

## 2021 Hazardous Waste Scanning Project

### File Form Naming Convention.

*(File\_Type).(Program).(Site\_Number).(YYYY-MM-DD).(File\_Name).pdf*

*Note 1: Each category is separated by a period "."*

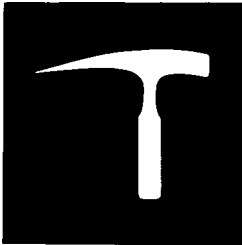
*Note 2: Each word within category is separated by an underscore "\_"*

Specific File Naming Convention Label:

WorkPlan, HW, 932020, 1987-08-09, NAPL-Inv-NF.pdf

932020

RP



Prepared for:  
Mr. Evans Stamatakis  
U.S. Environmental Protection Agency  
Region II  
New York, New York

**CONFIDENTIAL:  
PREPARED FOR LITIGATION**

**WORK PLAN**

**NAPL INVESTIGATION  
LOVE CANAL HAZARDOUS WASTE SITE  
NIAGARA FALLS, NEW YORK**

August 9, 1987

**Geo**  
**Trans, inc.**  
GROUNDWATER SPECIALISTS

250 Exchange Place, Suite A  
Herndon, Virginia 22070  
703-435-4400

**FEDERAL EXPRESS**

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL  
NUMBER

4976634504

7244M

4976634504

Date 10/17/87		Your Phone Number (Very Important) 703 435-4400		To (Recipient's Name) Please Print Gerry Pietraszek		Recipient's Phone Number (Very Important)	
From (Your Name) Please Print Robert Cohen		Company GE TRANS INC		Company NYSDEC		Department/Floor No.	
Street Address 250 EXCHANGE PLACE STE A		Department/Floor No. OCT 14 1987		Exact Street Address (Use of P.O. Boxes or P.O. Zip Codes Will Delay Delivery And Result in Extra Charge.) 600 Delaware Avenue			
City HERNDON VA		State ENVIRONMENTAL CONSERVATION REGION 4 22070		City Buffalo NY		State NY	
ZIP Street Address Zip Required 14202							

3 YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.) 4.6.2.18

PAYMENT <input type="checkbox"/> Bill Sender <input type="checkbox"/> Bill Recipient's FedEx Acct. No. <input type="checkbox"/> Bill 3rd Party FedEx Acct. No. <input type="checkbox"/> Bill Credit Card <input type="checkbox"/> Cash		HOLD FOR PICK-UP AT THIS FEDERAL EXPRESS LOCATION: Street Address (See Service Guide or Call 800-238-5355)		Federal Express Use Base Charges	
		City		State	
				Declared Value Charge	
				Origin Agent Charge	

SERVICES CHECK ONLY ONE BOX		DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED		PACKAGES	WEIGHT	YOUR DECLARED VALUE	OVER SIZE
1	<input type="checkbox"/> PRIORITY 1 Overnight Delivery 6 Using Your Packaging	<input checked="" type="checkbox"/> HOLD FOR PICK-UP (Fill in Section H at right)		1	LBS		
	<input checked="" type="checkbox"/> OVERNIGHT DELIVERY USING OUR PACKAGING	<input type="checkbox"/> DELIVER WEEKDAY			LBS		
2	<input checked="" type="checkbox"/> Envelope-Pak Overnight Envelope* 6 1/2" x 12 1/2"	<input type="checkbox"/> DELIVER SATURDAY (Extra charge)			LBS		
3	<input type="checkbox"/> Overnight Box 12 1/2" x 17 1/2" x 3"	4 <input type="checkbox"/> DANGEROUS GOODS (P-1 and Standard Air Packages only, Extra charge)			LBS		
4	<input type="checkbox"/> Overnight Tube 38" x 6" x 6" x 6"	5 <input type="checkbox"/> CONSTANT SURVEILLANCE SERVICE (CSS) (Extra charge) (Do Not Complete Section 5)		Total	Total	Total	
5	<input type="checkbox"/> STANDARD AIR Delivery not later than second business day	6 <input type="checkbox"/> DRY ICE Lbs.		1	7		
	<input type="checkbox"/> SERVICE COMMITMENT	7 <input type="checkbox"/> OTHER SPECIAL SERVICE		Received At			
PRIORITY 1 - Delivery is scheduled early next business morning in most locations. It may take two or more business days if the destination is outside our primary service areas. STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days if the destination is outside our primary service areas.		8 <input type="checkbox"/> SATURDAY PICK-UP (Extra charge)		1 <input type="checkbox"/> Regular Stop			
Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom. Release Signature:		9 <input type="checkbox"/>		3 <input type="checkbox"/> Drop Box	4 <input type="checkbox"/> B.S.C.	5 <input type="checkbox"/> Station	
		10 <input type="checkbox"/>		Federal Express Corp. Employee No.			
				Date/Time For Federal Express Use			
				54997			
				Date/Time Received		FedEx Employee Number	
				10/13 1/800		X	

PART #106001 REV. 5/87  
PRINTED U.S.A. GBFE

007

RECIPIENT'S COPY

## TERMS AND CONDITIONS

### DEFINITIONS

On this Airbill, we, our and us refer to Federal Express Corporation, its employees and agents. You and your refer to the sender, its employees and agents.

### AGREEMENT TO TERMS

By giving us your package to deliver, you agree to all the terms on this Airbill and in our current Service Guide, which is available on request. No one is authorized to alter or modify the terms of our Agreement.

### RESPONSIBILITY FOR PACKAGING AND COMPLETING AIRBILL

You are responsible for adequately packaging your goods and for properly filling out this Airbill. Because the number of packages and weight per package are critical to our ability to correctly bill you, any omission of this information from this Airbill will result in a billing based on our best estimate of the number of packages received from you and an estimated "default" weight per package, as determined and periodically adjusted by us.

### AIR TRANSPORTATION TAX INCLUDED

Our basic rate includes a federal tax required by Internal Revenue Code Section 4271 on the air transportation portion of this service.

### LIMITATIONS ON OUR LIABILITY

Our liability for loss or damage to your package is limited to your actual damages or \$100, whichever is less, unless you pay for and declare a higher authorized value. We do not provide cargo liability insurance, but you may pay thirty cents for each additional \$100 of declared value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your package.

Our liability for delays not caused by your negligence shall be limited to a refund of your delivery charges.

We won't be liable for your acts or omissions, including but not limited to improper or insufficient packing, securing, marking or addressing, or for the acts or omissions of the recipient or anyone else with an interest in the package. Also, we won't be liable if you or the recipient violates any of the terms of our agreement. We won't be liable for loss of or damage to shipments of cash, currency or other prohibited items.

Finally, we won't be liable for loss, damage or delay caused by events we cannot reasonably foresee or control, including but not limited to acts of God, perils of the air, weather conditions, mechanical delays, acts of public enemies, war, strikes, civil commotions, or acts or omissions of public authorities (including customs and quarantine officials) with actual or apparent authority.

**WE WON'T BE LIABLE IN ANY CASE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, WHETHER OR NOT WE KNEW THAT SUCH DAMAGES MIGHT BE INCURRED.**

### DECLARED VALUE LIMITS

The highest declared value we allow for Overnight Letter and Courier-Pak Overnight Envelope shipments is \$100. For other Priority-1 and Standard Air shipments, the highest declared value we allow is \$25,000 unless your package contains items of "extraordinary value," in which case the highest declared value we allow is \$500. Items of "extraordinary value," include artwork, jewelry, furs, money, precious metals, negotiable instruments, and other items listed in our current Service Guide.

If you send more than one package on this Airbill, you may fill in the total declared value for all packages, not to exceed the \$100, \$500 or \$25,000 per package limit described above. (Example: 5 packages can have a total declared value of up to \$125,000.)

If more than one package is shipped on this airbill, our liability for loss or damage will be limited to the declared value of the package(s) actually lost or damaged (not to exceed the per package limits described above). You have the responsibility of proving the actual loss or damage.

### FILING A CLAIM

ALL CLAIMS MUST BE MADE BY YOU IN WRITING:

- WITHIN 15 DAYS AFTER WE DELIVER YOUR PACKAGE IF YOUR CLAIM RESULTS FROM SHORTAGE, DAMAGE OR DELAY; OR
- WITHIN 90 DAYS AFTER WE ACCEPT YOUR PACKAGE IF YOUR CLAIM RESULTS FROM NON-DELIVERY.

We'll consider your claim filed if you call and notify our Customer Service Department at 800-238-5355 and notify us in writing as soon as possible.

Within 90 days after you notify us of your claim, you must send us all relevant information about it. We are not obligated to act on a claim until you have paid all transportation charges, and you may not deduct the amount of your claim from those charges.

If the recipient accepts your package without noting any damage on the delivery record, we will assume that the package was delivered in good condition. In order for us to process your claim, you must, to the extent possible, make the original shipping cartons and packing available for inspection.

Requests for refunds must be made in writing within 90 days of the ship date.

### RIGHT TO INSPECT

We may, at our option, open and inspect your packages prior to or after you give them to us to deliver.

### NO C.O.D. SERVICES

We don't provide C.O.D. services.

### RESPONSIBILITY FOR PAYMENT

Even if you give us different payment instructions, you will always be primarily responsible for all delivery costs, as well as any costs we may incur in either returning your package to you or warehousing it pending disposition.

### QUALIFIED ACCEPTANCE

We reserve the right to reject a shipment at any time, when such shipment would be likely to cause damage or delay to other shipments, equipment or personnel, or if the transportation of which is prohibited by law or is in violation of any rules contained in this Airbill or our Service Guide.

CONFIDENTIAL: PREPARED FOR LITIGATION

WORK PLAN

NAPL INVESTIGATION  
LOVE CANAL HAZARDOUS WASTE SITE  
NIAGARA FALLS, NEW YORK

Prepared for:

Mr. Evans Stamatakis  
USEPA Region II  
26 Federal Plaza  
New York, New York

Prepared by:

GeoTrans, Inc.  
250 Exchange Place, Suite A  
Herndon, VA 22070  
703-435-4400

August 11, 1987

## 1 INTRODUCTION

This work plan defines the scope of activities anticipated to investigate the presence, nature, and mobility of Non-Aqueous Phase Liquids (NAPL) at the Love Canal hazardous waste site in Niagara Falls, New York. The planned activities are designed to provide data critical to the assessment of several litigation issues and will be conducted for trial preparation.

## 2 OBJECTIVES AND RATIONALE

NAPL has been observed in soils and in basement sumps within the first ring of homes (now demolished) at Love Canal. Recent drilling of monitoring wells directly into the landfill encountered significant thicknesses of NAPL. The analysis of NAPL migration is a complex task that is confounded by a lack of information regarding NAPL distribution and properties. A series of hydraulic tests and density and viscosity measurements of NAPL samples will be made to: (a) obtain a qualitative understanding of the distribution and mobility of NAPL remaining in the landfill; (b) obtain additional viscosity and density data for the NAPL; and (c) provide data needed to analyze historic NAPL migration from the site.

## 3 SITE BACKGROUND

The U.S. Department of Justice filed four suits against OCC on December 20, 1979 regarding the Love Canal, S-Area, Hyde Park, and 102nd Street Landfills. OCC and the governments decided to review the cases one at a time starting with Hyde Park, followed by S-Area, 102nd Street, and finally, Love Canal. Between 1982 and 1985 settlement agreements were reached regarding aspects of investigation and cleanup at the Hyde Park, S-Area, and 102nd Street landfills. An estimated trial date for Phase 1 of the Love Canal litigation (re liability) is January 1989. The work outlined in this plan will be conducted to

prepare for trial.

#### 4 MANAGEMENT AND SUPPORT

All field tasks of this investigation will be coordinated through GeoTrans (R. Cohen, Project Manager, C. Faust, Principal Investigator). Specific responsibilities include the coordinating schedules and field operations, directing staff (including subcontractors), implementing the health and safety plan, and maintaining contact with government agencies.

#### 5 NAPL INVESTIGATION

The depth-to-water and depth-to-NAPL will be measured in each of the 12 monitoring wells completed to the Love Canal landfill (Figure 1). Following this initial survey, short-term pumping tests will be conducted at each of these wells to assess the distribution and mobility of NAPL remaining in the landfill and to obtain samples for measurement of viscosity and density. The pump test procedure is outlined below.

- (1) The depth-to-water and depth-to-NAPL will be measured again prior to commencement of the pumping test at each well.
- (2) A weighted intake line to a peristaltic pump will be lowered to the top of the fluid column in the well. A small volume of fluid will be withdrawn. The intake will be lowered in 1 or 2 ft drops to the base of the well. A small fluid sample will be withdrawn from each depth. This will be done to verify the fluid column that was determined in step (1).
- (3) After verification of the fluid column, pumping will commence with the intake of the peristaltic pump centered in the NAPL column. Ten well volumes (generally less than 2 gallons per

well volume) will be withdrawn. Each well volume will be contained in a volumetrically-calibrated transparent container. The phases in each container will be allowed to separate and the ratio of water:NAPL will be measured.

- (4) After ten well volumes have been pumped, a decision will be made whether or not to continue pumping. If possible, depth-to-water and depth-to-NAPL measurements will be made during and at the conclusion of pumping.
- (5) After phase separation of samples from a particular well is complete and measurements have been made, the NAPL samples will be combined in one container. A representative sample of NAPL from each well will be taken for viscosity and density measurements.

Collected fluid not retained for viscosity and density measurements will be disposed of at the leachate treatment plant. The hydraulic tests will be analyzed using appropriate analytical and/or numerical methods.

*What head data is obtained from a 10 well val draw down?*

To control contaminant exposure, transient work zones (Survey Sites) will be established at each Canal well. A polyethylene sheet (with a hole to allow the well to stick up) will be placed over the well and attached to it using duct tape. Plywood will be placed over the well atop the polyethylene sheet and a second polyethylene sheet will be laid over the plywood (and attached to the well using duct tape). The upper polyethylene sheet will be secured with 4" x 4" lumber. Pumping equipment, measurement devices, and fluid containers will be mounted and operated over containers to ensure that any fluid leaks are captured.

## 6 SCHEDULE AND DELIVERABLES

It is estimated that it will take two workers seven days to complete the NAPL investigation. The results of the field work will be reported to government attorneys.



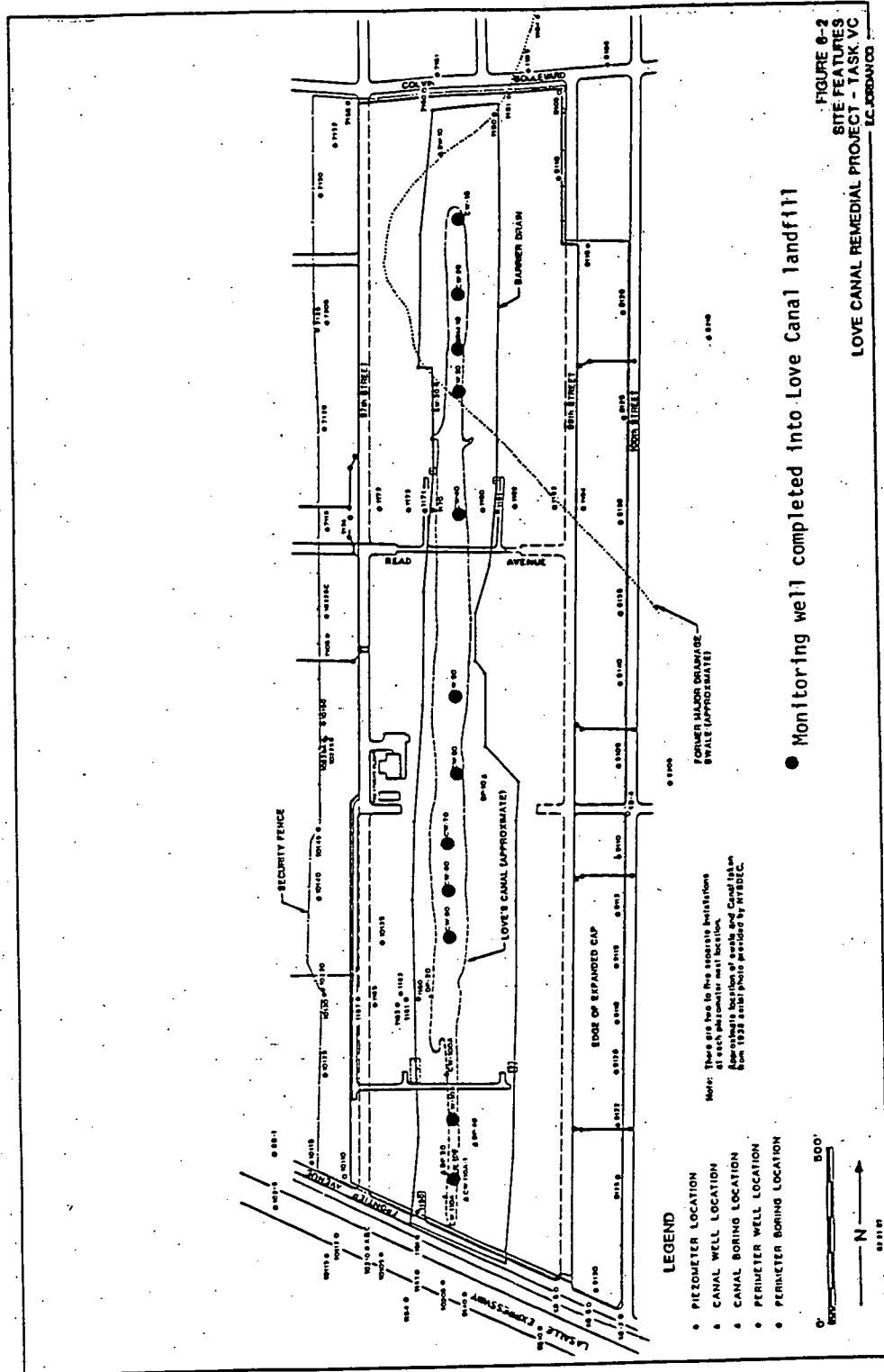


Figure 1. NAPL investigation well locations.

RECEIVED

OCT 14 1987

STATE DEPT. OF  
ENVIRONMENTAL CONSERVATION  
REGION 9