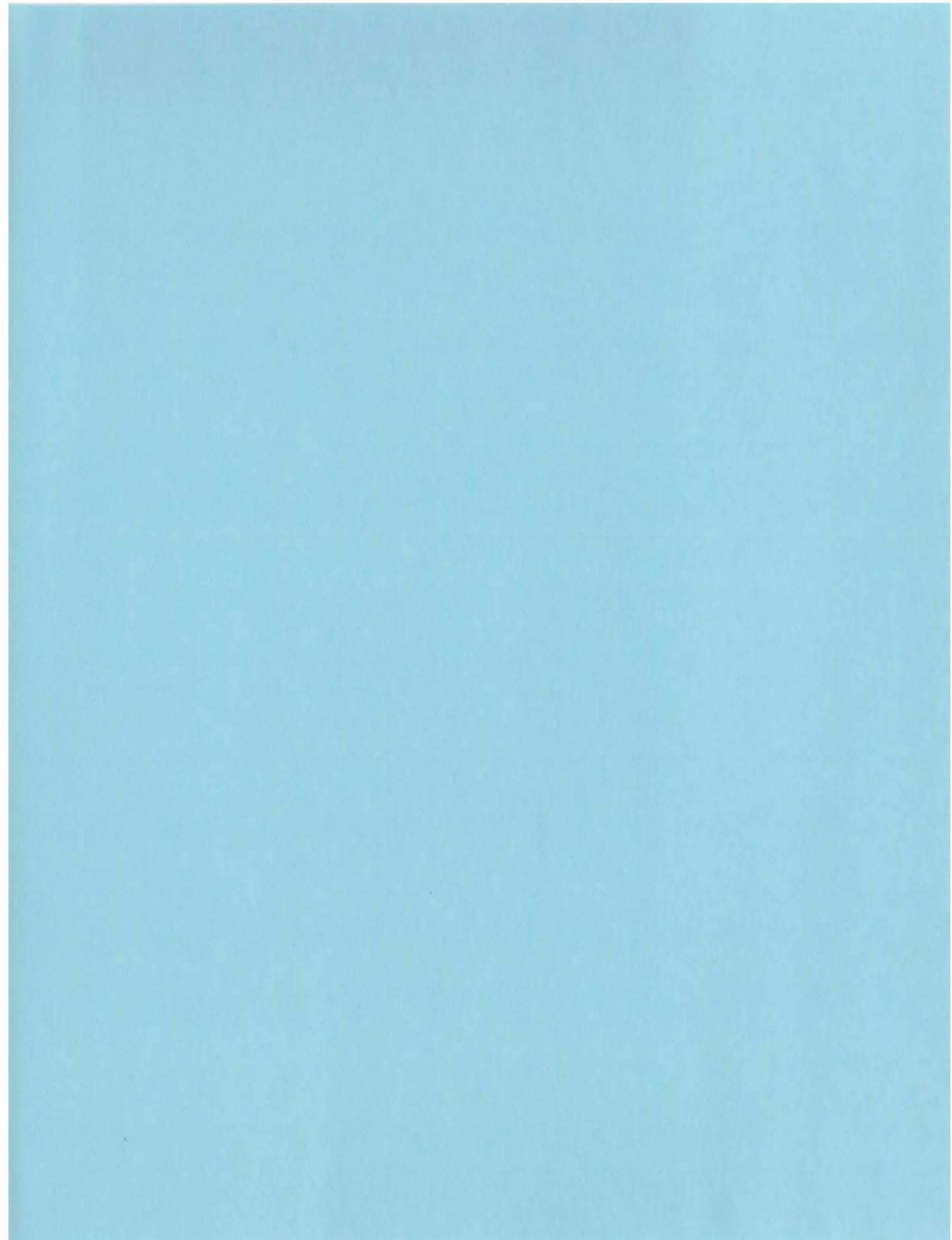
Entered as a General Permit of the Commissioner of the Department of Environmental Protection on
January 25, 2001.

DISCHARGE AT A SITE IS NOT AUTHORIZED UNTIL THE APPLICANT RECEIVED A COPY OF CERTIFICATION FORM VS2 FOR THAT SITE STAMPED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

THIS PERMIT AUTHORIZES DISCHARGE FROM ANY SITE FOR WHICH THE APPLICANT HAS RECEIVED CERTIFICATION FORM VS2 FOR THAT SITE STAMPED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



Michael A. Harder,
Director
Permitting, Enforcement and
Remediation Division



ATTACHMENT G

WINDSOR BLOOMFIELD LANDFILL
SEWER EXTENSION PROJECT

PROJECT CLOSE OUT REPORT

CONTRACTOR'S RECORD DRAWINGS



Fuss & O'Neill Inc. *Consulting Engineers*

146 Hartford Road, Manchester, CT 06040-5992
TEL 860 646-2469 FAX 860 533-5143
INTERNET: www.fussandoneill.com

Other Offices:
West Springfield, Massachusetts
Trumbull, Connecticut
Providence, Rhode Island
Columbia, South Carolina
Greenville, North Carolina

March 22, 2004

Mr. Mark Goossens
Solid Waste Manager
500 Huckleberry Road
Windsor, CT 06095

RE: Summary of Dry Well and Tornado Debris Area
Soil Sampling Results
Windsor-Bloomfield Landfill

Dear Mr. Goossens:

As you are aware, the Connecticut Department of Environmental Protection (CTDEP) established regulations to move RCRA land disposal facilities into a formal enforceable regulatory RCRA Corrective Action cleanup program. One of these regulations required certain CT RCRA facilities, like the Windsor-Bloomfield Landfill to submit an Environmental Condition Assessment Form (ECAAF) to the Waste Engineering and Enforcement Division by. This form as required by the regulations was submitted to the CTDEP on August 27, 2003. We have also collected soil samples at the former dry well and tornado debris disposal area in accordance with our July 2003 proposal. This letter provides a summary of the soil sampling results.

BACKGROUND

RCRA Corrective Action is a regulatory program requiring facilities to investigate on-site potential areas of environmental concern (PAOCs) and clean up releases to regulatory standards. The CTDEP previously listed several PAOCs at the Windsor-Bloomfield Landfill in a 1997 report titled the "Environmental Indicator Evaluation Report". At a minimum, all releases from PAOCs at the landfill, with possible exception of the permitted disposal areas, will have to be investigated consistent with the CTDEP's Draft Site Characterization Guidance Document and remediated to cleanup criteria in Connecticut's Remediation Standard Regulations (RSRs).

A large quantity of groundwater sampling data has been assembled from historical investigations at the landfill. However, previous investigations have targeted primarily the MSW landfill and RCRA hydroxide sludge cell. The purpose of this investigation was to investigate soil quality in the vicinity of two PAOCs, the former dry well and tornado debris area. These PAOCs have not previously been investigated, but are subject to RCRA Corrective Action.



Fuss & O'Neill Inc. Consulting Engineers

Mr. Mark Goossens

March 22, 2004

Page 2

INVESTIGATION ACTIVITIES

On July 28, 2003, Fuss & O'Neill advanced six soil borings (SS-01 thru SS-05 and DW-01), at the former dry well and tornado debris disposal area. DW-01 was advanced in the vicinity of the former dry well at the landfill, and SS-01 thru SS-05 were advanced in the vicinity of the tornado debris area. The locations of these sampling points are shown on the attached Figure 1.

The EPA generally uses only the top two feet of soil in evaluating whether or not a site is stabilized. Surficial soil samples were collected from 0 to 2 feet from borings SS-01 thru SS-05. However, since releases at the dry well may have occurred near the surface and at depth, soil samples were collected continuously to approximately 20 feet at DW-01. All soil samples were screened for volatile organic compounds (VOCs) using a photoionization detector (PID). Three soil samples were collected from DW-01 and submitted for laboratory analysis. Five surficial soil samples were collected from SS-01 thru SS-05.

The five soil samples from SS-01 thru SS-05 were submitted for analysis of total petroleum hydrocarbons (TPH) using the Connecticut Extractable TPH method (CT ETPH), VOCs by EPA Method 8260 and total Priority Pollutant 13 metals. The three soil samples submitted from DW-01 were analyzed for CT ETPH, VOCs, total RCRA 8 metals, PCBs and PAHs. Samples were submitted to Phoenix Environmental Laboratories located in Manchester, Connecticut. Copies of the laboratory analytical reports are provided in Attachment A. Copies of the field data sheets are provided in Attachment B.

ANALYTICAL RESULTS

Laboratory analytical results are listed in Table 1. A summary of the analytical results for this investigation are discussed below.

VOCs, PCBs and PAHs were not reported above laboratory detection limits in soil samples collected from these PAOCs. Soil analytical results indicate that a release of ETPH may have occurred in the vicinity of the tornado/demolition debris areas. ETPH was reported at concentrations ranging from not detected to 420 milligrams per kilogram (mg/kg) (Table 1). ETPH was not reported above laboratory detection limits in soil samples collected from the former dry well area. All ETPH concentrations reported were below CT RSR criteria.

Concentrations of arsenic, barium, chromium, copper, lead, nickel and zinc were reported in one or more of the soil samples collected from the former dry well and



Fuss & O'Neill Inc. Consulting Engineers

Mr. Mark Goossens

March 22, 2004

Page 3

tornado/demolition debris areas (Table 1). Concentrations reported for these metals ranged from not detected to 806 mg/kg. The lead concentration at SS-04 (806 mg/kg) is above the Residential Direct Exposure Criteria (Res DEC) of the CT RSRs and indicates that a release of metals may have occurred in the vicinity of the tornado debris area.

CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results for soil samples collected in the vicinity of the former dry well and tornado debris area, it appears that the soil in the vicinity of these PAOCs is stabilized and these PAOCs do not have Current Human Exposures that are not under control. These results confirm the attached completed EI form submitted for the Windsor-Bloomfield Landfill by the CTDEP during September 2003 (Attachment C). This EI form submitted to the US EPA Region 1 office for approval by the CTDEP indicated that current human exposures at the landfill are stabilized. The US EPA Region 1 office reviewed this EI form and approved the CTDEP's conclusions that the Windsor-Bloomfield landfill is stabilized. Recommendations with regards to these PAOCs are listed below:

1. Close the Tornado Debris Disposal area in accordance with CT's Solid Waste Regulations.
2. Clean-out and remove the on-site former dry well and any associated impacted soil.

Should you have any questions regarding the results and conclusions of this letter, please feel free to contact our office.

Sincerely,

Robert M. Danielson, LEP, CPG
Senior Hydrogeologist

David F. Hurley, LEP, PG
Vice President

/gml

Attachments

cc: Dr. Charles Petrillo, Town of Windsor
Thomas Lenehan, Town of Windsor

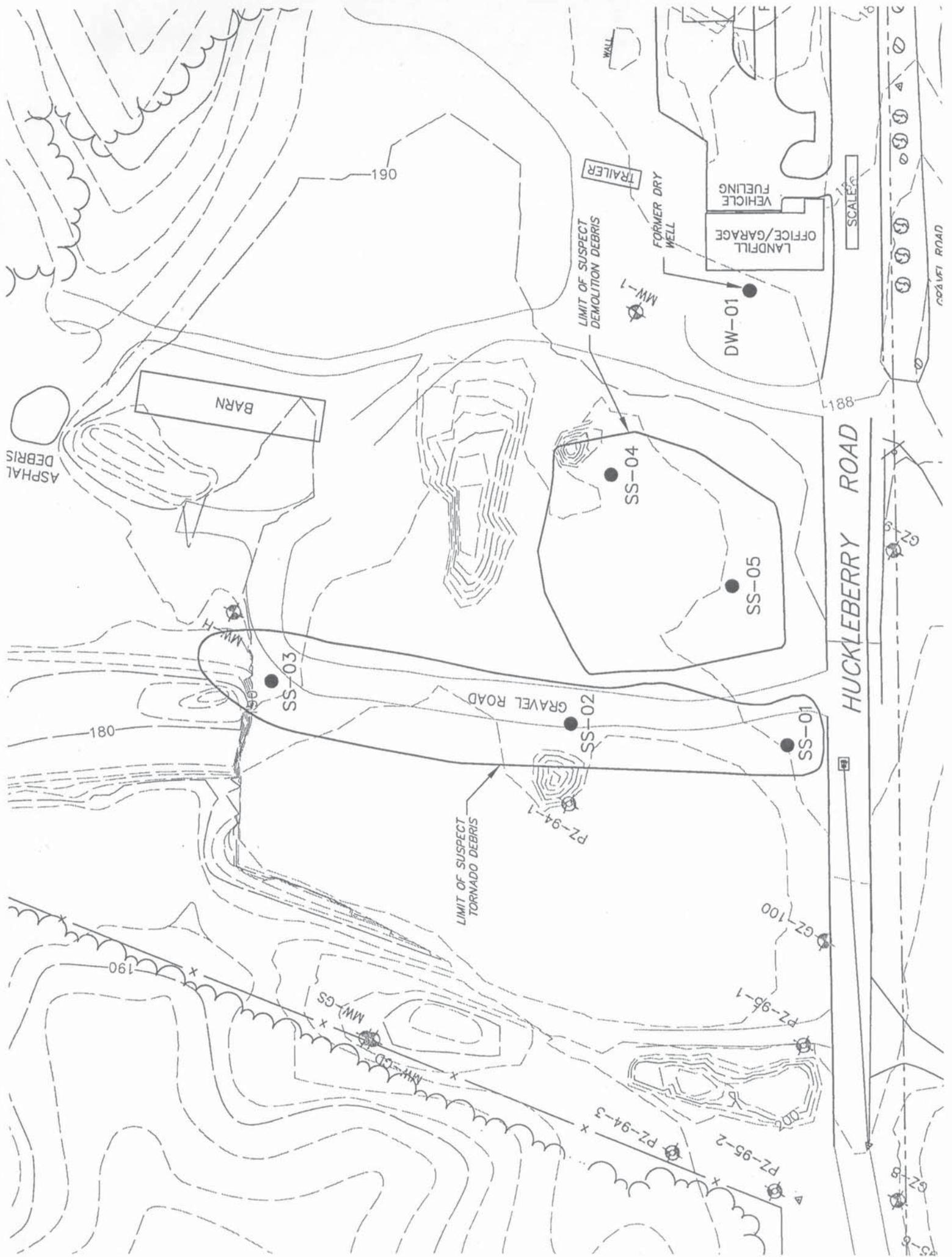


Table 1

Summary of Detected Constituents in Soil
 RCRA Corrective Action Investigation
 Windsor-Bloomfield Landfill
 Windsor, Connecticut
 February-2004

Sample Location Sample I.D. Depth**	Res DEC	SS-01 670030728-01 1.00 Primary	SS-02 670030728-02 11.00 Primary	SS-03 670030728-03 1.00 Primary	SS-04 670030728-04 1.00 Primary	SS-05 670030728-05 1.00 Primary	DW-01 670030728-06 7.00 Primary	DW-01 670030728-07 11.00 Primary	DW-01 670030728-08 19.00 Primary
CONSTITUENT	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS	UNITS
Arsenic	10 (mg/kg)	2.54	2.8	1.7	5.6	1.6	ND<1.0	ND<1.0	ND<1.0
Barium	4,700 (mg/kg)	---	---	---	---	---	20.6	17.8	18.6
Chromium	100 (mg/kg)	10.0	11.7	10.6	11.0	7.95	6.58	3.87	4.26
Copper	2,500 (mg/kg)	28.5	15.7	13.3	18.6	11.8	---	---	---
Nickel	1,400 (mg/kg)	9.98	10.1	10.3	9.00	11.5	---	---	---
Lead	500 (mg/kg)	67.8	30.3	7.49	306	31.5	4.10	3.12	2.16
Zinc	20,000 (mg/kg)	84.8	41.4	28.6	95.3	50.1	---	---	---
TPH	500 (mg/kg)	420	ND<10	ND<10	220	280	ND<10	ND<10	ND<10

Notes:

- 1) Res DEC = Baseline Residential Direct Exposure Criteria in the Connecticut RSRs
- 2) * = TPH analyzed by Connecticut's Extractable Petroleum Hydrocarbon method
- 3) ** = Represents the midpoint depth of the sampling interval in feet
- 4) ND = Not detected
- 5) --- = Not analyzed or not applicable
- 6) mg/kg = milligrams per kilogram
- 7) Values shaded and in bold represent an exceedance of CT RSR criteria.

ATTACHMENT A



Environmental Laboratories, Inc.

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06045-0370
Tel. (860) 645-1102 Fax (860) 645-0823

Thursday, August 07, 2003

**Fuss and O'Neill Inc.
146 Hartford Road
Manchester CT 06040**

Attention: Mr Ken Kauch

Sample ID#: AE96004-96011

This laboratory is in compliance with the QA/QC procedure outlined in EPA 600/4-79-019, Handbook for Analytical Quality in Water and Waste Water, March 1979, and SW846 QA/QC requirements of procedures used.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

**Phyllis Shiller
Laboratory Director**

**CT Lab Registration #PH-0618
MA Lab Registration #MA-CT-007
NY Lab Registration #11301
RI Lab Registration #63
NH Lab Registration #213693-A,B
ME Lab Registration #CT-007
NJ Lab Registration #CT-003**



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0323

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
Fuss & O'Neill, Inc.
146 Hartford Rd.
Manchester, CT 06040

Sample Information

Matrix: SOIL
Location Code: F&O-WBLF
Rush Request:
P.O.#: 93126H10

Custody Information

Collected by:
Received by: SW
Analyzed by: see "By" below

Date Time
07/28/03 16:00
07/29/03 16:05

SDG I.D.: GAE96004

Phoenix I.D.: AE96004

Laboratory Data

Client ID: WBLF 670030728-01 SS-01 (0-2)

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	2.54	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Beryllium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	10.0	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Copper	28.5	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Nickel	9.98	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Lead	67.8	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Antimony	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Thallium	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Zinc	84.8	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	79		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5030
Mercury Digestion	Completed			07/30/03		TR	SW7471
Total Metals Digest	Completed			07/31/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	420	10	mg/Kg	07/30/03		CP	M8100CT
Identification	**		mg/Kg	07/30/03		CP	M8100CT

Volatiles

1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
QA/QC Surrogates							
% Bromofluorobenzene	91		%	07/30/03		RM	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

**Petroleum hydrocarbon chromatogram was not a perfect match with any of the standards, unknown material from C12 to C36.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller
 Phyllis Shiller, Laboratory Director
 August 07, 2003



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
 Fuss & O'Neill, Inc.
 146 Hartford Rd.
 Manchester, CT 06040

Sample Information

Matrix: SOIL
 Location Code: F&O-WBLF
 Rush Request:
 P.O.#: 93126H10

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date Time
 07/28/03 16:00
 07/29/03 16:05

SDG I.D.: GAE96004

Phoenix I.D.: AE96005

Laboratory Data

Client ID: WBLF 670030728-02 55-02 (6-2')

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	2.8	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Beryllium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	11.7	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Copper	15.7	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Nickel	10.1	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Lead	30.3	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Antimony	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Thallium	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Zinc	41.4	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	92		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5030
Mercury Digestion	Completed			07/30/03		TR	SW7471
Total Metals Digest	Completed			07/29/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	10	mg/Kg	07/30/03		CP	MS100CT
Identification	ND		mg/Kg	07/30/03		CP	MS100CT

Volatiles

1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260

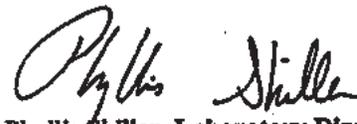
Parameter	Result	RL	Units	Date	Time	By	Reference
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
QA/QC Surrogates							
% Bromofluorobenzene	95		%	07/30/03		RM	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.


 Phyllis Shiller, Laboratory Director
 August 07, 2003



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
Fuss & O'Neill, Inc.
146 Hartford Rd.
Manchester, CT 06040

Sample Information

Matrix: SOIL
Location Code: F&O-WBLF
Rush Request:
P.O.#: 93126H10

Custody Information

Collected by:
Received by: SW
Analyzed by: see "By" below

Date Time
07/28/03 16:00
07/29/03 16:05

SDG I.D.: GAE96004

Phoenix I.D.: AE96006

Laboratory Data

Client ID: WBLF 670030728-03 55-03 (0-2')

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	1.7	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Beryllium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	10.6	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Copper	13.3	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Nickel	10.3	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Lead	7.49	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Antimony	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Thallium	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Zinc	28.6	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	94		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5030
Mercury Digestion	Completed			07/30/03		TR	SW7471
Total Metals Digest	Completed			07/29/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	10	mg/Kg	07/30/03		CP	MS100CT
Identification	ND		mg/Kg	07/30/03		CP	MS100CT

Volatiles

1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260

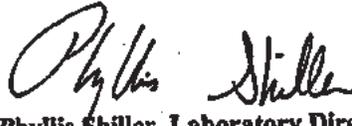
Parameter	Result	RL	Units	Date	Time	By	Reference
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
QA/QC Surrogates							
% Bromofluorobenzene	95		%	07/30/03		RM	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.


 Phyllis Shiller, Laboratory Director
 August 07, 2003



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
 Fuss & O'Neill, Inc.
 146 Hartford Rd.
 Manchester, CT 06040

Sample Information

Matrix: SOIL
 Location Code: F&O-WBLF
 Rush Request:
 P.O.#: 93126H10

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date Time

07/28/03 16:00
 07/29/03 16:05

SDG I.D.: GAE96004

Phoenix I.D.: AE96007

Laboratory Data

Client ID: WBLF 670030728-04 55-04 (0-2')

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	5.6	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Beryllium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	11.0	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Copper	18.6	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Nickel	9.00	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Lead	806	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Antimony	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Thallium	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Zinc	95.3	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	76		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5030
Mercury Digestion	Completed			07/30/03		TR	SW7471
Total Metals Digest	Completed			07/29/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	220	10	mg/Kg	07/30/03		CP	MS100CT
Identification	**		mg/Kg	07/30/03		CP	MS100CT

Volatiles

1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260

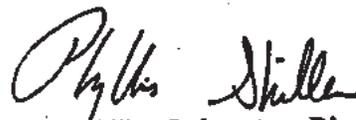
Parameter	Result	RL	Units	Date	Time	By	Reference
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
QA/QC Surrogates							
% Bromofluorobenzene	98		%	07/30/03		RM	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

**Petroleum hydrocarbon chromatogram was not a perfect match with any of the standards, unknown material from C12 to C36.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director

August 07, 2003



Environmental Laboratories, Inc.
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
 Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
 Fuss & O'Neill, Inc.
 146 Hartford Rd.
 Manchester, CT 06040

Sample Information

Matrix: SOIL
 Location Code: F&O-WBLF
 Rush Request:
 P.O.#: 93126H10

Custody Information

Collected by:
 Received by: SW
 Analyzed by: see "By" below

Date Time

07/28/03 16:00
 07/29/03 16:05

SDG LD.: GAE96004

Phoenix LD.: AE96008

Laboratory Data

Client ID: WBLF 670030728-05 55-05 (6-2)

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	1.6	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Beryllium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	7.95	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Copper	11.8	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Nickel	11.5	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Lead	31.5	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Antimony	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Thallium	BDL	5.0	mg/Kg	07/30/03		MH	6010/E200.7
Zinc	50.1	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	88		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5030
Mercury Digestion	Completed			07/30/03		TR	SW7471
Total Metals Digest	Completed			07/29/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	280	10	mg/Kg	07/30/03		CP	M8100CT
Identification	**		mg/Kg	07/30/03		CP	M8100CT

Volatiles

1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
QA/QC Surrogates							
% Bromofluorobenzene	92		%	07/30/03		RM	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

**Petroleum hydrocarbon chromatogram was not a perfect match with any of the standards, unknown material from C12 to C36.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director

August 07, 2003



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
Fuss & O'Neill, Inc.
146 Hartford Rd.
Manchester, CT 06040

Sample Information

Matrix: SOIL
Location Code: F&O-WBLF
Rush Request:
P.O.#: 93126H10

Custody Information

Collected by:
Received by: SW
Analyzed by: see "By" below

Date Time
07/28/03 16:00
07/29/03 16:05

SDG I.D.: GAE96004

Phoenix I.D.: AE96009

Laboratory Data

Client ID: WBLF 670030728-06 Dw-01 (6-4')

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	BDL	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Barium	20.6	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	6.58	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Lead	4.10	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	93		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5030
Mercury Digestion	Completed			07/30/03		TR	SW7471
Soil Extraction for PCB	Completed			07/29/03		A/B	3545/3550
Soil Ext. Semi-Vol BN	Completed			07/29/03		A/B	SW3545/3350
Total Metals Digest	Completed			07/29/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	10	mg/Kg	07/30/03		CP	M8100CT
Identification	ND		mg/Kg	07/30/03		CP	M8100CT

Polychlorinated Biphenyls

PCB-1016	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1221	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1232	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1242	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1248	ND	400	ug/Kg	07/30/03		JRB	SW 8082

Parameter	Result	RL	Units	Date	Time	By	Reference
PCB-1254	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1260	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1262	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1268	ND	400	ug/Kg	07/30/03		JRB	SW 8082
QA/QC Surrogates							
% DCBP (Surrogate Rec)	95		%	07/30/03		JRB	SW 8082
% TCMX (Surrogate Rec)	95		%	07/30/03		JRB	SW 8082
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
<u>QA/QC Surrogates</u>							
% Bromofluorobenzene	100		%	07/30/03		RM	SW8260

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Acenaphthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Acenaphthylene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Anthracene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benz(a)anthracene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(a)pyrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(b)fluoranthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(ghi)perylene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(k)fluoranthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Chrysene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Dibenz(a,h)anthracene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Fluoranthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Fluorene	ND	330	ug/Kg	07/30/03		DRC	SW 8270

Client ID: WBLF 670030728-06 0w-01 (6-8')

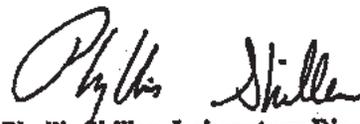
Phoenix I.D.: AE96009

Parameter	Result	RL	Units	Date	Time	By	Reference
Indeno(1,2,3-cd)pyrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Naphthalene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Phenanthrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Pyrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
QA/QC Surrogates							
% 2-Fluorobiphenyl	81		%	07/30/03		DRC	SW 8270
% Nitrobenzene-d5	79		%	07/30/03		DRC	SW 8270
% Terphenyl-d14	91		%	07/30/03		DRC	SW 8270

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
August 07, 2003



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
Fuss & O'Neill, Inc.
146 Hartford Rd.
Manchester, CT 06040

Sample Information

Matrix: SOIL
Location Code: F&O-WBLF
Rush Request:
P.O.#: 93126H10

Custody Information

Collected by:
Received by: SW
Analyzed by: see "By" below

Date Time
07/28/03 16:00
07/29/03 16:05

SDG I.D.: GAE96004

Phoenix I.D.: AE96010

Laboratory Data

Client ID: WBLF 870030728-07 Dw-01 (10-12')

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	BDL	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Barium	17.8	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	3.87	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Lead	3.12	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	94		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5090
Mercury Digestion	Completed			07/30/03		TR	SW7471
Soil Extraction for PCB	Completed			07/29/03		A/B	3545/3550
Soil Ext. Semi-Vol BN	Completed			07/29/03		A/B	SW3545/3350
Total Metals Digest	Completed			07/29/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	10	mg/Kg	07/30/03		CP	M8100CT
Identification	ND		mg/Kg	07/30/03		CP	M8100CT

Polychlorinated Biphenyls

PCB-1016	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1221	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1232	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1242	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1248	ND	400	ug/Kg	07/30/03		JRB	SW 8082

Parameter	Result	RL	Units	Date	Time	By	Reference
PCB-1254	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1260	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1262	ND	400	ug/Kg	07/30/03		JRB	SW 8082
PCB-1268	ND	400	ug/Kg	07/30/03		JRB	SW 8082
QA/QC Surrogates							
% DCBP (Surrogate Rec)	107		%	07/30/03		JRB	SW 8082
% TCMX (Surrogate Rec)	101		%	07/30/03		JRB	SW 8082
Volatiles							
1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
QA/QC Surrogates							
% Bromofluorobenzene	99		%	07/30/03		RM	SW8260

Polynuclear Aromatic HC

2-Methylnaphthalene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Acenaphthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Acenaphthylene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Anthracene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(a)anthracene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(a)pyrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(b)fluoranthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(ghi)perylene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Benzo(k) fluoranthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Chrysene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Dibenzo(a,h) anthracene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Fluoranthene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Fluorene	ND	330	ug/Kg	07/30/03		DRC	SW 8270

Client ID: WBLF 670030728-07 DW-01 (10-12)

Phoenix I.D.: AE96010

Parameter	Result	RL	Units	Date	Time	By	Reference
Indeno(1,2,3-cd) pyrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Naphthalene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Phenanthrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
Pyrene	ND	330	ug/Kg	07/30/03		DRC	SW 8270
QA/QC Surrogates							
% 2-Fluorobiphenyl (Surrogate Rec)	78		%	07/30/03		DRC	SW 8270
% Nitrobenzene-d5 (Surrogate Rec)	75		%	07/30/03		DRC	SW 8270
% Terphenyl-d14 (Surrogate Rec)	93		%	07/30/03		DRC	SW 8270

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

Phyllis Shiller, Laboratory Director
August 07, 2003



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

August 07, 2003

FOR: Attn: Mr. Ken Kouch
Fuss & O'Neill, Inc.
146 Hartford Rd.
Manchester, CT 06040

Sample Information

Matrix: SOIL
Location Code: F&O-WBLF
Rush Request:
P.O.#: 93126H10

Custody Information

Collected by:
Received by: SW
Analyzed by: see "By" below

Date

07/28/03
07/29/03

Time

16:00
16:05

SDG I.D.: GAE96004

Phoenix I.D.: AE96011

Laboratory Data

Client ID: WBLF 670030728-08 DW-01/18-20¹

Parameter	Result	RL	Units	Date	Time	By	Reference
Silver	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Arsenic	BDL	1.0	mg/Kg	07/30/03		MH	6010/E200.7
Barium	18.6	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Cadmium	BDL	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Chromium	4.26	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Mercury - Soil	BDL	0.10	mg/kg	07/30/03		RS	SW-7471
Lead	2.16	0.50	mg/Kg	07/30/03		MH	6010/E200.7
Selenium	BDL	2.5	mg/Kg	07/30/03		MH	6010/E200.7
Percent Solid	94		%	07/30/03		MR/	E160.3
Extraction of CT ETPH	Completed			07/29/03		A/B	3550/5030
Mercury Digestion	Completed			07/30/03		TR	SW7471
Total Metals Digest	Completed			07/29/03		G	SW846 - 3050

TPH by GC (Extractable Products)

Ext. Petroleum HC	ND	10	mg/Kg	07/30/03		CP	M8100CT
Identification	ND		mg/Kg	07/30/03		CP	M8100CT

Volatiles

1,1,1,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,1-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2,2-Tetrachloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1,2-Trichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,1-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260

Parameter	Result	RL	Units	Date	Time	By	Reference
1,2,3-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,3-Trichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2,4-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dibromo-3-chloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3,5-Trimethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
1,3-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
1,4-Dichlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
2,2-Dichloropropane	ND	10	ug/Kg	07/30/03		RM	SW8260
2-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
4-Chlorotoluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Benzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromodichloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromoform	ND	10	ug/Kg	07/30/03		RM	SW8260
Bromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Carbon tetrachloride	ND	10	ug/Kg	07/30/03		RM	SW8260
Chlorobenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloroform	ND	10	ug/Kg	07/30/03		RM	SW8260
Chloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
cis-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromochloromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromoethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dibromomethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Dichlorodifluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Ethylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Hexachlorobutadiene	ND	10	ug/Kg	07/30/03		RM	SW8260
Isopropylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
m&p-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
Methyl Ethyl Ketone	ND	60	ug/Kg	07/30/03		RM	SW8260
Methyl t-butyl ether (MTBE)	ND	20	ug/Kg	07/30/03		RM	SW8260
Methylene chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
n-Propylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Naphthalene	ND	10	ug/Kg	07/30/03		RM	SW8260
o-Xylene	ND	10	ug/Kg	07/30/03		RM	SW8260
p-Isopropyltoluene	ND	10	ug/Kg	07/30/03		RM	SW8260

Client ID: WBLF 670030728-08 Dw-01 (6-20')

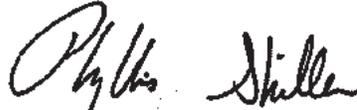
Phoenix I.D.: AE96011

Parameter	Result	RL	Units	Date	Time	By	Reference
sec-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Styrene	ND	10	ug/Kg	07/30/03		RM	SW8260
tert-Butylbenzene	ND	10	ug/Kg	07/30/03		RM	SW8260
Tetrachloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Toluene	ND	10	ug/Kg	07/30/03		RM	SW8260
Total Xylenes	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,2-Dichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
trans-1,3-Dichloropropene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichloroethene	ND	10	ug/Kg	07/30/03		RM	SW8260
Trichlorofluoromethane	ND	10	ug/Kg	07/30/03		RM	SW8260
Vinyl chloride	ND	10	ug/Kg	07/30/03		RM	SW8260
QA/QC Surrogates							
% Bromofluorobenzene	102		%	07/30/03		RM	SW8260

Comments:

ND=Not detected BDL = Below Detection Limit RL=Reporting Limit

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.



Phyllis Shiller, Laboratory Director
August 07, 2003



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

August 07, 2003

QA/QC Data

SDG I.D.: GAE96004

Parameter	Blank	LCS Rec %	MS Rec %	RPD
QA/QC Batch Sample No: AE95838 (AE96004)				
ICP Metals - Soil				
Aluminum	BDL	108	NC	10.4
Antimony	BDL	98.4	24.8	NC
Arsenic	BDL	98.1	86.7	NC
Barium	BDL	103	91.7	0.5
Beryllium	BDL	104	89.8	NC
Boron	BDL			
Cadmium	BDL	86.1	75.1	NC
Calcium	BDL			
Chromium	BDL	104	80.1	18.1
Cobalt	BDL	109	91.4	7.50
Copper	BDL	103	93.5	12.1
Iron	BDL	NC	NC	4.7
Lead	BDL	105	89.2	7.1
Magnesium	BDL			
Manganese	BDL	110	96.5	5.9
Molybdenum	BDL			
Nickel	BDL	102	86.6	4.8
Phosphorus	BDL			
Potassium				
Selenium	BDL	99.4	87.9	NC
Silver	BDL	73.0	61.0	NC
Sodium				
Thallium	BDL	95.6	80.9	3.8
Tin	BDL			
Vanadium	BDL	106	89.2	16.4
Zinc	BDL	98.4	85.6	3.1

QA/QC Batch Sample No: AE95987 (AE96006, AE96007, AE96008, AE96009, AE96010, AE96011)

Arsenic (Furnace)	BDL	98	101	NC
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QA/QC Batch Sample No: AE95987 (AE96006, AE96007, AE96008, AE96009, AE96010, AE96011)

ICP Metals - Soil

Aluminum	BDL	112	125	3.20
Antimony	BDL	97.9	74.8	NC
Arsenic	BDL	96.1	89.8	NC
Barium	BDL	106	97.4	18.7
Beryllium	BDL	104	95.6	NC
Boron	BDL			

QA/QC Data

SDG I.D.: GAE96004

Parameter	Blank	LCS Rec %	MS Rec %	RPD %
cadmium	BDL	84.7	77.3	NC
calcium	BDL			
chromium	BDL	102	96.1	NC
cobalt	BDL	110	101	NC
copper	0.7	107	92.4	NC
iron	1.7	NC	NC	13.6
lead	BDL	101	93.3	NC
magnesium	BDL			
manganese	BDL	110	104	42.7
molybdenum	BDL			
nickel	BDL	101	91.7	NC
phosphorus	BDL			
potassium				
selenium	BDL	96.9	91.2	NC
silver	BDL	73.5	66.5	NC
sodium				
thallium	BDL	94.4	86.7	NC
tin	2.9			
vanadium	BDL	111	103	NC
zinc	BDL	99.0	99.9	4.1

A/QC Batch Sample No: AE96005 (AE96004, AE96006, AE96007, AE96008, AE96009, AE96010, AE96011)

mercury - Soil	BDL	106	116	NC
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A/QC Batch Sample No: AE96716 (AE96004)

CP Metals - Soil

aluminum	BDL	118	92.5	8.6
antimony	BDL	101	68.2	NC
arsenic	BDL	105	95.7	NC
barium	BDL	109	98.5	15.9
beryllium	BDL	106	99.9	NC
boron	BDL			
cadmium	BDL	111	101	NC
calcium	BDL			
chromium	BDL	106	96.3	NC
cobalt	BDL	108	96.9	NC
copper	BDL	108	96.6	NC
iron	3.1	NC	NC	10.2
lead	BDL	106	94.4	NC
magnesium	BDL			
manganese	BDL	115	98.7	7.3
molybdenum	BDL			
nickel	BDL	107	95.9	NC
phosphorus	2.10			
potassium				
selenium	BDL	106	96.0	NC
silver	BDL	80.	69.5	NC
sodium				
thallium	BDL	101	91.4	NC
tin	BDL			
vanadium	BDL	110	99.5	8.5

QA/QC Data

SDG ID: GAE96004

Parameter	Blank	LCS Rec %	MS Rec %	RPD %
inc	BDL	104	94.1	11.7

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

LCS - Laboratory Control Sample

MS - Matrix Spike

RPD - Relative Percent Difference
Between Sample and Sample Duplicate



Phyllis Shiller, Laboratory Director

August 07, 2003



Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06040
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

August 07, 2003

QA/QC Data

SDG LD.: GAE96004

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD
QA/QC Batch Sample No: AE93952 (AE96009, AE96010)					
Semivolatiles					
1,2,4-Trichlorobenzene	ND	94	82	83	1.2
1,2-Dichlorobenzene	ND				
1,2-Diphenylhydrazine	ND				
1,3-Dichlorobenzene	ND				
1,4-Dichlorobenzene	ND	77	70	72	2.8
2,4,5-Trichlorophenol	ND				
2,4,6-Trichlorophenol	ND				
2,4-Dichlorophenol	ND				
2,4-Dimethylphenol	ND				
2,4-Dinitrophenol	ND				
2,4-Dinitrotoluene	ND	92	78	80	2.5
2,6-Dichlorophenol	ND				
2,6-Dinitrotoluene	ND				
2-Chloronaphthalene	ND				
2-Chlorophenol	ND	91	87	88	1.1
2-Methylnaphthalene	ND				
2-Methylphenol (o-cresol)	ND				
2-Nitroaniline	ND				
2-Nitrophenol	ND				
3,3'-Dichlorobenzidine	ND				
3-Nitroaniline	ND				
4,6-Dinitro-2-methylphenol	ND				
4-Bromophenyl phenyl ether	ND				
4-Chloro-3-methylphenol	ND	109	96	101	5.1
4-Chloroaniline	ND				
4-Chlorophenyl phenyl ether	ND				
4-Methylphenol (p-cresol)	ND				
4-Nitroaniline	ND				
4-Nitrophenol	ND				
Acenaphthene	ND	90	82	86	4.8
Acenaphthylene	ND				
Anthracene	ND				
Benzidine	ND				
Benzo(a)anthracene	ND				
Benzo(a)pyrene	ND				
Benzo(b)fluoranthene	ND				
Benzo(g,h,i)perylene	ND				
Benzo(k)fluoranthene	ND				

QA/QC Data

SDG I.D.: GAE96004

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD %
Benzoic acid	ND				
Benzyl alcohol	ND				
Benzyl butyl phthalate	ND				
Bis(2-chloroethoxy)methane	ND				
Bis(2-chloroethyl)ether	ND				
Bis(2-chloroisopropyl)ether	ND				
Bis(2-ethylhexyl)phthalate	ND				
Chrysene	ND				
Di-n-butylphthalate	ND				
Di-n-octyl phthalate	ND				
Dibenz(a,h)anthracene	ND				
Dibenzofuran	ND				
Diethyl phthalate	ND				
Dimethyl phthalate	ND				
Fluoranthene	ND				
Fluorene	ND				
Hexachlorobenzene	ND				
Hexachlorobutadiene	ND				
Hexachlorocyclopentadiene	ND				
Hexachloroethane	ND				
Indeno(1,2,3-c,d)pyrene	ND				
Sophorone	ND				
N-Nitrosodi-n-propylamine	ND	104	96	96	0.0
N-Nitrosodimethylamine	ND				
N-Nitrosodiphenylamine	ND				
Naphthalene	ND				
Nitrobenzene	ND				
Pentachlorophenol	ND	87	90	92	2.2
Phenanthrene	ND				
Phenol	ND	91	87	89	2.3
Pyrene	ND	109	99	100	1.0
Pyridine	ND				
% 2,4,6-Tribromophenol (Surrog Rec)	92	101	96	100	4.1
% 2-Fluorobiphenyl (Surrogate Rec)	86	85	84	84	0.0
% 2-Fluorophenol (Surrogate Rec)	83	82	81	83	2.4
% Nitrobenzene-d5 (Surrogate Rec)	73	69	68	67	1.5
% Phenol-d5 (Surrogate Rec)	87	88	89	89	0.0
% Terphenyl-d14 (Surrogate Rec)	102	95	93	106	13.1

QA/QC Batch Sample No: AE95938 (AE96004, AE96006, AE96007, AE96008, AE96009)

Volatiles

1,1,1,2-Tetrachloroethane	ND	94			
1,1,1-Trichloroethane	ND	100			
1,1,2,2-Tetrachloroethane	ND	83			
1,1,2-Trichloroethane	ND	90			
1,1-Dichloroethane	ND	85			
1,1-Dichloroethene	ND	92	86	112	26.3
1,1-Dichloropropene	ND	86			
1,2,3-Trichlorobenzene	ND	86			
1,2,3-Trichloropropane	ND	88			
1,2,4-Trichlorobenzene	ND	80			

QA/QC Data

SDG I.D.: GAE96004

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD %
1,2,4-Trimethylbenzene	ND	85			
1,2-Dibromo-3-chloropropane	ND	81			
1,2-Dichlorobenzene	ND	86			
1,2-Dichloroethane	ND	93			
1,2-Dichloropropane	ND	96			
1,3,5-Trimethylbenzene	ND	86			
1,3-Dichlorobenzene	ND	84			
1,3-Dichloropropane	ND	92			
1,4-Dichlorobenzene	ND	80			
2,2-Dichloropropane	ND	69			
2-Chlorotoluene	ND	87			
4-Chlorotoluene	ND	84			
Benzene	ND	95	86	100	15.1
Bromobenzene	ND	87			
Bromochloromethane	ND	99			
Bromodichloromethane	ND	98			
Bromoform	ND	106			
Bromomethane	ND				
Carbon tetrachloride	ND	94			
Chlorobenzene	ND	92	76	88	14.6
Chloroethane	ND	75			
Chloroform	ND	98			
Chloromethane	ND	80			
cis-1,2-Dichloroethene	ND	91			
cis-1,3-Dichloropropene	ND	90			
Dibromochloromethane	ND	97			
Dibromoethane	ND	79			
Dibromomethane	ND	91			
Dichlorodifluoromethane	ND	78			
Ethylbenzene	ND	91			
Hexachlorobutadiene	ND	84			
Isopropylbenzene	ND	89			
m&p-Xylene	ND	91			
Methyl Ethyl Ketone	ND				
Methyl t-butyl ether (MTBE)	ND				
Methylene chloride	ND	98			
n-Butylbenzene	ND	83			
n-Propylbenzene	ND	84			
Naphthalene	ND	84			
o-Xylene	ND	100			
p-Isopropyltoluene	ND	88			
sec-Butylbenzene	ND	84			
Styrene	ND	101			
tert-Butylbenzene	ND	85			
Tetrachloroethene	ND	92			
Toluene	ND	93	82	94	13.6
Total Xylenes	ND				
trans-1,2-Dichloroethene	ND	92			
trans-1,3-Dichloropropene	ND	90			
Trichloroethene	ND	94	80	94	16.1
Trichlorofluoromethane	ND	83			

QA/QC Data

SDG LD.: GAE96004

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD %
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Vinyl chloride	ND	84			
% Bromofluorobenzene	95	105	96	93	3.2

A/QC Batch Sample No: AE95980 (AE96009, AE96010)

Pesticides - Soil

1,4'-DDD	ND				
1,4'-DDE	ND				
1,4'-DDT	ND				
γ-BHC	ND				
Aldrin	ND		120	100	18.2
β-BHC	ND				
Chlordane	ND				
δ-BHC	ND				
Dieldrin	ND				
Endosulfan I	ND				
Endosulfan II	ND				
Endosulfan sulfate	ND				
Endrin	ND				
Endrin aldehyde	ND				
γ-BHC	ND				
Heptachlor	ND		121	99	20.0
Heptachlor epoxide	ND				
Methoxychlor	ND				
Toxaphene	ND				
% DCBP (Surrogate Rec)	115		83	75	10.1
% TCMX (Surrogate Rec)	108		69	58	17.3

A/QC Batch Sample No: AE95980 (AE96009, AE96010)

Polychlorinated Biphenyls

PCB-1016	ND				
PCB-1221	ND				
PCB-1232	ND				
PCB-1242	ND				
PCB-1248	ND				
PCB-1254	ND				
PCB-1260	ND	78	***	***	NC
PCB-1262	ND				
PCB-1268	ND				
% DCBP (Surrogate Rec)	122	112	94	110	15.7
% TCMX (Surrogate Rec)	115	104	76	88	14.6

A/QC Batch Sample No: AE95991 (AE96004, AE96006, AE96007, AE96008, AE96009, AE96010, AE96011)

TPH by GC (Extractable Products)

Aviation Fuel/Kerosene	ND				
Fuel Oil #2/ Diesel Fuel	ND	79	**	**	NC
Fuel Oil #4	ND				
Fuel Oil #6	ND				
Motor Oil	ND				
Other Oil (Cutting & Lubricating)	ND				
Unidentified	ND				

Comment: ** Matrix spike and Matrix spike duplicate recoveries could not be calculated due to the presence of material in the original sample.

QA/QC Data

SDG ID.: GAE96004

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD %
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A/QC Batch Sample No: AE96005 (AE96004, AE96006, AE96007, AE96008, AE96009, AE96010, AE96011)

Atx Spk Dup Recovery for Mercury - Soil

Completed

NC

A/QC Batch Sample No: AE96062 (AE96010, AE96011)

Volatiles

.1,1,2-Tetrachloroethane	ND	93			
.1,1-Trichloroethane	ND	101			
.1,2,2-Tetrachloroethane	ND	79			
.1,2-Trichloroethane	ND	87			
.1-Dichloroethane	ND	85			
.1-Dichloroethene	ND	92	106	100	5.8
.1-Dichloropropene	ND	96			
.2,3-Trichlorobenzene	ND	83			
.2,3-Trichloropropane	ND	84			
.2,4-Trichlorobenzene	ND	76			
.2,4-Trimethylbenzene	ND	83			
.2-Dibromo-3-chloropropane	ND	79			
.2-Dichlorobenzene	ND	84			
.2-Dichloroethane	ND	92			
.2-Dichloropropane	ND	94			
.3,5-Trimethylbenzene	ND	85			
.3-Dichlorobenzene	ND	82			
.3-Dichloropropane	ND	91			
.4-Dichlorobenzene	ND	80			
.2-Dichloropropane	ND	78			
1-Chlorotoluene	ND	85			
1-Chlorotoluene	ND	83			
benzene	ND	94	98	98	0.0
bromobenzene	ND	85			
bromochloromethane	ND	99			
bromodichloromethane	ND	98			
bromoform	ND	103			
bromomethane	ND	46			
carbon tetrachloride	ND	100			
chlorobenzene	ND	91	90	92	2.2
chloroethane	ND	82			
chloroform	ND	97			
chloromethane	ND	76			
is-1,2-Dichloroethene	ND	98			
is-1,3-Dichloropropene	ND	89			
dibromochloromethane	ND	95			
dibromoethane	ND	85			
dibromomethane	ND	92			
dichlorodifluoromethane	ND	77			
ethylbenzene	ND	92			
hexachlorobutadiene	ND	84			
isopropylbenzene	ND	87			
m&p-Xylene	ND	90			
methyl Ethyl Ketone	ND				
methyl tert-butyl ether (MTBE)	ND				
methylene chloride	ND	97			

QA/QC Data

SDG I.D.: GAE96004

Parameter	Blank	LCS %	MS Rec %	MS Dup Rec %	RPD %
n-Butylbenzene	ND	82			
n-Propylbenzene	ND	83			
Naphthalene	ND	80			
o-Xylene	ND	98			
p-Isopropyltoluene	ND	87			
sec-Butylbenzene	ND	83			
Styrene	ND	99			
tert-Butylbenzene	ND	85			
Tetrachloroethene	ND	92			
Toluene	ND	93	95	96	1.0
trans-1,2-Dichloroethene	ND	90			
trans-1,3-Dichloropropene	ND	87			
Trichloroethene	ND	94	94	96	2.1
Trichlorofluoromethane	ND	92			
Vinyl chloride	ND	82			
% Bromofluorobenzene	94	107	98	99	1.0

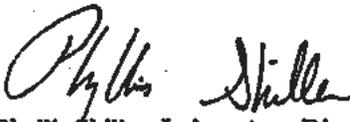
If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

MS - Matrix Spike

MS Dup - Matrix Spike Duplicate

RPD - Relative Percent Difference

LCS - Laboratory Control Sample


Phyllis Shiller, Laboratory Director
August 07, 2003

ATTACHMENT B

FUSS & O'NEILL, INC.
CONSULTING ENGINEERS
MANCHESTER, CT 06040

BORING LOG

PROJECT: Windsor Board LF

LOCATION: Windsor CT

SITE ID: DW-01

SHEET 1 of 1

PROJECT NO: 93126.110

CONTRACTOR: F+O
OPERATOR: RB
F & O REPRESENTATIVE: GS
DRILLING METHOD: Geoprobe
SAMPLING METHOD: Geoprobe
HAMMER WT.: — HAMMER FALL (IN): —
BORING LOCATION: adjacent to dry well
GROUND ELEVATION: —
DATE STARTED: 7/23/03 DATE FINISHED: 7/23/03
SAMPLE PREFIX: 67000728-

WATER LEVEL MEASUREMENTS

DATE	MS. FT.	WATER AT	TIME
7/28/03	6.5		

Time and Date of Completion: 1450 7/23/03

DEPTH (FT)	SAMPLE NO.	SAMPLE DEPTH (FT)	REC/PEN	BLOWS #	SAMPLE DESCRIPTION	STRATA CHANGE	LITHO-LOGIC CODE	FIELD TESTING
0		0-2	18/24	NA	Sand F-m, trace silt, gravel, wood		TC	NA
2		2-4	14/24		Sand F-m, trace gravel		SW	
4		4-6	16/24		Sand F-m		SW	
6	-06	6-7.5	14/24		Sand F-m, some gravel	7.5	SW	
		7.5-8			Sand fine, some silt (wet)		SM	
8		8-10	18/24		Sand fine, some gravel		SW	
10	-07	10-12	20/24		Sand F-m, trace coarse, trace gravel		SP	
12		12-14	20/24		Sand F-m, trace coarse		SP	
14		14-16	22/24		Same as above		SP	
16		16-18	22/24		Same as above		SP	
18	-08	18-20	22/24	✓	Same as above		SP	
					EOB 20' no refusal			↓

BORING DIAMETER	BORING METHOD	DEPTH
2"	Geoprobe	20.0'

REMARKS
Field Instrument = NA
If refusal is encountered, describe all efforts used to confirm:
EOB 20' no refusal

PROPORTIONS USED:
TRACE 0 TO 10% SOME 20 TO 35%
LITTLE 10 TO 20% AND 35 TO 50%

Reviewed by Staff:

BACKFILL
Native Material _____ To _____
Bentonite Grout/Chips _____ To _____
Concrete/Asphalt _____ To _____
Other _____ To _____
See Monitoring Well Completion Report

Soil Sampling Field Data

Environmental
Field Services

Client/Project Name: W. D. Blackwell LP Project #: 93126 H10

Project Location: Windsor CT

Date: 7/25/03 Weather: clear 35°

Sample #: 670030723-01
 Sample Location: SS-01
 Sampler: 70 Time: 1045
 Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
 Trowel / Other seaweed
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite
 Other (west end of tornado debris)
 Generic Soil Description: Sand F.M. trace gravel, wood, metal
 Sample Depth: 0-2.0 PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice
A302	2	↓

Sample #: 670030723-02
 Sample Location: SS-02
 Sampler: 75 Time: 1105
 Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
 Trowel / Other seaweed
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite
 Other (center of tornado debris)
 Generic Soil Description: Sand F.M. trace gravel, wood, metal
 Sample Depth: 0-2.0 PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice
A302	2	↓

Sample #: 670030723-03
 Sample Location: SS-03
 Sampler: 70 Time: 1120
 Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
 Trowel / Other seaweed
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite
 Other (east end of tornado debris)
 Generic Soil Description: Sand F.M. trace gravel
 Sample Depth: 0-2.0 PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice
A302	2	↓

Sample #: 670030723-04
 Sample Location: SS-04
 Sampler: 73 Time: 1145
 Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
 Trowel / Other seaweed
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite
 Other (east end of debris area)
 Generic Soil Description: Sand F.M. trace wood, trace gravel
 Sample Depth: 0-2.0 PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice
A302	2	↓

Soil Sampling Field Data

Environmental
Field Services

Client/Project Name: W. Star Realty LLC LP Project #: 93126 N10

Project Location: W. Star CT

Date: 7/25/03 Weather: clear 85°

Sample #: 670030723-05

Sample Location: SS-05

Sampler: 7D Time: 1155

Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
Trowel / Other Scrape

Field decon: Yes / No / Dedicated

Type of Sample: Grab / Composite

Other (West end of Debris area)

Generic Soil Description: Sand F.M. trace wood, plastic

Sample Depth: 0-2' PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice ✓
A202	2	↓

Sample #: 670030723-06

Sample Location: DN-01

Sampler: 7B Time: 1305

Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
Trowel / Other Scrape

Field decon: Yes / No / Dedicated

Type of Sample: Grab / Composite

Other

Generic Soil Description: Sand F.M. some gravel, some silt

Sample Depth: 6-8' PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice
A202	2	↓

Sample #: 670030723-07

Sample Location: DN-01

Sampler: 7B Time: 1335

Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
Trowel / Other Scrape

Field decon: Yes / No / Dedicated

Type of Sample: Grab / Composite

Other

Generic Soil Description: sand F.M. trace some trace sand

Sample Depth: 10-12' PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice
A202	2	↓

Sample #: 670030723-08

Sample Location: DN-01

Sampler: 7B Time: 1435

Sampling Device: Auger / Core Sampler / Shovel / Hammer Drill
Trowel / Other Scrape

Field decon: Yes / No / Dedicated

Type of Sample: Grab / Composite

Other

Generic Soil Description: sand F.M. trace some

Sample Depth: 18-20' PetroFLAG/OVM NA

Container	Quantity	Preservative
G202	1	Ice
A202	2	↓

ATTACHMENT C



DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

RCRA RECORDS CENTER (landfill)
FACILITY Windsor Bloomfield San
I.D. NO. CTD991289133
FILE LOC. R-13
OTHER _____

Facility Name: Windsor-Bloomfield Sanitary Landfill
Facility Address: Huckleberry Road, Windsor, CT
Facility EPA ID #: CTD991289133

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

If yes - check here and continue with #2 below.

If no - re-evaluate existing data, or

if data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

**Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 2**

2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated"¹ above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater	<u>X</u>	<u> </u>	<u> </u>	See Attachment 1
Air (indoors) ²	<u> </u>	<u>X</u>	<u> </u>	
Surface Soil	<u> </u>	<u> </u>	<u> </u>	
(e.g., <2 ft)	<u>X</u>	<u> </u>	<u> </u>	
Surface Water	<u> </u>	<u>X</u>	<u> </u>	
Sediment	<u> </u>	<u>X</u>	<u> </u>	
Subsurf. Soil	<u> </u>	<u> </u>	<u> </u>	
(e.g., >2 ft)	<u>X</u>	<u> </u>	<u> </u>	
Air (outdoors)	<u> </u>	<u>X</u>	<u> </u>	

 If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

X If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

 If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

Footnotes:

¹ "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
 Page 3

3. Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential Human Receptors (Under Current Conditions)

<u>"Contaminated" Media</u>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food ³
Groundwater	_N_	_N_	_N_	_N_			_N_
Air (indoors)							
Soil (surface, e.g., <2 ft)	_N_	_Y_	_N_	_Y_	_Y_	_N_	_N_
Surface Water							
Sediment							
Soil (subsurface e.g., >2 ft)				_N_			_N_
Air (outdoors)							

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.
2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

- _____ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).
- ___Y___ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.
- _____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s): See Attachment 2

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

Page 4

- 4 Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant"⁴ (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

 N If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

 If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

 If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

Exposure of surface soil to *site workers and construction workers* is insignificant because workers are usually in trucks or compaction machinery so are not in direct contact with the soil. Additionally, site workers are trained in accordance with the solid waste permit for the site to maintain the worker's health and safety. Finally, the non-hazardous nature of the municipal solid waste likely precludes significant exposure to hazardous constituents. *Trespassers* are not likely to be present since this is an active landfill that is partially fenced with access control on one side with a river on the other side. If exposure should occur, the non-hazardous nature of the waste likely precludes significant exposure to hazardous constituents.

⁴ If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 5

5 Can the "significant" exposures (identified in #4) be shown to be within acceptable limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable") - continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s): _____

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 6

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

 YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Windsor - Bloomfield Sanitary Landfill facility, EPA ID #CTD991289133, located at Huckleberry Road, Windsor, under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

 NO - "Current Human Exposures" are NOT "Under Control."

 IN - More information is needed to make a determination.

Completed by (signature) David Ringquist Date 9-29-03
(print) David Ringquist
(title) Sanitary Engineer 3

Supervisor (signature) Diane Duva Date 9-29-03
(print) Diane Duva
(title) Supervising Environmental Analyst
(EPA Region or State) Connecticut

Locations where References may be found:

 Connecticut Department of Environmental Protection, 79 Elm St. Hartford, CT.

Contact telephone and e-mail numbers

(name) David Ringquist _____
(phone #) 860-424-3573 _____
(e-mail) david.ringquist@po.state.ct.us _____

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 6

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

YE YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Windsor - Bloomfield Sanitary Landfill facility, EPA ID #CTD991289133, located at Huckleberry Road, Windsor under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

___ NO - "Current Human Exposures" are NOT "Under Control."

___ IN - More information is needed to make a determination.

Completed by (signature) _____ Date _____
(print) David Ringquist _____
(title) Sanitary Engineer 3 _____

Supervisor (signature) _____ Date _____
(print) Diane Duva _____
(title) Supervising Environmental Analyst _____
(EPA Region or State) Connecticut _____

Reviewed by
David Lin
David Lin
9/29/03

Approved by
Matthew R. Hayland
Matthew R. Hayland
9/29/03

Locations where References may be found:

___ Connecticut Department of Environmental Protection, 79 Elm St. Hartford, CT.

Contact telephone and e-mail numbers

(name) David Ringquist _____
(phone #) 860-424-3573 _____
(e-mail) david.ringquist@po.state.ct.us _____

Chief, RCRA
Corrective Action
Section
Rg. I.

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

Attachment 1 –

Windsor Bloomfield Sanitary Landfill – EI Determination - CA725

Question 2: *Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be “contaminated” above appropriately protective risk-based “levels” (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?*

Groundwater: Contaminants typical of municipal solid waste landfills are present in the groundwater monitoring wells downgradient of the landfill, including total dissolved solids, specific conductance, alkalinity, ammonia, hardness, sodium, barium, iron, manganese and arsenic. In addition, trichloroethylene and vinyl chloride slightly exceed the groundwater protection criteria in one monitoring well located within the landfill and adjacent to the RCRA closed metal hydroxide cell.

Indoor Air: There are no buildings on the landfill and the closest building is the landfill scale house located approximately 300 feet to the east. As a precaution, this building will soon have a continuous monitoring device to warn the workers of the presence of gas.

Surface and Subsurface Soil: This is an active landfill that receives municipal solid waste and bulky waste, e.g. large furniture, daily, therefore surface soil in the vicinity of the working face of the landfill is likely to be contaminated. Subsurface soil is contaminated by the municipal solid waste and by metal hydroxide sludge that is disposed of in a cell adjacent to the solid waste landfill. The cell has been capped with a RCRA engineered cover system that includes an impermeable membrane. The town is required to monitor the groundwater and maintain the sludge landfill for 30 years after closure.

Surface Water and Sediments: “Several leachate-impacted groundwater seeps are present west and northwest (down gradient) of the landfill. The leachate seeps occur where the groundwater elevation equals the topographic elevation” (from Zone of Influence Investigation Report, Windsor-Bloomfield Sanitary Landfill, Windsor, CT, dated May 1996). Some leachate seeps containing iron-oxide precipitate (orange-stained soil) discharge directly into the Farmington River. Arsenic has been measured in groundwater at a maximum of .035 mg/l as reported in a May 2001 landfill groundwater monitoring report, exceeding Connecticut’s Remediation Standard Regulations surface water protection criteria of .004 mg/l. However arsenic does not exceed this criteria by more than 10 times so it can be concluded that this is *not anticipated to have an unacceptable impact to the Farmington River, its sediments, or eco-system*. Also, “surface water samples from the Farmington River continue to show no significant impact from the landfill. Water quality at SW-1, upriver from the landfill, is similar to that at downstream location SW-3”, as reported in the 2000 Annual Summary Groundwater Monitoring Program... by Fuss & O’Neill, Inc., dated February 2001. Finally, the toxicity of the groundwater and stream water down gradient of the landfill was determined in 1992 by exposing live organisms to these water samples. This study concluded that the water is non-toxic. Nevertheless, the CTDEP is requiring the Town of Windsor, through an administrative order, to implement controls on the landfill leachate and the leachate seeps for aesthetic (odor and visual) reasons.

Air Outdoors: The landfill emits gas to the atmosphere, typical of a solid waste disposal area. The residents located to the east occasionally detect an odor that is generally a function of certain weather conditions, however the gas is diluted over the 1000-foot distance to the nearest home and therefore can be reasonably expected to be an aesthetic and not a health problem.

Attachment 2
Windsor Bloomfield Sanitary Landfill – EI Determination - CA725

Question 3:

Are there complete pathways between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Groundwater: There are no drinking water wells located downgradient of the contaminated groundwater. All groundwater discharges to the Farmington River before reaching wells, therefore there is not a complete pathway.

Surface Soil: Workers at the landfill will likely come into contact with the contaminated soil, as well as construction workers and trespassers, therefore there is a complete pathway.

Subsurface Soil: It is very unlikely that the RCRA metal hydroxide cell or the solid waste landfill will be dug up, therefore the exposure pathway to construction workers is not complete. Current land use precludes growing crops therefore the food pathway is incomplete.

References

Windsor Bloomfield Sanitary Landfill -- EI Determination - CA725

1. *Zone of Influence Investigation Report, Windsor-Bloomfield Sanitary Landfill, Windsor, Connecticut, Volume I: Technical Report*, prepared by Fuss & O'Neill Inc., May 1996.
2. *Second Quarter 2001 Monitoring Results, Groundwater Monitoring Program, Windsor-Bloomfield Sanitary Landfill and RCRA Metal Hydroxide Cell, Windsor, Connecticut*, prepared by Fuss & O'Neill Inc., May 2001.
3. *Verification Of Approved Controls In Place Windsor-Bloomfield Landfill*, September 13, 2001, Prepared by Marina Crawford, Connecticut Department of Environmental Protection.
4. *2000 Annual Summary, Groundwater Monitoring Program, Windsor Bloomfield Sanitary Landfill, Windsor, Connecticut*, prepared by Fuss & O'Neill, Inc., February 2001.

Appendix E

Wetland/Stream Outlet Design and Permitting



FUSS & O'NEILL

June 6, 2019

Mr. Mark Goossens
Solid Waste Manager
Windsor-Bloomfield Landfill
500 Huckleberry Road
Windsor, CT 06095

RE: Wetland/Stream Outlet Design and Permitting
Windsor-Bloomfield Landfill - Windsor, Connecticut
Fuss & O'Neill Reference No. 1993126.A84

Dear Mr. Goossens:

Fuss & O'Neill, Inc. is pleased to submit this conceptual design report for mitigating the discharge of visible iron precipitate from an unnamed stream to the Farmington River, discussed in our October 18, 2018 proposal. Preliminary design plans, description of work, order of magnitude opinion of cost, and list of expected permits required are included below.

Project Background

An unnamed stream located northwest of the Windsor-Bloomfield Landfill is visually impacted by iron-oxide precipitate. The Town of Windsor and Fuss & O'Neill have worked with the Connecticut Department of Energy and Environmental Protection (CTDEEP) over the past decade to evaluate various methods for mitigating the discharge of visible iron precipitate to the Farmington River.

A concept intended to reduce the visibility of discoloration from the unnamed stream during low flow conditions was most recently discussed. CTDEEP indicated in a January 9, 2018 email that iron-containing surface water collected in a pipe from the stream and discharged from the subsurface up into the bottom of the Farmington River would not require a CTDEEP permit, just a local wetland permit.

As a result of the above, Fuss & O'Neill investigated the feasibility of diverting low flows in the stream into a pipe installed beneath and up into the bottom of Farmington River using horizontal directional drilling (HDD) methods. This would reduce the visibility of the main iron seep associated with the unnamed stream as it discharges into the Farmington River during periods of low flow as discussed in our October proposal.

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Mr. Mark Goossens

June 6, 2019

Page 2

Findings

The specific findings of the work in our October 2018 proposal are described below by task.

Bathymetric Survey & Coordination with Existing Survey

An updated base map of existing conditions in the project area was prepared by Fuss & O'Neill. This included a bathymetric survey by our sub-consultant, All Habitat Services of Branford, CT, on the bottom of the Farmington River adjacent to the unnamed stream outlet. All Habitat used sonar methods to determine the riverbed contour elevations underwater.

Fuss & O'Neill coordinated and supplemented the bathymetric survey with its topographic field survey of the project area in the vicinity of the unnamed stream on the east bank of the Farmington River. This supplemental field survey area extended beyond the unnamed stream and into the area of a proposed access road route from the landfill.

The resulting compilation survey map, prepared with the accuracies of a Class T-2 and Class T-D Topographic Survey, was used as a base map for the preliminary design plans in this report. The flood zones shown are based on Town of Windsor GIS and Federal Emergency Management Agency FIRM mapping.

Preliminary Design & Budgetary Opinion of Construction Cost

Fuss & O'Neill visited the unnamed stream site in November and December of 2018 to evaluate site access and design options. Preliminary design plans in *Attachment 1* were prepared for mitigating the discharge of iron from the unnamed stream, based upon the survey base mapping and our site observations.

Directional Technologies, Inc., our HDD subcontractor, also visited the site on December 6, 2018 to determine a workable design concept and help prepare an opinion of construction cost. The HDD subcontractor confirmed that both land and river access will be needed for pipe installation and provided estimated construction cost input on January 25. Cashman Dredging and Marine Contracting Company, LLC provided two alternative approaches for performing the river work and provided estimated construction cost input on February 1.

Mr. Mark Goossens

June 6, 2019

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Construction and Maintenance Access

A boat or floating barge, to stage and help install the HDD pipe as well as the pipe end anchor and any diffuser, could access the work area from the Rainbow Reservoir Boat Launch in Windsor 1.2± miles downstream of the subject stream and 0.5± mile upstream of the Rainbow Dam. Some or all of the pipe would need to be fused together at this boat launch, as discussed below.

The HDD construction needs to take place under full impoundment conditions. According to CTDEEP, there is no regular dam drawdown schedule for this impoundment.

For the land-based work, four access road routes were investigated: two from the Town of Windsor Northwest Park to the north and two from the Windsor-Bloomfield Landfill to the south. The two best access road options, one each from the north and south, are shown on the conceptual design plans in *Attachment 1*. Both options would utilize the existing wooded Northwest Park “Hemlock Trail” to some extent. A wetland crossing is required for either access option, and the existing trail would have to be widened slightly by clearing trees in areas to accommodate construction equipment and to allow for maintenance and repair access, including water tank truck and/or vacuum truck access. The two best access roadway options are discussed/described below:

1. Access from the north would require minimal tree clearing and almost no grading to accommodate construction vehicles or post-construction maintenance vehicles and equipment. It would utilize several existing access roads and trails throughout Northwest Park and cost far less to construct and maintain than access from the south. This option would involve long segments of the existing park trail system, and the town may have concerns about potential conflicts with park use. It may make sense to use this route for the initial construction only.
2. Access from the south would require more tree clearing, grubbing and significant grading to accommodate construction and maintenance vehicles. Although the effort to construct this access route would be significant, this option would allow traffic access from the landfill site instead of through Northwest Park and be less disruptive to recreational park users. This route would make more sense from a maintenance perspective since periodic access will be needed to clean/maintain the proposed structures. The road could be relocated adjacent to the existing riprap lined drainage swale; however, the road would likely require regular on-going maintenance and repairs after significant rainfall events for on-going use by rubber-tired vehicles. The riprap in the existing swale occasionally experiences large storm flows from the landfill detention basin, which displaces the riprap and requires on-going maintenance/repair.

Mr. Mark Goossens

June 6, 2019

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Horizontal Directional Drilling

Conceptual design plans and details are contained in *Attachment 1*. The horizontal directional drilling (HDD) method proposed for this project is a technique for installing pipes below ground using a surface-mounted drill rig that launches a continuous string of steel rods, called a “drill string,” at a shallow angle to the surface. The HDD rig that drives the drill string has continuous drill head tracking and steering capabilities. The drill string creates an initial (pilot) bore hole in a shallow arc that may be enlarged during a secondary operation through use of a back reamer. The final pipe is installed during the final reaming operation or, if necessary, as a separate last step in the process. The predetermined path of the bore is maintained by tracking the path of the pilot bore and by performing path steering corrections to guide the hole along a carefully pre-designed vertical and horizontal alignment.

Soil penetration is accomplished using high pressure, low volume fluid jets with the mechanical drill string cutting. The drilling fluid volume and pressure is controlled to avoid or minimize the creation of voids during the initial boring and back-reaming operations. The resultant slurry created by the combination of the drilling fluid and soil cuttings, called “drilling mud,” gradually solidifies into a solid mass encapsulating the product pipe.

Mini-HDD is a class of HDD equipment typically employed for boring segments less than 600 feet in length, depths up to 15 feet, for placing pipes up to 12 inches in diameter. Therefore, it is assumed that mini-HDD equipment would be used for this project.

Figures 1 and 2 illustrate typical mini-HDD equipment and pilot boring and back-reaming operations and final pipe placement.

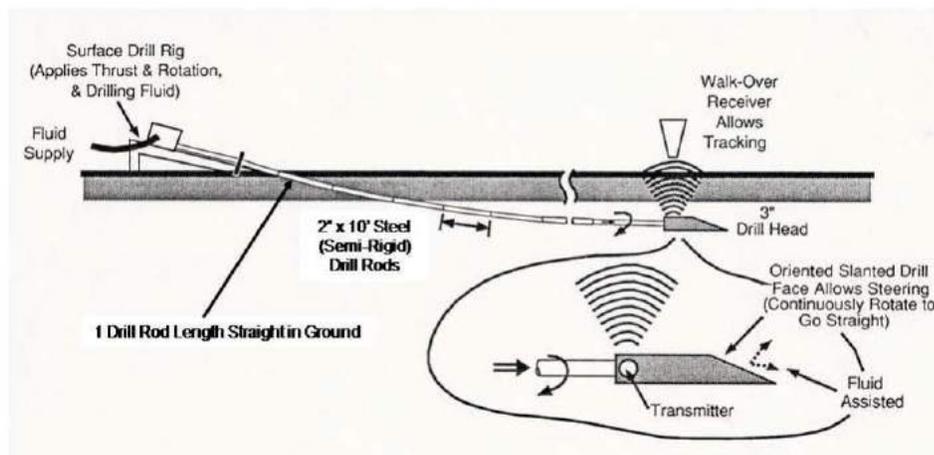


Figure 1 - Typical Mini-HDD Equipment and Pilot Boring Process

Mr. Mark Goossens

June 6, 2019

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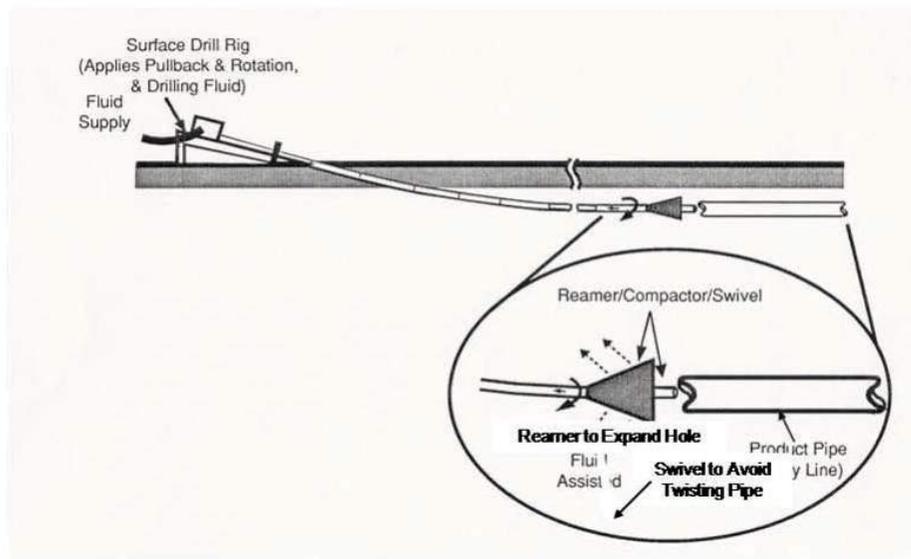


Figure 2 - Typical Mini-HDD Back-Reaming and Pipe Pullback Process

Key aspects, components, and issues of the mini-HDD operation for this project are described in more detail below. The construction methodology information is based in part on information provided by vendors and subcontractors.

Site Access for Mini-HDD

The HDD subcontractor reviewed the proposed construction site and existing access roads and trails from Northwest Park in December of 2018 to verify there is sufficient room for the drill rig and auxiliary equipment, vehicles, trailers at the launch (landward) end of the borehole. The proposed mini-HDD drill working area shown in the *Attachment 1* plans appears to be reasonably firm, level, accessible by and suitable for the movement of vehicles with rubber tires or treads.

Pilot Hole

The pilot hole drill-path and subsequent pipe alignment will have a pre-designed curvature along their vertical profile. The exact curvature will depend on pipe length, existing topography, required soil depth and soil characteristics to provide safe cover and prevent frac-outs, and pipe end staging locations. This curvature may be limited by the minimum allowable bending radius of the drill rod and pipe (varies with diameter and wall material).

Mr. Mark Goossens

June 6, 2019

Page 6

A remote tracking/steering system will likely be deployed on our project, rather than a land-based walk-over receiver of the type shown in *Figure 1*, because much of the HDD pipe will be under the Farmington River.

When the bore head and drill string rod emerge on the downgradient end of the installation in the river, a special cutter called a back reamer will be attached from a boat or temporary barge and pulled back by the HDD machine back towards through the pilot hole. The reamer will bore out the pilot hole so that the pipe can be pulled through. This reaming operation will open the pilot hole to a slightly larger diameter than the final pipe, the final size of which will depend on soil types, soil stability, depth, drilling mud, borehole hydrostatic pressure, etc.

Drilling Mud

A drilling slurry made of water and bentonite or other material will be injected into the bore during cutting and reaming to aid in soil penetration, removal of soil cutting spoils, borehole stabilization, lubrication for the drill rods and product pipe, and cooling of the drill head and transmitter electronics. The primary clay for this “drilling mud” is typically sodium montmorillonite, a ground and refined bentonite, which is added to fresh water to produce the mud. If clay already represents a large component of the native soil within the specific construction path, a polymer additive may be more appropriate. Up to 4,000 lbs. of bentonite could be needed for this project.

The use of drilling mud requires a source of water. The HDD subcontractor will either utilize water from a public water supply hydrant within two (2) miles of the site, or withdraw surface water from the Farmington River. Up to 20,000 gal of water could be used for this project, depending on soil conditions.

The drilling mud will be designed to match soil conditions and the back reamer/cutter. The mud must have sufficient gel strength to keep cuttings suspended for transport, to form a filter cake on the borehole wall that contains the water within the drilling fluid, and to provide lubrication between the pipe and the borehole on pullback.

Environmental Considerations

The bentonite or polymer material used in our drilling mud will be chemically inert and non-toxic given the project location under wetlands and in the Farmington River. Biodegradable drilling mud materials/additives, rather than petroleum-based or detergent additives will be used.

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June 6, 2019

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Drilling mud components from this project including excess/recirculated drilling fluid, drilling mud, and spoils should be disposed of properly in the landfill. The total volume of drilling mud and spoils can be minimized by means of drilling fluid recirculating systems and one or more temporary collection pits, which are used to collect excess drilling mud that exits from the bore hole for subsequent recirculation during the HDD operation.

A “frac-out” is the condition where drilling fluid or mud is released to the ground surface or river bottom through either fractured bedrock or soil between the bore path and surface - a key concern during HDD. Although the bentonite clay-water mixture is considered inert, the turbidity of an uncontrolled drilling mud release into the river or wetlands is not desired as it could potentially impact fish and invertebrates. A written contingency plan should be prepared and distributed to project stakeholders, in advance of any field drilling, which establishes operational procedures and identified the responsibilities for prevention, containment, and clean-up of any frac-outs.

Pipe Installation from Farmington River

The pullback operation will involve pulling the entire 450-foot pipeline length in one segment back from a temporary barge or boat in the Farmington River through the drilling mud along the reamed-hole pathway. Pipe handling, cradling, bend minimization, and pipe fusion procedures will occur at the riverward end of the project. The min-HDD pullback speed at the opposite landward end may range between 1 to 2 feet per minute.

High-density polyethylene (HDPE) pipe is well-suited for river installations like this because of its low friction and head loss characteristics, scratch tolerance, and strong fused-pipe joining system. HDPE pipe wall thicknesses between DR 7.3 and DR 17 are typically strong enough for min-HDD depths to approximately 15 feet.

Previous unnamed stream flow calculations from Fuss & O'Neill's quarterly surface monitoring near the landfill were reviewed to select the design flow of 250 gallons/minute (gpm) in the pipe. Low flows in the stream of up to 250 gpm would be collected in a pipe and discharged up into the bottom of the Farmington River, but larger flows would bypass the pipe and flow overland into the river as they currently do. An 8-inch diameter DR 11 HDPE pipe is currently proposed to convey a design flow of up to 250 gallons/minute, based on preliminary design hydraulic calculations and given the tail water conditions and elevation difference between the inlet structure and water surface of the Farmington River. A low-head loss diffuser system is envisioned, to minimize head loss at the end of the pipe (e.g., duck-bill style rubber valve or simple open end vertical tee fitting).

Mr. Mark Goossens

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The pipe thickness will be verified during final design, to ensure sufficient strength exists during the HDD operation (pipe pullback) and for the long-term soil/surface loads after installation. Final design hydraulic calculations will be performed to confirm the pipe size and diffuser configuration.

Given the low differential elevation head between the inlet and discharge ends of the pipe, and a computed velocity of $1.6 \pm$ feet/second for the 250 gallons/minute design flow, an 8-inch HDPE pipe will require occasional maintenance using a roter device, since flows won't achieve a "self-cleaning" velocity of 2 feet/second. The pipe may therefore plug with both organic debris and iron fouling, which would likely require regular maintenance cleanout. The pipe segment installed between the HDD launch area and proposed inlet structure, upgradient of the footbridge, should be left in-place and a hand hole installed at the upstream end of the pipe at the HDD launch area. This would allow for roter equipment to access and clean out the 450 foot pipe segment of debris, between the hand hole and pipe end in the Farmington River, from the HDD launch area.

Because 8-inch HDPE is available in pipe segments, rather than coil rolls used for smaller diameter pipe, individual pipe lengths will need to be butt-fused together by the Contractor before or during installation. The HDPE pipe will need to be floated into place on the river in order to back feed it during the HDD pullback operation. Some or all of the pipe segments may be butt-fused on shore at the point of delivery at the Rainbow Reservoir Boat Launch and some may be fused on the river.

Two alternate approaches for the river work were described by Cashman Dredging & Marine Contracting Company, LLC. One use a boat and the other uses a barge:

1. The boat approach would utilize the use of an excavator, a dive support boat, and diving services. This "minimalist approach" would progress by unloading and fusing all of the pipe at the boat launch using an excavator and HDPE pipe fusion machine. The fused string of pipe would be pulled into the river with the dive support boat as pipe fusion progresses. The total 450-foot long fused pipe string would then be floated to the HDD exit pit using the dive support boat, for the land-based HDD contractor to pull from. The diver would assist with pullback hookup assembly from the dive support boat. The precast concrete collar and pipe end diffuser would be placed via A-Frame from the dive support boat, with diver support to guide them into place.
2. The barge approach would include the use of a rough terrain 40-ton hydraulic crane, a 40' x 80' crane barge (with spuds, lighting, generator, hydraulic power pack), and shallow water push boat/tugboat. This "comprehensive approach" would progress by unloading and fusing all or a portion of the HDPE pipe at the boat launch using the hydraulic crane and pipe fusion machine. The barge would be assembled in the water, and the crane would be walked onto the barge. The barge would be then be transported to the work site, secured in place with spuds, and serviced by the push boat/tugboat. Any additional segments of pipe not fused at the boat launch would be fused on location with the assistance of the crane barge. The crane barge, with diver assistance if needed, will make the connection between the back reamer and 8-inch HDPE pipe so that the land-based HDD contractor

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can pull back the line. The precast collar and diffuser would be placed via the crane with diver support as needed.

The minimalist boat approach above would provide less flexibility in managing changing weather and river conditions or other potential project challenges than the more costly, full-service barge approach with stable a barge platform and crane support on the river.

In either case, silt curtain would be placed around the pipe exit area near the middle of the river and around the outfall of the unnamed stream as shown in *Attachment 1* plans via the support boat.

Geotechnical Investigation

A soil investigation to identify the bedrock surface is recommended to confirm the most efficient way of accomplishing HDD for the project and to more accurately determine the construction cost. Directional drilling must simultaneously penetrate and maneuver through the soil, using less aggressive equipment than conventional open-cut trenching. Problematic soil conditions can slow the installation progress or result in frac-outs in the Farmington River or adjacent wetlands.

State of Connecticut geology mapping suggests bedrock (Portland Arkose) may be close to the surface at the edge of the Farmington River here, so it is possible that the HDD operation may encounter the top of bedrock rock on land or under the river. A subsurface geotechnical investigation will identify whether or not rock is present, to avoid the need/expense of mobilizing that type of equipment unnecessarily, and to determine the overlying soil characteristics in order to finalize a design configuration that reduces the potential for frac-outs.

Soil borings will extend a few feet below the anticipated pipe depth/profile ($20 \pm$ feet deep) near the drill-path to give accurate soil data. These will also be sufficiently far from the future project borehole, to avoid pressurized mud from following natural ground fissures and rupturing to the ground surface during the future work through the geotechnical investigation soil boring hole (soil borings may be performed $30 \pm$ feet to either side of the bore path).

The identification of river bottom material characteristics at the pipe outlet location is required, to find out whether it is comprised of sediment or bedrock and to determine its stability (lateral as well as scour stability). This information, as well as the previously obtained bathymetric bottom contour elevation information, is needed to for final design of both the pipe end anchor and diffuser configurations. A barge may be needed for the underwater pipe outlet location investigation/riverbed sample collection.

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A total of three or four subsurface investigations/soil borings, one or two on land in the general vicinity of the existing and proposed foot bridge and two in the river, would suffice for a project of this length. One of these will be at the proposed outlet location; the number, depth, and exact locations of the others will be determined by a geotechnical engineer during the next design phase.

Budgetary Opinion of Construction Cost

Given that bedrock may be close to the ground surface near/under the Farmington River at the project location, the budgetary opinion of probable construction cost for the land-based HDD work below assumes some or all of the HDD will occur in bedrock since specialized equipment would need to be mobilized for rock. Because the project will likely occur during warm weather months for regulatory reasons, the budgetary costs below assume the boat approach for river work.

Fuss & O'Neill prepared a Budgetary Opinion of Probable Construction Cost based on the above Conceptual Design and without detailed engineering data (see *Table 1* below). This type of estimate is considered accurate to within the range of -15% to +30%. Since regulatory agency approvals are required, and the project may be publicly advertised and bid, it is assumed that this construction would most likely occur in 2020 rather than 2019 and a one-year 3.0±% inflation factor is included:

**Table No. 1
Budgetary Opinion of Probable Construction Cost**

Major Work Item	Opinion of Cost
1 Site/Civil (Range Assumes South Access Road Only)	\$417,000
2 Land-Based HDD (Range Assumes Mostly Rock)	\$271,000
3 River Work (Range Assumes Boat Approach)	\$150,000
Total (in 2019 Dollars):	\$838,000
Budgetary Opinion of Cost Upper Range (30%):	\$251,400
One-Year Inflation Factor (3.0± %):	\$32,600
Total (in 2020 Dollars):	\$1,122,000

The above includes an allowance for construction phase management/inspection services but does not include additional subsurface geotechnical investigation or final design costs. A more definitive opinion of construction cost can be prepared after subsurface soil investigations are conducted to determine the presence or absence of bedrock along the 450-foot project length and final design documents are prepared.

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June 6, 2019

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Permitting Analysis / Meetings

The CTDEEP indicated in a January 9, 2018 email that its Land and Water Resources and Permitting & Enforcement Divisions jointly anticipated that no CTDEEP permits would be required for the HDD method of managing the unnamed stream discharge to the Farmington River. We understand that CTDEEP email resulted from of an intra-agency meeting regarding the Town of Windsor's Stewardship Permit DEP/HWM/CS-164-014. The Department noted at that time that only a local inland wetland and watercourses permit may be required for the project.

The final municipal, state and/or federal permit approval process will be based on the specific project location and pipe layout, which are shown on the enclosed conceptual design plans and did not exist in January 2018. Fuss & O'Neill provided draft versions of the conceptual design drawings, details, and HDD narrative description in this report to CTDEEP and Town of Windsor in early February 2019, to confirm the recommended permit approach with those agencies, in light of the conceptual layout in relation to existing wetlands, watercourse, FEMA floodway and 100-year flood lines. The results of our communication with state and municipal staff are described below.

Municipal Permitting

The entire HDD operation will be located in, under, and within the 150 horizontal foot upland review area of an inland wetland or watercourse. The Wetland Agent for the Town of Windsor reviewed a draft version of the conceptual plans and confirmed that this project will need a permit from the Windsor Inland Wetland and Watercourse Commission (IWWC). The IWWC permit application and fee will be received at a regular monthly Commission meeting and, after hearing the proposal, that Commission will decide whether the application warrants a public hearing or not. Either course of action will then require a second meeting the following month. The Wetland Agent recommended an informal meeting attended by the Landfill Manager, Wetlands Agent, and possibly Town Engineering to identify/resolve any minor issues before the formal permit application submission or initial IWWC public meeting.

Town staff indicated that an Erosion and Sedimentation review or permit, and possibly a Stormwater review or permit, will be required from the Engineering Department for this project. Town staff indicated no local Planning or Building agency/department permits will be needed.

Because the proposed construction project will disturb less than one acre, and the Town will review the proposed erosion and sediment control plan, a CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities will not apply.

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Federal Permitting

The project will temporarily disturb the Farmington River bottom and adjacent upland freshwater wetlands on one shore; therefore, the work falls within the regulatory jurisdiction of the USACE under Section 404 of the Clean Water Act for inland wetlands and/or Section 10 of the Rivers and Harbors Act for “navigable waters.”

The USACE’s General Permit (GP) for the State of Connecticut indicates a Pre-Construction Notification (PCN) is required for “Utility Line Activities” such as this, under GP 6, which appears to apply to the proposed project. Application to and written approval from the Corps is required for this GP6 PCN before work can commence, and a copy of the application must be provided to CTDEEP.

GP 6 covers activities related to the construction of utility lines, including outfall and intake structures and the associated excavation, backfill, or bedding. GP 6 also authorizes the construction of access roads to facilitate construction of the above activities provided the activity, in combination with all other activities included in the project, does not cause the permanent loss of greater than one (1) acre of non-tidal wetlands/waters of the U.S.

USACE’s GP for Connecticut requires a Section 401 Water Quality Certification (WQC) from CTDEEP. A WQC may already be granted for this project by CTDEEP by virtue of an intra-agency meeting held prior to the January 9, 2018 email since 401 WQC is “granted for activities conducted or funded by the CTDEEP that receive written approval through a formal cooperative CTDEEP intra-agency screening process” under GP6 PCN and since the proposed activities in the FEMA established floodplain are not expected to adversely affect the hydraulic characteristics of flood flows (water surface elevation, water velocity, or cause a restriction).

A review of CTDEEP Natural Diversity Data Base (NDDB) Area mapping in 2019 suggests the proposed work may be located in an area where impact(s) to State or Federal Listed Species or Significant Natural Communities is possible. The NDDB Area map is a preliminary screening tool only. Further interaction with CTDEEP, in the form of a Request for NDDB State Listed Species Review Form, will verify whether the proposed activity is located in an exact area of potential impact for these types of natural resources. *If the project shown on the conceptual design plans is determined by CTDEEP to be in a location of a State or Federal Listed Species or Significant Natural Community, an Individual Section 401 WQC will be required from CTDEEP in lieu of the above GP6 PCN pre-granted WQC certification.* CTDEEP may have looked into and determined that there were no State or Federal List Species or Significant Natural Community issues in the general vicinity of the subject project in 2017 before it issued the above-mentioned January 2018 email regarding permitting requirements; this will be verified during the next design stage.

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It is worth noting that the USACE retains discretionary authority to require an Individual Permit review for Section 404 and Section 10 activities normally covered under a GP, based on its interpretation of potential "concerns for the aquatic environment or for any other factor of the public interest." This determination would be made after the required PCN documentation is submitted to the Corps.

State Permitting

Fuss & O'Neill contacted CTDEEP on a number of occasions in February of 2019 to arrange a meeting to discuss the draft conceptual design plans and HDD operational details that did not exist at the time of the January 2018 email from Maurice Hamel (who retired from the Department later in 2018). In the absence of further input from CTDEEP in 2019, it is assumed for the purposes of this report that the work in wetlands and watercourses will fall under the jurisdiction of the IWWC and USACE, and that CTDEEP will have a role in the USACE permit process as discussed above.

Conclusions

Diverting low flows in the unnamed stream into a pipe installed beneath and up into the bottom of Farmington River to reduce the visibility of iron seeps in the river during periods of low flow is constructible using HDD methods. Additional geotechnical investigations are warranted for final design. Periodic maintenance will be required after construction is complete to keep the pipe, inlet, and outlet clear of sediment and debris.

The HDD method of construction will result in some drilling mud entering the Farmington River. A marine silt curtain will be installed in the river to mitigate impacts to the river and silt fence will be installed to mitigate any impacts to inland wetlands. The project will be reviewed and permitted by the Town IWWC and USACE. CTDEEP will be involved in the approval process by virtue of the Town's Stewardship Permit and the Department's review of NDDDB issues and the 401 WQC in support of an USACE approval process.



FUSS & O'NEILL

Mr. Mark Goossens
June 6, 2019
Page 14

We appreciate the opportunity to submit this conceptual design report and look forward to the next phase of this project. Please contact the undersigned with any questions.

Sincerely,

James C. Otis, PE
Associate

Robert M. Danielson, LEP, CPG
Vice President

Attachment 1: Conceptual Plans



- LEGEND**
- CHAINLINK FENCE
 - GUARDRAIL
 - TREELINE
 - EDGE OF PAVED ROAD
 - EDGE OF UNPAVED ROAD
 - EDGE OF WATER
 - WETLANDS
 - EXISTING MONITORING WELL
 - (1457) SPECIFIC CONDUCTANCE (µmhos/cm)
 - PROPERTY LINE
 - EXISTING GAS PORT
 - EXISTING PIEZOMETER
 - LIMIT OF REFUSE
 - CATCH BASIN
 - ROUTE EQUIPMENT STAGING ONE-WAY TRAVEL
 - ROUTE EQUIPMENT STAGING TWO-WAY TRAVEL

NOTES:

1. TOPOGRAPHIC FEATURES, SHOWN HEREON, WERE PREPARED IN ACCORDANCE WITH CLASS 1-2 & 1-3.

2. ELEVATIONS ARE BASED ON NVD 29 & HORIZONTAL DATUM BASED ON NAD 27. CONTOURS HAVE BEEN TAKEN FROM AN M.D.C. DIGITAL FILE & FIELD TOPO TAKEN BY THE TOWN OF WINDSOR 10/94, 11/94 & 1/95 AND FUSS & O'NEILL 1/18 (SEE SURVEY NOTE BELOW).

3. MONITOR WELL, PIEZOMETER, & GASPORT LOCATIONS WERE FIELD VERIFIED BY THE TOWN OF WINDSOR ENGINEERING DEPARTMENT OR FUSS & O'NEILL.

4. PROPERTY LINES HAVE BEEN ROTATED TO NAD27 DATUM BASED ON COORDINATE INFORMATION PROVIDED BY THE TOWN OF WINDSOR ENGINEERING DEPARTMENT.

5. TOPOGRAPHY FROM AERIAL SURVEY ON 4/19/91 BY TOPOGRAPHIC DATA CONSULTANTS, INC., BERLIN, N.J. VERTICAL AND HORIZONTAL CONTROL BASED ON M.D.C. DATUM.

6. BOUNDARY FROM MAP ENTITLED "BOUNDARY MAP, SOLID WASTE DISPOSAL SITE, PREPARED FOR TOWN OF WINDSOR, CONNECTICUT, SCALE 1"=100", DATED FEB 4, 1972, REV. 7/1/77" PREPARED BY GRIFFIELD & FUSS, INC., MANCHESTER, CT. COORDINATES FOR MW-N04S PROVIDED BY ABB INC.

SURVEY NOTES:

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300a-1 THROUGH 20-300a-20 AND THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT AS PREPARED AND ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996. THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY AND IS INTENDED TO DEPICT EXISTING TOPOGRAPHIC FEATURES ONLY.

2. NO BOUNDARY DETERMINATION WAS MADE OR IS IMPLIED.

3. THIS PLAN CONFORMS TO HORIZONTAL ACCURACY CLASS 2, THE CONTOURS IN CELLS A, B, C, D AND THE RELAY BENCH MARKS ARE BASED ON THE FUSS & O'NEILL TOPOGRAPHIC FIELD SURVEY PERFORMED ON 01-18-2018, 01-22-2018, 01-23-2018, 01-24-2018 & 01-29-2018. THE TOPOGRAPHY IN THESE AREAS CONFORMS TO TOPOGRAPHIC ACCURACY CLASS 1-3.

4. ALL OTHER AREAS OF TOPOGRAPHY CONFORM TO TOPOGRAPHIC ACCURACY 1-3.

5. THE WETLANDS SURVEYED WERE FIELD VERIFIED BY NEW ENGLAND ENVIRONMENTAL SERVICES AND FIELD LOCATED BY FUSS & O'NEILL, INC. DURING JANUARY, 2003 UTILIZING PHASE TWO & SUBSET ONE.

6. THE HORIZONTAL DATUM IS NAD27 AND BASED ON THE PUBLISHED VALUES OF THE FOLLOWING CONTROL POINTS: WINDSOR, WINDSOR, WINDSOR & WINDSOR. THE VERTICAL DATUM IS NVD27 AND BASED ON THE PUBLISHED VALUES OF THE FOLLOWING CONTROL POINTS: WINDSOR, WINDSOR, WINDSOR & WINDSOR.

NO.	DATE	BY	DESCRIPTION	DESIGNER	REVIEWER
1	1/20/2019	IN-HOUSE REVIEW			

SEAL	SEAL	
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SCALE

HORIZ: 1" = 200'

VERT: _____

DATUM: _____

HORIZ: _____

VERT: _____

GRAPHIC SCALE

FUSS & O'NEILL

146 HARBORVIEW ROAD
MANCHESTER, CONNECTICUT 06040
800.646.2407
www.fussco.com

WINDSOR-BLOOMFIELD LANDFILL

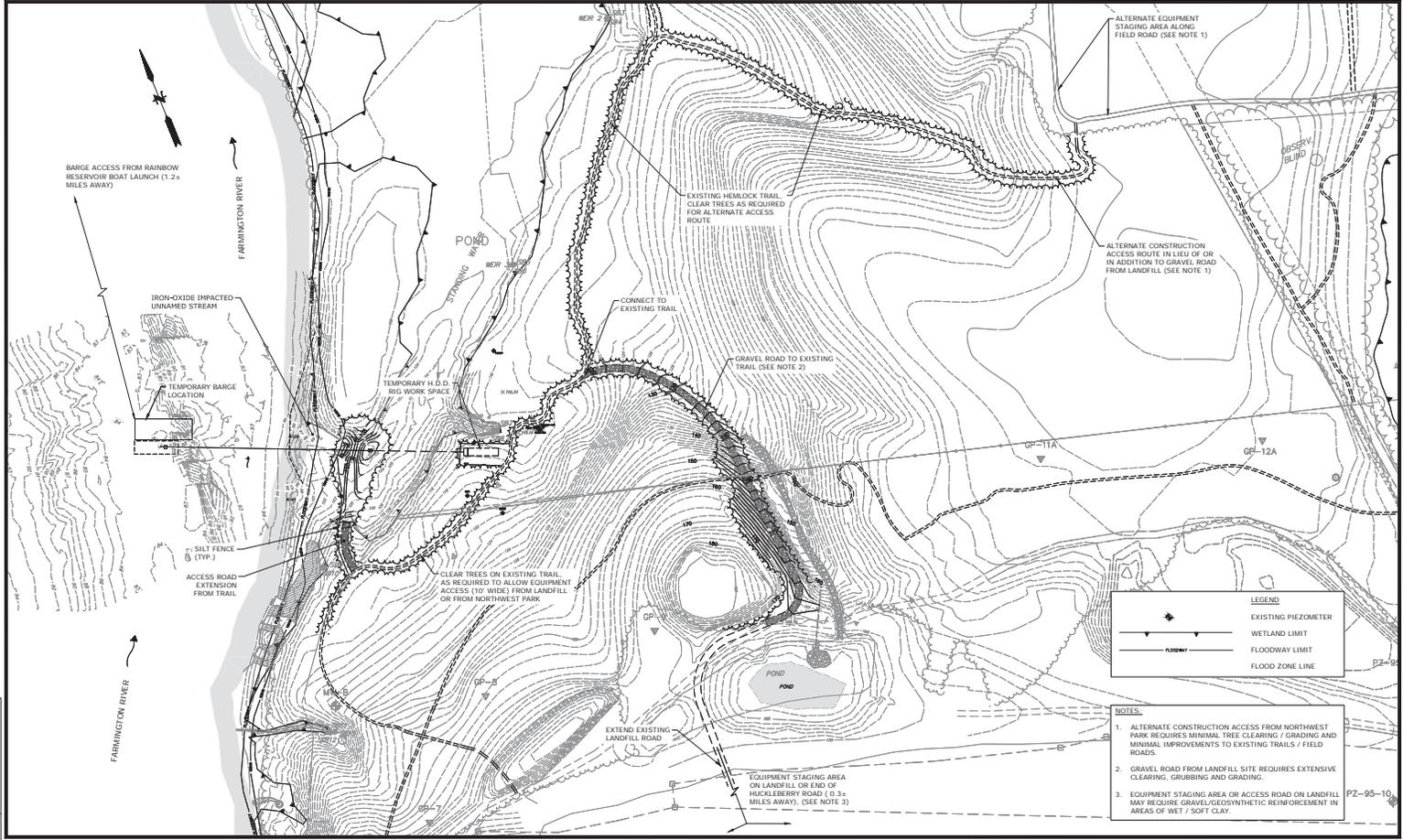
EXISTING CONDITIONS

WINDSOR CONNECTICUT

PROJ. NO. 1901120.A04

DATE: DECEMBER 2018

EXC-01



IN PLAN: 1. CONSTRUCTION OF ACCESS ROAD TO EXISTING TRAIL FROM TRAIL TO TRAIL. THE DATE IS 2019. 2. BARGE ACCESS FROM RAINBOW RESERVOIR BOAT LAUNCH (1.2+ MILES AWAY).
 DATE: 1/20/19
 DRAWN BY: J. J. JONES
 CHECKED BY: J. J. JONES
 PROJECT: WINDSOR/BLOOMFIELD LANDFILL SITE ACCESS PLAN

NO.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1	1/20/19	IN-HOUSE REVIEW		

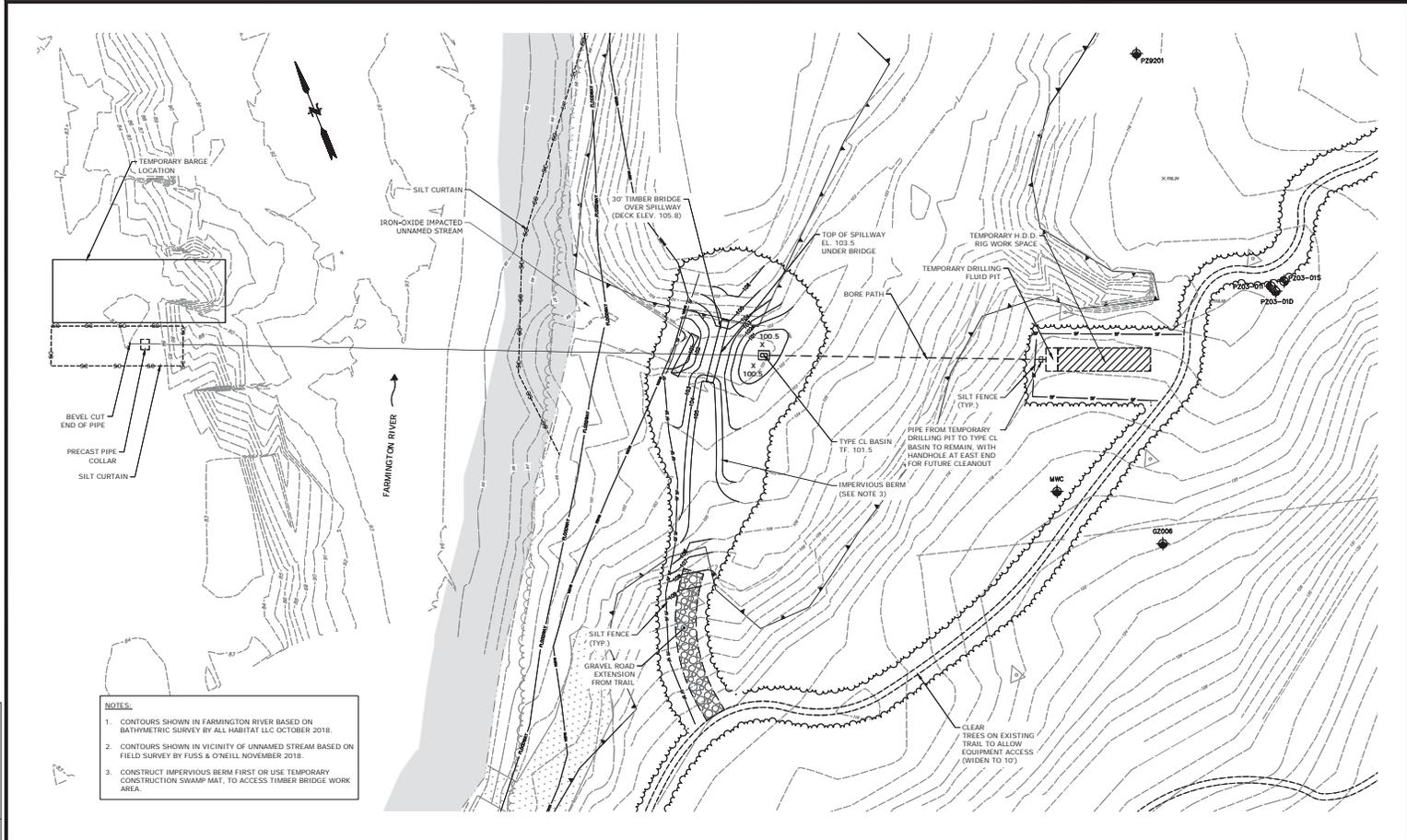
SEAL	SEAL	
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SCALE
 HORIZ: 1" = 60'
 VERT: 1" = 10'
 DATUM: NAD 83
 HORIZ: NAD 83
 VERT: NAVD 83
 GRAPHIC SCALE

FUSS & O'NEILL
 146 HARTFORD ROAD
 MANSFIELD, CONNECTICUT 06108
 860.446.2407
 www.fuss.com

WINDSOR/BLOOMFIELD LANDFILL
 SITE ACCESS PLAN
 WINDSOR
 CONNECTICUT

PROJ. NO. 190120.A04
 DATE: JANUARY 2019
STP-01



- NOTES:**
1. CONTOURS SHOWN IN FARMINGTON RIVER BASED ON BATHYMETRIC SURVEY BY ALL HABITAT LLC OCTOBER 2018.
 2. CONTOURS SHOWN IN VICINITY OF UNNAMED STREAM BASED ON FIELD SURVEY BY FUSS & O'NEILL NOVEMBER 2018.
 3. CONSTRUCT IMPERVIOUS BERM FIRST OR USE TEMPORARY CONSTRUCTION SWAMP MAT, TO ACCESS TIMBER BRIDGE WORK AREA.

FILE NAME: J:\CONTRACTS\2018\WINDSOR\DWG\PROPOSED CONDITIONS.dwg, PLOT DATE: 12/20/2018 10:23:41 AM, USER: jphughes
 PLOT SCALE: 1"=20'

NO.	DATE	BY	DESCRIPTION	DESIGNER	REVIEWER
1	4/26/2019	JPH	IN-HOUSE REVIEW		

SEAL	SEAL
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SCALE

HORIZ. 1" = 20'

VERT. 1" = 10'

DATUM: NAD 83

GRAPHIC SCALE

FUSS & O'NEILL

146 HURTYWOOD ROAD
MANCHESTER, CONNECTICUT 06040
800.646.2407
www.fuss-on.com

WINDSOR/BLOOMFIELD LANDFILL

PROPOSED CONDITIONS

WINDSOR CONNECTICUT

PROJ. NO. 1901120.A04
DATE: DECEMBER 2018

STP-02

Appendix F

Estimated Cost of Closure and Post Closure Care



**Wetland Outlet Pipe
Budgetary Opinion of Probable Construction Cost**

Major Work Item	Opinion of Cost
1 Site/Civil (Range Assumes South Access Road Only)	\$417,000
2 Land-Based HDD (Range Assumes Mostly Rock)	\$271,000
3 River Work (Range Assumes Boat Approach)	\$150,000
Total (in 2019 Dollars):	\$838,000
Budgetary Opinion of Cost Upper Range (30%):	\$251,400
One-Year Inflation Factor (3.0± %):	\$32,600
Total (in 2020 Dollars):	\$1,122,000

Fuss & O'Neill prepared a Budgetary Opinion of Probable Construction Cost based on the Conceptual Design described in a June 6, 2019 letter to the Town. The opinion of probable construction cost was prepared without detailed engineering data. This type of estimate is considered accurate to within the range of -15% to +30%. Since regulatory agency approvals are required, and the project may be publicly advertised and bid, it is assumed that this construction would most likely occur in 2020 rather than 2019 and a one-year 3.0±% inflation factor is included.

The above includes an allowance for construction phase management/inspection services but does not include additional subsurface geotechnical investigation or final design costs. A more definitive opinion of construction cost can be prepared after subsurface soil investigations are conducted to determine the presence or absence of bedrock along the 450-foot project length and final design documents are prepared.



FUSS & O'NEILL

September 26, 2018

Mr. James Bourke
Finance Director
Town of Windsor
275 Broad Street
Windsor, CT 06095

RE: Transmittal of 2018 Subtitle C & Subtitle D
Financial Assurance Demonstration Letters
Windsor-Bloomfield Landfill, Windsor, Connecticut

Dear Mr. Bourke:

Enclosed are "Closure and Post-Closure Cost Estimate" summary tables that Fuss & O'Neill prepared for the Town of Windsor to attach to the annual Financial Assurance Demonstration letters for the Windsor-Bloomfield Landfill. Separate letters are required by State regulations to cover both the Subtitle C Hazardous Waste Cell and the Subtitle D (municipal solid waste and bulky waste) portions of the landfill. Closure and post-closure costs must also be separated. Thus, one closure cost estimate and two distinct post-closure cost estimates are included in this correspondence. The Subtitle C Cell is already closed and does not require financial assurance for closure costs.

The Connecticut Department of Energy and Environmental Protection (CTDEEP) closure cost estimate guidance was used by Fuss & O'Neill to create the enclosed tables and breakdown estimated annual costs.

The Town must complete the Financial Assurance Demonstration letters, attach the enclosed tables and submit them to the CTDEEP. Should you have any questions, please call me at (860) 646-2469 x5280.

146 Hartford Road
Manchester, CT
06040
f 860.646.2469
800.286.2469
f 860.533.5143
www.fando.com

Sincerely,

Joseph D. Devine, P.E., LEP
Senior Project Manager

Robert Danielson, LEP, CPG
Vice President

cc: Mark Goossens, Solid Waste Manager
James Wren, Director of Finance, Town of Bloomfield

Enclosures: Closure Cost Estimate, RCRA Subtitle D Portion
Post-Closure Cost Estimate, RCRA Subtitle D Portion
Post-Closure Cost Estimate, RCRA Subtitle C Portion

California
Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

**Closure Cost Estimate
Windsor-Bloomfield Landfill
RCRA Subtitle D Portion**

Municipality Name:	Town of Windsor
Location Address:	500 Huckleberry Road, Windsor, CT
Solid Waste Facility Permit Approval Date:	February 5, 1973
Date of Estimate:	August 31, 2018
Identify Financial Instrument:	Local Government Financial Test

I.	<u>Closure Plan Preparation, Engineering and Administration</u>	
	Engineering and Miscellaneous Services ⁽¹⁾	\$ 1,450,500
II.	<u>System Design and Construction</u>	
	Final Cover ⁽²⁾	\$ 3,510,000
	Drainage Improvements and Access Road ⁽³⁾	\$ 1,460,000
	Leachate Collection System ⁽⁴⁾	\$ 4,300,000
	Landfill Gas System ⁽⁵⁾	\$ 400,000
	Total Closure Cost	\$ 11,120,500

Notes:

1. Estimated by assuming approximately 15% of the "System Design and Construction" subtotal.
2. The "Final Cover" estimate contingency approximately equals 25%.
3. The "Drainage Improvements and Access Road" estimate contingency approximately equals 25%.
4. The "Leachate Collection System" estimate contingency approximately equals 30%.
5. The "Landfill Gas System" estimate contingency approximately equals 25%.

**Post-Closure Cost Estimate
Windsor-Bloomfield Landfill
RCRA Subtitle D Portion**

Municipality Name:	Town of Windsor
Location Address:	500 Huckleberry Road, Windsor, CT
Solid Waste Facility Permit Approval Date:	February 5, 1973
Date of Estimate:	August 31, 2018
Identify Financial Instrument:	Local Government Financial Test

I. Groundwater Monitoring

Field Sampling Labor ⁽¹⁾ - \$8,750 per sampling event for 4 events	\$ 35,000/yr
Laboratory Analysis ⁽¹⁾ - \$7,500 per sampling event for 4 events	\$ 30,000/yr
Report Preparation - \$7,000 per report for 5 reports	<u>\$ 35,000/yr</u>
Monitoring and Analytical Testing Subtotal ⁽²⁾	\$ 100,000/yr

II. Landfill Inspection and Maintenance

Routine Quarterly Inspections	\$ 3,000/yr
Erosion Control	\$ 8,000/yr
Grass Mowing	\$ 18,000/yr
Roadway Maintenance	\$ 4,000/yr
Maintain Existing MWs and Sampling Ports	<u>\$ 3,000/yr</u>
Landfill Inspection and Maintenance Subtotal ⁽³⁾	\$ 36,000/yr

III. Leachate System Operation & Maintenance

Leachate System O&M Subtotal ⁽⁴⁾	\$ 425,000/yr
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IV. Gas System Operation & Maintenance

Gas System O&M Subtotal ⁽⁵⁾	\$ 200,000/yr
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Total Annual Post-Closure Care Cost	\$ 761,000/yr
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Length of Remaining Post-Closure Care Period	30 years
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Total Cost for Post-Closure Care Period	\$ 22,830,000
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Notes:

1. Assumes eight (8) wells and five (5) surface water points are sampled each quarter.
2. The "Monitoring and Analytical Testing" estimate contingency approximately equals 25%.
3. The "Landfill Inspection and Maintenance" estimate contingency approx. equals 25%.
4. The "Leachate System O&M" estimate contingency approximately equals 25%.
5. The "Gas System O&M" estimate contingency approximately equals 25%.

**Post-Closure Cost Estimate
Windsor-Bloomfield Landfill
RCRA Subtitle C Portion**

Municipality Name:	Town of Windsor
Location Address:	500 Huckleberry Road, Windsor, CT
Solid Waste Facility Permit Approval Date:	February 5, 1973
Solid Waste Facility Closure Date:	November 6, 1985
Date of Estimate:	August 31, 2018
Identify Financial Instrument:	Local Government Financial Test

V.	<u>Groundwater Monitoring (Hazardous Waste Cell Only)</u>	
	Field Sampling Labor ⁽¹⁾ - \$2,075 per sampling event for 4 events	\$ 8,300/yr
	Laboratory Analysis ⁽¹⁾ - \$1,750 per sampling event for 4 events	\$ 7,000/yr
	Quarterly Report Preparation - \$825 for 4 reports	\$ 3,300/yr
	Annual Summary Report Preparation - \$5,000	<u>\$ 5,000/yr</u>
	Monitoring and Analytical Testing Subtotal	\$ 23,600/yr
VI.	<u>Hazardous Waste Cell Inspection and Maintenance</u>	
	Inspections (including document review)	\$ 400/yr
	Repair of Cover and/or drainage facilities	\$ 280/yr
	Maintenance of Cover (i.e. mowing, fertilizer, etc.)	<u>\$ 350/yr</u>
	Landfill Inspection and Maintenance Subtotal	\$ 1,030/yr
VII.	<u>Monitoring Well Maintenance (Hazardous Waste Cell Area Only)</u>	
	Repair and Maintenance of Nearby Monitoring Wells	\$ 500/yr
	Contingency (15%)	\$ 3,770/yr
	Total Annual Post-Closure Care Cost	\$ 28,900/yr
	Length of Remaining Post-Closure Care Period	1 year
	Total Cost for Post-Closure Care Period	\$ 28,900

Notes:

1. Assumes two (2) monitoring wells are sampled each quarter.