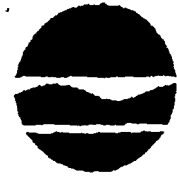


DOCUMENT # 4

New York State Department of Environmental Conservation**Division of Environmental Remediation, Region 2****Spill Prevention and Response**47-40 21ST Street, Long Island City, NY 11101-5407

Phone: (718) 482-4973 · Fax: (718) 482-4098

Erin M. Crotty
Commissioner

November 19, 2001

Mr. Randy Price
Vice President – Environment, Health & Safety
Con Edison Company of New York, Inc.
4 Irving Place
New York, NY 10003

Re: 7 World Trade Center (Trade Center Substation) Investigation Plan

Dear Mr. Price:

NYSDEC has reviewed the Subsurface Investigation Work Plan for the referenced site submitted by Con Edison on November 16, 2001. The Plan's Introduction (page 1) identified the release of 100,000-gallons of transformer oil but only mentions an unquantified amount of cable dielectric fluid. Based on information provided by Con Edison, the following releases occurred:

- 100,105 gallons of transformer oil
- 5,300 gallons of cable dielectric fluid from the WTC substation reservoir
- 2,000 gallons of cable dielectric fluid from the Farragut substation reservoir
- 15,300 gallons of cable dielectric fluid from the five feeders running between Farragut and WTC substations
- 3,672 gallons of capacitor oil

As documented by Con Ed's Chem Lab, transformer oil has been identified in the Verizon building located at 140 West Street and has impacted of Verizon's cable vault. The same oil was also confirmed by Con Ed's Chem Lab to be present in Verizon's manholes and trenches located on Washington Street, Barclay Street and Vesey Street.

In addition to Con Ed's oil, there was a maximum loss of 12,000 gallons of diesel from two underground storage tanks registered at 7WTC. To date, EPA and DEC have recovered approximately 20,000 gallons from the other two intact 11,600 gallon underground fuel oil storage tanks at 7WTC. 4 registered
USTs?

The Work Plan submitted to address the 126,377 gallons of various dielectric oils released from the Con Ed's World Trade Center Substation is conditionally approved by the department, pending inclusion of the following comments:

1. The Work Plan as written is dependent on EPA's assistance. There is a brief window of opportunity to utilize EPA's contractors to assist in Con Ed's product recovery efforts. However, NYSDEC cannot guarantee EPA's assistance. The plan will be implemented by Con Edison. Any assistance which EPA can provide will be at EPA's discretion. This applies to any references in the work plan to EPA's assistance (i.e., well development, product recovery, waste disposal, etc.).
2. If NYC DDC is unable or unavailable to provide a crew and equipment to break up the concrete for

the drilling locations within the footprint of 7 WTC, Con Edison's contractor (ADT) has the capability to bore through the concrete slab.

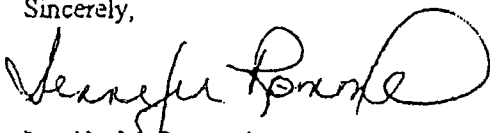
3. With respect to drill cuttings generated during this investigation, Con Edison should use the World Trade Center substation's EPA ID number for any potentially hazardous wastes generated within the footprint of 7 WTC. Any potentially hazardous wastes generated outside the footprint should be manifested under the temporary EPA ID number which was assigned to Con Edison in the wake of September 11.
4. Field screening using a PID in addition to visual and olfactory observations will be conducted on all soil samples.
5. At least one soil sample from each boring/well location will be analyzed for the following parameters:
 - TPH via EPA modified method 8100
 - Oil ID via an appropriate method (NYSDOH 312 series)Soil samples should be collected from either the zone of highest observed contamination or from the interval at or immediately above the water table interface.
6. Oil samples will be collected from any wells which exhibit recoverable product. These samples will be analyzed for oil ID via NYSDEH method 310.

In accordance with the schedule outlined in the Work Plan, NYSDEC expects that Con Edison will begin implementation within 5 business days of receipt of this conditional approval letter. It is DEC's understanding that Verizon has not committed to trench areas along the west side of 7 WTC (Washington St.), and along the northwest corner of 7 WTC (on Barclay St near Washington St.). If trenches are not open for inspection and incorporation into the investigation within 12 business days of this letter, two borings/monitoring wells will be substituted and installed along Washington Street and one boring/well will be installed along the west end of Barclay Street near Washington St.

Following installation, the wells should be surveyed and gauged by Con Edison's contractors. A report must be generated by Con Edison for submittal to NYSDEC which includes the following items: lab analytical data; boring logs and well construction diagrams; field notes; a scaled site map which includes all trenches and boring locations, surrounding buildings, structures and subsurface utilities which illustrates plume contours and results of the examination of subsurface structures. The report must also include conclusions and recommendations for remediation. Based on the results of this initial investigation, additional delineation may be required by the Department.

If you have any questions or comments, please call Jennifer Rommel (646) 739-2831 or Jane O'Connell (718) 482-4973.

Sincerely,



Jennifer M. Rommel
Engineering Geologist 2



Jane H. O'Connell
Engineering Geologist 2

Cc: T. Kunkel, DEC
T. DeMeo, DEC
S. Miller, DEC
E. Louie, Con Ed
S. Hanibuth, Con Ed
A. Meyrowitz, Con Ed

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Randolph S. Price
Vice President
Environment, Health & Safety

November 21, 2001

Ms. Jennifer Rommel
Bureau of Spill Prevention and Response
Division of Environmental Remediation
New York State Department
of Environmental Conservation, Region 2
47-40 21st Street
Long Island City, New York 11101

**Re: Subsurface Investigation Plan
7 World Trade Center**

Dear Ms. Rommel:

As directed by the Department, enclosed please find a Subsurface Investigation Plan designed to locate and facilitate the recovery of petroleum free phase product within the perimeter of 7 World Trade Center.

Con Edison has received and reviewed the Department's November 19, 2001 letter regarding the scope of work for the investigation and agrees to the additional requirements specified in that letter, with the exception of the installation of three monitoring wells along Washington and Barclay Streets. As discussed, and agreed to with you and Tim DeMeo of the Department, if Verizon discontinues trenching activities, Con Edison will relocate MW-6 to the northeast corner of the 7WTC footprint and install two wells (MW-8 and MW-9) at midway locations along Washington and Barclay Streets.

Because the site is owned by the Port Authority and is currently under the control of the New York City Department of Design and Construction (NYDDC), Con Edison must obtain these agencies' permission before proceeding with any fieldwork. Con Edison planned to commence the investigation on Monday, November 26, 2001 however, approvals from the Port Authority and/or NYDDC have not yet been granted. Con Edison will commence activities within five business days of receiving these agencies approvals.

Please be advised that Con Edison's preparation, submission, and implementation of the enclosed Subsurface Investigation Plan is not intended to be and under no circumstances is to be construed as an admission of liability on Con Edison's part for any releases or discharges of

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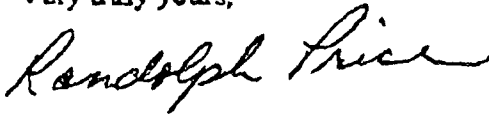
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hazardous substances or petroleum from Con Edison's facilities caused by the September 11th terrorist attack on the World Trade Center.

If you have any questions or comments on the Subsurface Investigation Plan, please contact Allison Meyrowitz at 718-204-4295.

Very truly yours,



Randolph Price
Vice President
Environment, Health and Safety

Bnc.

Cc: Thomas Kunkel, NYSDEC
Jane O'Connell, NYSDEC
Eddy Louie, Con Edison

Bcc: George Greenwood
Peter Garam
Eric Dessen
Jerry Mele
Stuart Hanebuth
Allison Meyrowitz
Joseph Panarelli
Barbara Doran

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SUBSURFACE INVESTIGATION WORK PLAN 7 WORLD TRADE CENTER

INTRODUCTION

As a result of the catastrophic events caused by the September 11, 2001 terrorist attack on the World Trade Center, including the collapse of 7 World Trade Center (7WTC), Con Edison has reported the release of approximately 100,000 gallons of transformer oil and dielectric fluid from its former electric distribution substation located within that building. In addition, it appears that significant amounts of petroleum products belonging to other entities were also released to the environment as a result of those events. The site of the former 7WTC building is bounded by Barclay Street on the north, Washington Street on the west, West Broadway on the east, and Vesey Street on the south.

Con Edison has prepared this subsurface investigation work plan at the direction of the New York State Department of Environmental Conservation (NYSDEC). The purpose of this investigation is to locate petroleum free phase product within the perimeter of the former 7WTC building, so that, the oil can be recovered and its migration, if occurring, can be controlled.

SCOPE

Con Edison will install up to seven 6-inch diameter groundwater monitoring wells to a depth of approximately 25 feet below ground. These wells, in conjunction with the trenches being excavated by Verizon along Barclay and Washington Streets, will be used to identify where petroleum free product may exist and to determine whether there is any on-going migration.

Groundwater samples will be collected from the Verizon trenches being excavated along Barclay and Washington Streets. Groundwater monitoring wells will be installed in the trenches prior to their backfilling if free product is evident at that time.

A comprehensive survey of all accessible Con Edison manholes inside the 7WTC footprint and within the immediate vicinity will be conducted to determine the severity of impact and optimal recovery locations. Con Edison assumes that the NYSDEC will coordinate similar inspections of underground structures belonging to other entities in the same area and will arrange to have the results of those inspections provided to Con Edison to enhance the value of this survey.

A visual inspection of the subgrade parking area off Ramp J will be conducted to verify, if possible, the intersection of the "tub wall" with the retaining wall (see Rationale below). This inspection is contingent upon the receipt of permission from the New York City Department of Design and Construction (DDC).

MONITORING WELL LOCATIONS

<u>Well Number</u>	<u>Location</u>
1	Western side of Ramp J (along W. Broadway) – only if product is present in MW-2
2	Ramp J (Point "Z")
3	Corner of Ramp J and Tub Wall (inside 7WTC Building footprint)
4	Within 7WTC Footprint (between Con Edison Manholes)
5	Within 7WTC Footprint (Southwest corner of former building)
6	West side of former Transformer 8
7	Within 7WTC Footprint (Northeast corner, within Transformer 6 vault - Off crane walk)

*See attached map for approximate well locations.

MONITORING WELL LOCATION RATIONALE

The monitoring wells will be used to identify the presence of free product, to attempt to prevent off-site migration, and to optimize product recovery. The proposed locations of the monitoring wells have been selected based upon the following rationale:

- The "tub wall" along Vesey Street will form the southern boundary of the 7WTC site while Verizon's Barclay Street and Washington Street trenches will form the northern and western boundaries of the 7WTC site.
- The concrete retaining wall between Ramp J and 7WTC is a minimum of 15 feet below ground surface (BGS), as measured at Point "Z". Despite a review of the structural drawings for the site, the depth of the wall could not be determined. Because depth to groundwater at the site is estimated at 15 feet BGS, it is assumed that the concrete retaining wall is constructed below the groundwater table and thus forms a barrier to off-site eastern migration. Monitoring wells MW-1 and MW-2 will be installed to delineate the eastern boundary. (Note: MW-1 will be installed only if free product is observed in MW-2.) MW-3 will be installed to determine whether there is free product on the western side of the retaining wall at the southeastern corner of the 7WTC footprint.
- Free product has been observed in the two accessible Con Edison manholes that are located within the 7WTC footprint (along the southern boundary of the former Con Edison substation). MW-4 will be installed in order to optimize product recovery at this location.
- Assuming that the "tub wall" intersects with Ramp J, the probable direction of product flow would be to the west-southwest. MW-5 will be installed at the southwestern corner of the 7WTC footprint as a product recovery location and

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southwestern boundary delineator. No access is available beyond the southern border of the 7WTC footprint due to the on-going demolition activities to the south of Vesey Street.

The Con Edison transformers at the site were situated in aboveground concrete vaults, the walls of which extend below grade. MW-6 and MW-7 will be installed in order to determine whether there has been any pooling of product within the concrete vaults. If product is identified, the wells will serve as product recovery points as well as delineate the northern and northeastern boundaries, respectively.

UTILITY CLEARANCE

Jacques Whitford Company, Inc. (JWC), Con Edison's consultant, has called in and started the Code 53 Utility Mark-Out process. Utilities clearance is expected by Monday, November 19, 2001. Con Edison will verify utility clearance for 7WTC building footprint and surrounding area. Due to unmarked Verizon utilities at the intersection of Vesey Street and Washington, Verizon personnel will be available on-site to give utility clearance at the MW-5 location.

MONITORING WELL INSTALLATION & COLLECTION OF SAMPLES

The soil borings for the installation of the monitoring wells will be advanced using a drill rig equipped with hollow stem auger (HSA) and air rotary capabilities. Where feasible, split spoon samplers will be advanced at five-foot intervals until the final depth of the boring, which will be at approximately 10 feet below the observed water table. Groundwater is anticipated to be encountered at 15 feet below grade, with the expected total depth of each boring being 25 feet below grade.

A geologist or engineer from JWC will supervise the drilling activities. Drilling will be conducted by Aquifer Drilling & Testing, under subcontract to JWC. The lithology of the soil and any physical evidence of contamination in the soil samples will be documented. Soil boring and well construction logs will be completed for each attempted location.

At each drilling location, split spoon samples will be collected continuously. Soil samples will be examined for visual and olfactory evidence of contamination and screened for the presence of volatile organic compounds with a Photo Ionization Detector (PID). The soil sample showing the most evidence of contamination will be set aside for possible laboratory analysis. If no evidence of contamination is observed in the soil samples, the sample directly above the water table will be set aside for possible laboratory analysis.

A decontamination pad will be constructed on-site to clean the split spoons prior to the commencement of drilling and after each use. Decontamination will consist of scrubbing with a non-phosphate detergent and potable water solution and rinsing with potable water, at a minimum. All decontamination water will be contained until disposal.

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The groundwater monitoring wells will be constructed in accordance with Addendum II, Groundwater Monitoring Well Installation Guidelines, and the American Society of Testing Materials (ASTM) Standard Practice D-5092, *Standard Practice for Design and Installation of Groundwater Monitoring Wells in Aquifers*.

A 6-inch diameter PVC monitoring well will be installed at each successfully completed boring. However, unforeseen subsurface conditions may necessitate the installation of 4-inch diameter monitoring wells. Each well will be furnished with 15 feet of 0.01-slotted screen, with 10 feet below the water table and five feet above the water table. Clean filter sand will be placed around and above the screened interval. A bentonite seal will be placed above the sand pack interval, and the borehole annulus will be grouted to grade with a bentonite/cement slurry. Each well will be furnished with a flush-mount bolt-down road box and a locking well cap. Each well will be developed by pumping and surging following installation. Con Edison expects that the wells will be developed using a vacuum truck to be provided by the EPA. Con Edison requests that NYDEC coordinate the EPA involvement for the monitoring well development.

Groundwater samples will be collected from each monitoring well where free product is observed. Soil samples will not be submitted for analysis if free product is identified in the groundwater. If no free product is observed in the groundwater, only soil samples will be collected and they will be collected from above the water table or at the depth with most visual contamination. The table below illustrates each scenario with the necessary protocol for sampling.

Scenario	Sample Submittal Protocol
Evidence of soil contamination. Free product in groundwater	Only groundwater sample submitted for analysis
Evidence of soil contamination. No free product in groundwater	Only soil sample submitted for analysis
No evidence of soil contamination. Free product in groundwater	Only groundwater sample submitted for analysis
No evidence of soil contamination. No free product in groundwater	Only soil sample submitted for analysis

Samples will be submitted to Con Edison's Chem-Lab for both fingerprint analysis (Oil ID) and PCB content. Con Edison expects that wells and/or manholes observed to contain free product will be pumped out by the EPA at an appropriate frequency to facilitate product recovery and that dates, quantities, and location of product recovered be documented and information provided to Con Edison. Con Edison requests that NYDEC coordinate the EPA involvement with the pumping of free product.

INVESTIGATION DERIVED WASTES

Investigation derived wastes such as soil cuttings, decontamination water, disposable personal protective equipment (PPE), etc. will be placed into a 55-gallon drum provided

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by Con Edison. Con Edison expects all accumulated water (decontamination water, well development water, etc) to be managed by the EPA. EPA involvement will be coordinated by NYDEC. Con Edison will be responsible for the transportation and disposal of non-liquid wastes (i.e. soil cuttings and PPE). Con Edison requests that the NYSDEC provide guidance regarding the management of investigation derived wastes that are generated outside of the footprint of the former substation.

SITE ACCESS

Because the site of 7WTC is owned by the Port Authority (PA) and is currently under the control of the New York City Department of Design and Construction (DDC), Con Edison has contacted both the PA and DDC and requested their permission to perform this investigation. Con Edison will also request that the DDC arrange for the removal of surface concrete and to create ramps to gain access (where necessary) at the proposed drilling locations. All individuals who are required to access the site will obtain Con Edison-issued contractor identification cards to facilitate site access. The assistance of the NYSDEC may be necessary to ensure the support of the PA and the DDC so that the investigation may proceed.

SCHEDULE

Contingent upon the receipt of the necessary approvals and support from the PA and the DDC, Con Edison will begin work within five business days of the NYSDEC's approval of this Work Plan. Based on driller availability, commencement of drilling activities is anticipated for Monday November 26, 2001.

Con Edison will prepare a summary of findings within two weeks of receipt of laboratory analytical data.

Public Safety - Critical Infrastructure

Protocol 36 11/23/01

FAX COVER SHEET

To: Bob Adams (DDC)
(212) 640 9207

From Timothy DeMeo
NYSDEC
(917) 217 8153

Pages 11 TOTAL (Including cover)

Subject Con Edison work plan
for sub surface investigation
@ WTC 7.

- Installation of MWs should be away from crane walk areas (which may damage wells)
- Full PPE for drillers since demo of WTC 5 & 6 is ~~directly~~ directly south of WTC 7.