



ENVIRONMENTAL BUSINESS CONSULTANTS

September 27, 2017

New York City Office of Environmental Remediation  
City Voluntary Cleanup Program  
c/o Shaminder Chawla  
100 Gold Street, 2<sup>nd</sup> Floor  
New York, NY 10038

**Re: VCP # 18CVCP005K  
E-Designation # 17EHAZ146K  
187 Kent Avenue, Brooklyn  
Remedial Action Work Plan (RAWP) Stipulation List**

Dear Mr. Chawla:

Environmental Business Consultants hereby submits a Remedial Action Plan (RAWP) Stipulation List for the above referenced Site to the New York City Office of Environmental Remediation (OER) on behalf of 187 Kent LLC. This letter serves as an addendum to the RAWP to stipulate additional content, requirements, and procedures that will be followed during the site remediation. The contents of this list are added to the RAWP and will supersede the content in the RAWP where there is a conflict in purpose or intent. The additional requirements/procedures include the following Stipulation List below:

1. The criterion attached in **Appendix 1** will be utilized if additional petroleum containing tank or vessel is identified during the remedial action or subsequent redevelopment excavation activities. All petroleum spills will be reported to the NYSDEC hotline as required by applicable laws and regulations. This contingency plan is designed for heating oil tanks and other small or moderately sized storage vessels. If larger tanks, such as gasoline storage tanks are identified, OER will be notified before this criterion is utilized.
2. A pre-construction meeting is required prior to start of remedial excavation work at the site. A pre-construction meeting will be held at the site and will be attended by OER, the developer or developer representative, the consultant, excavation/general contractor, and if applicable, the soil broker.
3. A Historic Fill Transfer and Disposal Notification Form to each disposal facility and a pre-approval letter from all disposal facilities will be provided to OER prior to any soil/fill material removal from the site. The Historic Fill Transfer and Disposal Notification Form template is attached in **Appendix 2**. Documentation specified in the RAWP - Appendix 3 - Section 1.6 "Materials Disposal Off-Site" will be provided to



ENVIRONMENTAL BUSINESS CONSULTANTS

1808 MIDDLE COUNTRY ROAD  
RIDGE, NY 11961

PHONE 631.504.6000  
FAX 631.924.2870

OER. If a different disposal facility for the soil/fill material is selected, OER will be notified immediately.

4. Signage for the project will include a sturdy placard mounted in a publically accessible right of way to building and other permits signage will consist of the NYC VCP Information Sheet (attached **Appendix 3**) announcing the remedial action. The Information sheet will be laminated and permanently affixed to the placard.
5. This NYC VCP project may involve the removal and transportation of hazardous waste, and if it does, it will be subject to the Special Assessment on hazardous waste (ECL 27-0923) which charges a fee of up to \$27 per ton of hazardous waste generated that is due to the State Department of Taxation and Finance 30 days after the end of the quarter in which the waste was generated. See DEC's website for more information: <http://www.dec.ny.gov/chemical/9099.html>. **Appendix 4** includes additional information about the Exemption for Hazardous Waste Program Fee.
6. Collection and analysis of nine end-point samples from the bottom of the excavation to evaluate the performance of the remedy with respect to attainment of Track 4 SCO's. The samples will be analyzed for contaminants of concern (SVOCs and metals). In addition, four sidewall and one bottom endpoint sample will be collected from the metal hotspot in the eastern portion of the Site and analyzed for trigger compounds (mercury). A map indicating end-point sampling locations is attached in **Appendix 5**.
7. OER requires parties seeking City Brownfield Incentive Grants to carry insurance. For a cleanup grant, both the excavator and the trucking firm(s) that handle removal of soil must carry or be covered under a commercial general liability (CGL) policy that provides \$1 million per claim in coverage. OER recommends that excavators and truckers also carry contractors pollution liability (CPL) coverage, also providing \$1 million per claim in coverage. The CGL policy, and the CPL policy if obtained, must name the City of New York, the NYC Economic Development Corporation, and Brownfield Redevelopment Solutions as additional insured. For an investigation grant, an environmental consultant must be a qualified vendor in the BIG program and carry \$1 million of professional liability (PL) coverage. A fact sheet regarding insurance is attached as **Appendix 6**.
8. Daily reports will be provided during active excavation work. If no work is performed for extended time period, daily report frequency will be reduced to weekly basis. Daily report template is attached in **Appendix 7**.
9. Monthly reports will be provided by the owner/developer after excavation work is completed for the duration of the construction period. Monthly report template is attached in **Appendix 8**.



10. Trucking log sheets will be utilized as trucks are transported from sites, and completed logs should be attached to the Remedial Action Report (RAR) as an appendix. The goal of this log is to clearly document the destination of material leaving the site, the parties responsible for its transfer, and other pertinent details. The trucking log template is provided in **Appendix 9**.
11. An engineered composite site cover will be placed over the entire footprint of the Site. The composite cover system will be comprised of the building concrete foundation/slab. Drawings of the composite site cover are provided as **Appendix 10**.
12. The excavation plans for the Site have been revised as follows:

*Excavation for the cellar will extend to approximately 12 feet below grade for the entire Site, with additional excavation to 17 ft for three elevator pits. An estimated 10,325 cubic yards (15,488 tons) of soil will require excavation for the new building's cellar.*
13. Dewatering will be performed in full compliance with applicable laws, rules and regulations. Dewatering permit will be obtained from NYCDEP prior to construction activities.
14. The Grace Preprufe 300R/160R waterproofing membrane/vapor barrier will be installed beneath the structure's slab and along foundation sidewalls. **Appendix 11** provides the layout vapor barrier plan and the manufacturer specifications and PE/RA certified building plans with the extent of the vapor barrier installation details (penetrations, joints, etc.) with respect to the proposed foundation, footings, etc. The vapor barrier must be inspected by EBC prior to the pouring of concrete.
15. Stabilized construction entrance and decontamination area will be constructed. All vehicle will be cleaned on-site to avoid any tracked materials (e.g., soils) spilling on roadways. Also, erosion controls must be installed, if necessary.
16. Applicant, Applicant's consultant and contractors are responsible for obtaining all permits necessary for the performance of the work, as well as, paying all associated fees (e.g., demolition, temporary water connection, dewatering, temporary electric connection, etc.).
17. Applicants and Applicant's consultant shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. Copy of the Health and Safety Plan (HASP) must be provided to the subcontractor (s). Copy of the HASP should be available at the site at all times.
18. Truck routing to the project site shall only occur according with the approved RAWP. The applicant, applicant's consultant and contractors are responsible for maintaining proper traffic in the vicinity of the site during all field operations, truck loading/unloading, etc.



19. The stamped/signed RAWP certification page is included in **Appendix 12.**

Sincerely,

**ENVIRONMENTAL BUSINESS CONSULTANTS**

A handwritten signature in black ink, appearing to read "Kimberly Somers", with a long horizontal flourish extending to the right.

Kimberly Somers, P.G.  
Project Manager

cc: Tara Ostock, NYCOER



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## **Appendix 1**

### **Generic Procedures for Management of Underground Storage Tanks Identified under the NYC VCP**

Prior to Tank removal, the following procedures should be followed:

- Remove all fluid to its lowest draw-off point.
- Drain and flush piping into the tank.
- Vacuum out the “tank bottom” consisting of water product and sludge.
- Dig down to the top of the tank and expose the upper half.
- Remove the fill tube and disconnect the fill, gauge, product, vent lines and pumps. Cap and plug open ends of lines.
- Temporarily plug all tank openings, complete the excavation, remove the tank and place it in a secure location.
- Render the tank safe and check the tank atmosphere to ensure that petroleum vapors have been satisfactorily purged from the tank.
- Clean tank or remove to storage yard for cleaning.
- If the tank is to be moved, it must be transported by licensed waste transporter. Plug and cap all holes prior to transport leaving a 1/8 inch vent hole located at the top of the tank during transport.
- After cleaning, the tank must be made acceptable for disposal at a scrap yard, cleaning the tanks interior with a high pressure rinse and cutting the tank in several pieces.

During the tank and pipe line removal, the following field observations should be made and recorded:

- A description and photographic documentation of the tank and pipe line condition (pitting, holes, staining, leak points, evidence of repairs, etc.).
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with a calibrated photoionization detector (PID).

#### Impacted Soil Excavation Methods

The excavation of the impacted soil will be performed following the removal of the existing tanks. Soil excavation will be performed in accordance with the procedures described under Section 5.5 of Draft DER-10 as follows:

- A description and photographic documentation of the excavation.
- Examination of the excavation floor and sidewalls for physical evidence of contamination (odor, staining, sheen, etc.).
- Periodic field screening (through bucket return) of the floor and sidewalls of the excavation, with calibrated photoionization detector (PID).

Final excavation depth, length, and width will be determined in the field, and will depend on the horizontal and vertical extent of contaminated soils as indentified through physical examination (PID response, odor, staining, etc.). Collection of verification samples will be performed to evaluate the success of the removal action as specified in this document.

The following procedure will be used for the excavation of impacted soil (as necessary and appropriate):

- Wear appropriate health and safety equipment as outlined in the Health and Safety Plan.

- Prior to excavation, ensure that the area is clear of utility lines or other obstructions. Lay plastic sheeting on the ground next to the area to be excavated.
- Using a rubber-tired backhoe or track mounted excavator, remove overburden soils and stockpile, or dispose of, separate from the impacted soil.
- If additional UST's are discovered, the NYSDEC will be notified and the best course of action to remove the structure should be determined in the field. This may involve the continued trenching around the perimeter to minimize its disturbance.
- If physically contaminated soil is present (e.g., staining, odors, sheen, PID response, etc.) an attempt will be made to remove it, to the extent not limited by the site boundaries or the bedrock surface. If possible, physically impacted soil will be removed using the backhoe or excavator, segregated from clean soils and overburden, and staged on separated dedicated plastic sheeting or live loaded into trucks from the disposal facility. Removal of the impacted soils will continue until visibly clean material is encountered and monitoring instruments indicate that no contaminants are present.
- Excavated soils which are temporarily stockpiled on-site will be covered with tarp material while disposal options are determined. Tarp will be checked on a daily basis and replaced, repaired or adjusted as needed to provide full coverage. The sheeting will be shaped and secured in such a manner as to drain runoff and direct it toward the interior of the property.

Once the site representative and regulatory personnel are satisfied with the removal effort, verification of confirmatory samples will be collected from the excavation in accordance with DER-10.

**Appendix 2**  
Historic Fill Transfer and Disposal Notification Form

**Historic Fill & Soil Disposal Notification Form**  
**New York City Office of Environmental Remediation**

**Date:**  

To operators and representatives of disposal facilities:

The New York City Office of Environmental Remediation (OER) operates several environmental remediation regulatory programs in New York City that manage light to moderately contaminated properties that are planned for redevelopment. These projects commonly involve the removal of historical fill and soil from properties for development and other purposes. As with any government regulatory program, lawful transport and disposal of historic fill and soil is mandatory. It is also our highest priority.

Disposal facilities, recycling facilities and clean fill facilities (collectively, receiving facilities) for historic fill and soil may be located in New York or neighboring states. Our research has indicated a wide range of facility types and a complex set of regulatory requirements and obligations for a receiving facility operation exist within each jurisdiction. Receiving facilities are required to comply with applicable laws and regulations and may operate under state and local authority via permits, licenses, registrations, agreements and other legal instruments that dictate requirements for the material they can receive. Operating requirements may include adherence to applicable chemical standards, guidance levels, criteria, policy or other bases to determine the suitability for receipt of historical fill or soil at a receiving facility. Such requirements may also specify sample frequency, location, sampling method, chemical analytes, or analytical methods. Receiving facility soil/fill sampling requirements often differ from standard remedial investigation protocol performed in the original environmental study of the property.

Given the variability of data requirements for receiving facilities, the wide range of receiving facility types, and the complexity of regulatory requirements and obligations, OER is seeking to assist government regulators and facility operators and their technical representatives to achieve compliance with regulatory requirements for disposal of historic fill and soil at receiving facilities for projects we administer. Further, we seek to ensure that all of the data and information that is developed in OER's regulatory programs (for instance, site environmental history and soil chemistry) is available to government regulators and to facility managers.

This document provides formal notification from OER of the availability of environmental information regarding the physical and chemical content of historical fill and soil that is proposed for transfer to a disposal, recycling or clean fill facility from a property located at:

187 Kent Avenue, Brooklyn, NY  
OER Site # 18CVCP005K

The above referenced property has undergone regulated environmental investigation and is the subject of remedial action work plan under the authority of OER. All environmental data and information generated during this regulatory process is available online in OER's Document Repository listed below. OER reserves the right to share this information with applicable state regulators.

<http://www.nyc.gov/html/oer/html/document-repository/document-repository.shtml>

Note: when logged on, select the borough for the site (listed in the address above) and scroll through the list and select the address for the site (listed above). All documents are available in PDF format.

According to New York State DER-10 Technical Guidance for Site Investigation and Remediation, historical fill is non-indigenous fill material deposited on a property to raise its topographic elevation. The origin of historical fill is unknown but it is commonly known to contain ash from wood and coal combustion, slag, clinker, construction debris, dredge spoils, incinerator residue, and demolition debris. Historic fill is a regulated solid waste in the State of New York. Prior to making a determination regarding the suitability of historic fill or soil from this property for disposal at this receiving facility, **we strongly recommend that you review all of the data and information available for this property in our Document Repository** listed above. The repository includes:

- A Phase 1 history of use of the property;
- A Remedial Investigation Report for the property which includes:
  - Boring logs that describe physical observations of the historical fill material made by a trained environmental professional;
  - Chemical data for grab samples of historical fill collected during the remedial investigation;
- A Remedial Action Work Plan for the property.

If you have any questions, please contact Horace Zhang at (212) 788-8484 or [H Zhang@dep.nyc.gov](mailto:H Zhang@dep.nyc.gov) for more information.

### **Appendix 3**

#### NYC VCP Signage



## **NYC Voluntary Cleanup Program**

**187 Kent Avenue, Brooklyn**

**Site #: 17EHAZ146K**

This property is enrolled in the New York City Voluntary Cleanup Program for environmental remediation. This is a voluntary program administered by the NYC Office of Environmental Remediation.

For more information,  
log on to: [www.nyc.gov/oer](http://www.nyc.gov/oer)

Or scan with smart phone:



If you have questions or would like more information,  
please contact:

Shaminder Chawla at (212) 442-3007  
or email us at [brownfields@cityhall.nyc.gov](mailto:brownfields@cityhall.nyc.gov)

## Appendix 4

### Hazardous Waste Exemptions Fact Sheet



#### Exemptions from the state Hazardous Waste Program Fee & Special Assessment

If your site is enrolled in the city Voluntary Cleanup Program (VCP) and contains hazardous waste that will be excavated and disposed of offsite, OER can work with your development team to exempt your property from the \$130/ton state Hazardous Waste Program Fee and the Special Assessment on Hazardous Waste.

#### **Exemption from the Hazardous Waste Program Fee**

To qualify for an exemption from the Hazardous Waste Program Fee:

1. A site must be enrolled in the city Voluntary Cleanup Program;
2. Hazardous waste must result from remedial action set forth in a cleanup plan approved by OER; and
3. OER must oversee the cleanup.

#### **Process for obtaining a Hazardous Waste Program Fee exemption:**

For each VCP site, OER will submit three certifications to the New York State Department of Environmental Conservation (DEC):

1. OER will prepare a Notice of Potential Generation of Hazardous Waste after a soil test shows a site contains hazardous waste. To prepare this Notice, you must provide your OER project manager with:

- the site's EPA generator ID number;
- the date of the soil test confirming hazardous waste;
- the quantity of hazardous waste, in tons, anticipated to be shipped; and
- the anticipated dates for the start and completion of remediation.

DEC must receive this form **before** hazardous waste is shipped from your site. Otherwise, your claim for an exemption may be denied.

2. After hazardous waste has been removed from the site, you must notify your OER project manager that removal is complete. OER will then distribute a Certification of Hazardous Waste Generation to your project team which, when filled out, documents how the hazardous waste was managed. Once completed, it must be signed by the generator (or site owner) and the site's Qualified Environmental Professional and returned to your OER project manager with a copy to Amanda Duchesne [aduchesne@dep.nyc.gov](mailto:aduchesne@dep.nyc.gov) and Michelle Sarro [msarro@dep.nyc.gov](mailto:msarro@dep.nyc.gov).

**For further information,  
please contact:**

Michelle Sarro  
Attorney

(212) 341-2015

[MSarro@dep.nyc.gov](mailto:MSarro@dep.nyc.gov)

Upon receipt of the Certification of Hazardous Waste Generation, OER will issue a **\$10/ton fee** for services to obtain the exemption from the state Hazardous Waste Program Fee.

3. OER will then issue a Certification of Remedial Action that Generated Hazardous Waste to DEC representing OER's approval of how a site managed its hazardous waste.

DEC will make its determination after receiving the last two certifications. OER will then notify the project of the exemption.

### **Exemption from the Special Assessment on Hazardous Waste**

VCP sites are also eligible for an exemption from the Special Assessment on Hazardous Waste, which can cost projects up to \$27/ton.

It is advised that you assert your interest in obtaining the Special Assessment exemption when you file a TP-550 Quarterly Return for Special Assessments on Hazardous Waste Generated in New York State form with the state Department of Taxation and Finance within 20 days of the end of the calendar quarter in which the waste was generated. In line item 3 on the form, indicate the number of tons of hazardous waste that were generated in New York State under an order of, or agreement or contract with, DEC. For access to the TP-550 form and further instructions see <http://www.tax.ny.gov/bus/haz/hzrdwste.htm>.

### **Ongoing Obligations**

Regardless of the exemptions from the Hazardous Waste Program Fee and Special Assessment on Hazardous Waste, parties must:

- File a Hazardous Waste Annual Report with DEC by March 1 of each year if your site generated 15 tons or more of hazardous waste in the prior calendar year. For details, see <http://www.dec.ny.gov/chemical/8770.html>. To set forth the basis for an exemption from the Hazardous Waste Program Fee, put an X in the Exempt Remedial box in Box H of Section 1 of the Waste Generation and Management (GM) form and in the Comments Box (at the bottom of the form) include "New York City Voluntary Cleanup Program, VCP Site Number\_\_\_\_\_"; and
- File a TP-550 Quarterly Return for Special Assessments on Hazardous Waste Generated in New York State form with the state Department of Taxation and Finance within 20 days of the end of the calendar quarter in which the waste was generated. For access to the TP-550 form and further instructions see <http://www.tax.ny.gov/bus/haz/hzrdwste.htm>.

**Appendix 5**  
End-Point Sampling Map

NORTH 3RD STREET

LOT 8

EP1

EP2

LOT 25R

EP3

EP4

LOT 4

LOT 29

EP5

EP6

EP9

EP7

EP8

HSM-E  
HSM-Bottom  
HSM-N  
HSM-S  
HSM-W

LOT 1

SIDEWALK

KENT AVENUE

SIDEWALK  
METROPOLITAN AVENUE



Key:



Site Boundary

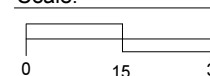


Proposed Endpoint Sample Location  
(SVOCs and TAL Metals)



Proposed Hotspot Sample Location  
(Mercury)

Scale:



1 inch = 30feet

**BC**

ENVIRONMENTAL BUSINESS CONSULTANTS

Phone 631.504.6000  
Fax 631.924.2870

**Figure  
6**

Site Name: **REDEVELOPMENT PROJECT**  
Site Address: **187 KENT AVENUE, BROOKLYN, NY**  
Drawing Title: **ENDPOINT SAMPLING MAP**

**Appendix 6**  
**BIG Program Insurance Fact Sheet**



**Office of Environmental  
Remediation**



**FACT SHEET – BIG PROGRAM INSURANCE REQUIREMENTS**

**Investigation Grants** – for a developer or site owner to be eligible for a BIG investigation grant, its environmental consultant(s) must be:

- a Qualified Vendor in the BIG Program; and
- maintain Professional Liability (PL) insurance of \$1M per claim and annual aggregate.

**Cleanup Grants** – for a developer or site owner to be eligible for a BIG cleanup grant:

- Its general contractor or excavation/foundation contractor hired to perform remedial work must maintain Commercial General Liability (CGL) insurance of at least \$1M per occurrence and \$2M in the general aggregate. It is recommended that the general contractor or excavation/foundation contractor also maintain a Contractors Pollution Liability policy (CPL) of at least \$1M per occurrence.
- Its subcontractors who are hired by the general contractor etc. to perform remedial work at a site, including soil brokers and truckers, must also maintain a CGL policy in the amount and with the terms set forth above. It is recommended that subcontractors also maintain a CPL policy in the amount and with the terms set forth above.

The CGL policy, and the CPL policy if in force, must list the city, EDC and BRS as additional insureds, include completed operations coverage and be primary and non-contributory to any other insurance the additional insureds may have.

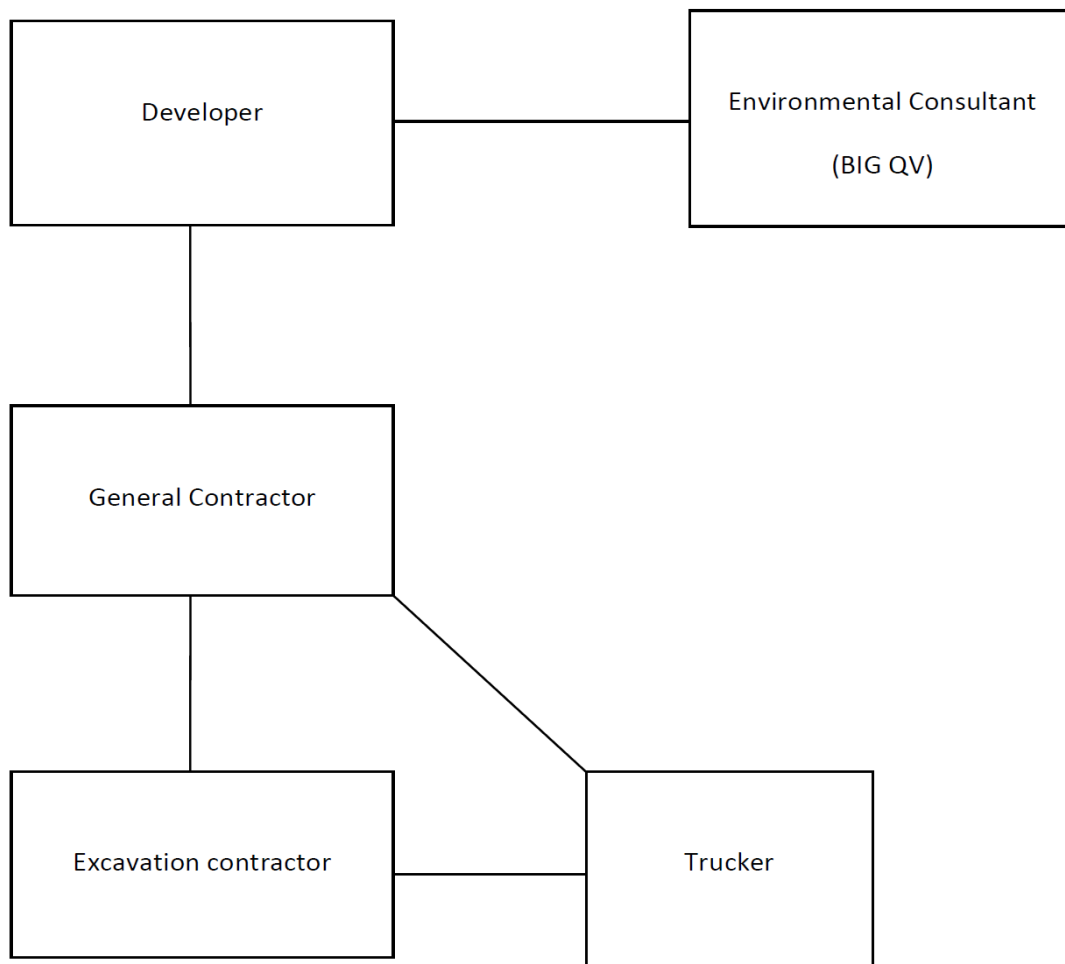
- Its environmental consultant(s) hired to oversee the cleanup must be:
  - a. a BIG Qualified Vendor; and
  - b. maintain Professional Liability (PL) insurance of \$1M per claim and annual aggregate.

If, in the alternative, the developer hires its environmental consultant to perform the cleanup, the environmental consultant must maintain CGL insurance in the amount and with the terms set forth above. It is recommended that the environmental consultant also maintain CPL coverage in the amount and with the terms set forth in the first two bulleted items listed above.

A schematic presenting the contractual relationships described above appears on page 2. Parties who must be named as Additional Insureds on Cleanup Grant insurance policies (CGL and CPL) are presented on page 3.

### Example of Contractual Relationships for Cleanup Work

The Office of Environmental Remediation's Voluntary Cleanup Plan program requires applicants to identify the parties who are engaged in active remediation of their sites including: the General Contractor hired to remediate and/or the excavation contractor hired to excavate soil from the site and the trucking firm(s) that remove soil from the site for disposal at approved facilit(ies).



The chart above shows contractual relationships that typically exist for projects that are enrolled in the Voluntary Cleanup Program.



Office of Environmental  
Remediation



**BIG Program Additional Insureds**

The full names and addresses of the additional insureds required under the Required CGL Policy and recommended CPL Policy are as follows:

“City and its officials and employees”

New York City Mayor’s Office of Environmental Remediation  
253 Broadway, 14th Floor  
New York, NY 10007

“NYC EDC and its officials and employees”

New York City Economic Development Corporation  
110 William Street  
New York, NY 10038

“BIG Grant Administrator and its officials and employees”

Brownfield Redevelopment Solutions, Inc.  
739 Stokes Road, Units A & B  
Medford, NJ 08055

**Appendix 7**  
Daily Report Template

## Generic Template for Daily Status Report

### Instructions

The Daily Status Report submitted to OER should adhere to the following conventions:

- Remove this cover sheet prior to editing.
- Remove all the **red text** and replace with site-specific information.
- Submit the final version as a Word or PDF file.

### Daily Status Reports

Daily status reports providing a general summary of activities for each day of *active remedial work* will be emailed to the OER Project Manager by the end of the following day. Those reports will include:

- Project number and statement of the activities and an update of progress made and locations of work performed;
- Quantities of material imported and exported from the Site;
- Status of on-Site soil/fill stockpiles;
- A summary of all citizen complaints, with relevant details (basis of complaint; actions taken; etc.);
- A summary of CAMP excursions, if any;
- Photograph of notable Site conditions and activities.

The frequency of the reporting period may be revised in consultation with OER project manager based on planned project tasks. Daily email reports are not intended to be the primary mode of communication for notification to OER of emergencies (accidents, spills), requests for changes to the RAWP or other sensitive or time critical information. However, such information will be included in the daily reports. Emergency conditions and changes to the RAWP will be communicated directly to the OER project manager by personal communication. Daily reports will be included as an Appendix in the Remedial Action Report.

## DAILY STATUS REPORT

Prepared By: Enter Your Name Here

WEATHER	Snow		Rain		Overcast		Partly Cloudy	X	Bright Sun	
TEMP.	< 32		32-50		50-70	X	70-85		>85	

VCP Project No.:	14CVCP000M	E-Number Project No.:	14EHAN000M	Date:	01/01/2014
Project Name:	Name or Address				

Consultant: Person(s) Name and Company Name	Safety Officer: Person(s) Name and Company Name
General Contractor: Person(s) Name and Company Name	Site Manager/ Supervisor: Person(s) Name and Company Name

Work Activities Performed (Since Last Report):  
Provide details about the work activities performed.

Working In Grid #: A1, B1, C1

Samples Collected (Since Last Report):  
No samples collected or provide details

Air Monitoring (Since Last Report):  
No air monitoring performed or provide details  
Prestart Conditions – PID = 0.0 ppm, Dust = 0.000  
High Conditions – PID = 0.0 ppm, Dust = 0.000

Problems Encountered:  
No problems encountered or provide details

Planned Activities for the Next Day/ Week:  
Provide details about the work activities planned for the next day/ week.

									Example:	
Facility # Name/ Location Type of Waste Solid <u>Or</u> Liquid	Facility # Name Location Type of Waste Solid <u>Or</u> Liquid		Facility # Name Location Type of Waste Solid <u>Or</u> Liquid		Facility # Name Location Type of Waste Solid <u>Or</u> Liquid		Facility # Name Location Type of Waste Solid <u>Or</u> Liquid		##### Clean Earth Carteret, NJ petroleum soils Solid	
(Trucks, Cu.Yds. <u>Or</u> Gallons)	Trucks	Cu. Yds. <u>Or</u> Gallons	Trucks	Cu. Yds. <u>Or</u> Gallons	Trucks	Cu. Yds. <u>Or</u> Gallons	Trucks	Cu. Yds. <u>Or</u> Gallons	Trucks	Cu. Yds.
Today									5	120
Total									25	600

NYC Clean Soil Bank			Receiving Facility:		
Tracking No.:	13CCSB000		Name/ Address (Approved by OER)		
Today	Trucks 5	Cu. Yds. 25	Total	Trucks 120	Cu. Yds. 600

Site Grid Map

Insert the site grid map here

### **Photo Log**

<p>Photo 1 – provide a caption</p>	<p>Insert Photo Here – Photo of the entire site</p>
<p>Photo 2 – provide a caption</p>	<p>Insert Photo Here – Photo of the work activities performed</p>
<p>Photo 3 – provide a caption</p>	<p>Insert Photo Here – Photo of the work activities performed</p>

**Appendix 8**  
Monthly Report Template

## WEEKLY/MONTHLY STATUS REPORT

Prepared By: **Enter Your Name Here**

VCP Project No.:	<b>14CVCP000M</b>	E-Number Project No.:	<b>14EHAN000M</b>	Date:	<b>01/01/2014</b>
------------------	-------------------	-----------------------	-------------------	-------	-------------------

Project Name:	<b>Name or Address</b>
<b>Project Updates (Since Last Report):</b> <b>Provide details about the work activities performed.</b>	

<b>Problems Encountered:</b> <b>No problems encountered or provide details</b>
<b>Planned Activities for the Next three months:</b> <b>Provide details about the future work activities.</b>

**Photo Log**

<p>Photo 1 – provide a caption</p>	<p>Insert Photo Here – Photo of the entire site</p>
<p>Photo 2 – provide a caption</p>	<p>Insert Photo Here – Photo of the work activities performed</p>

Photo 3 – provide a caption	Insert Photo Here – Photo of the work activities performed
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**Appendix 9**  
Soil Disposal and Trucking Log Template

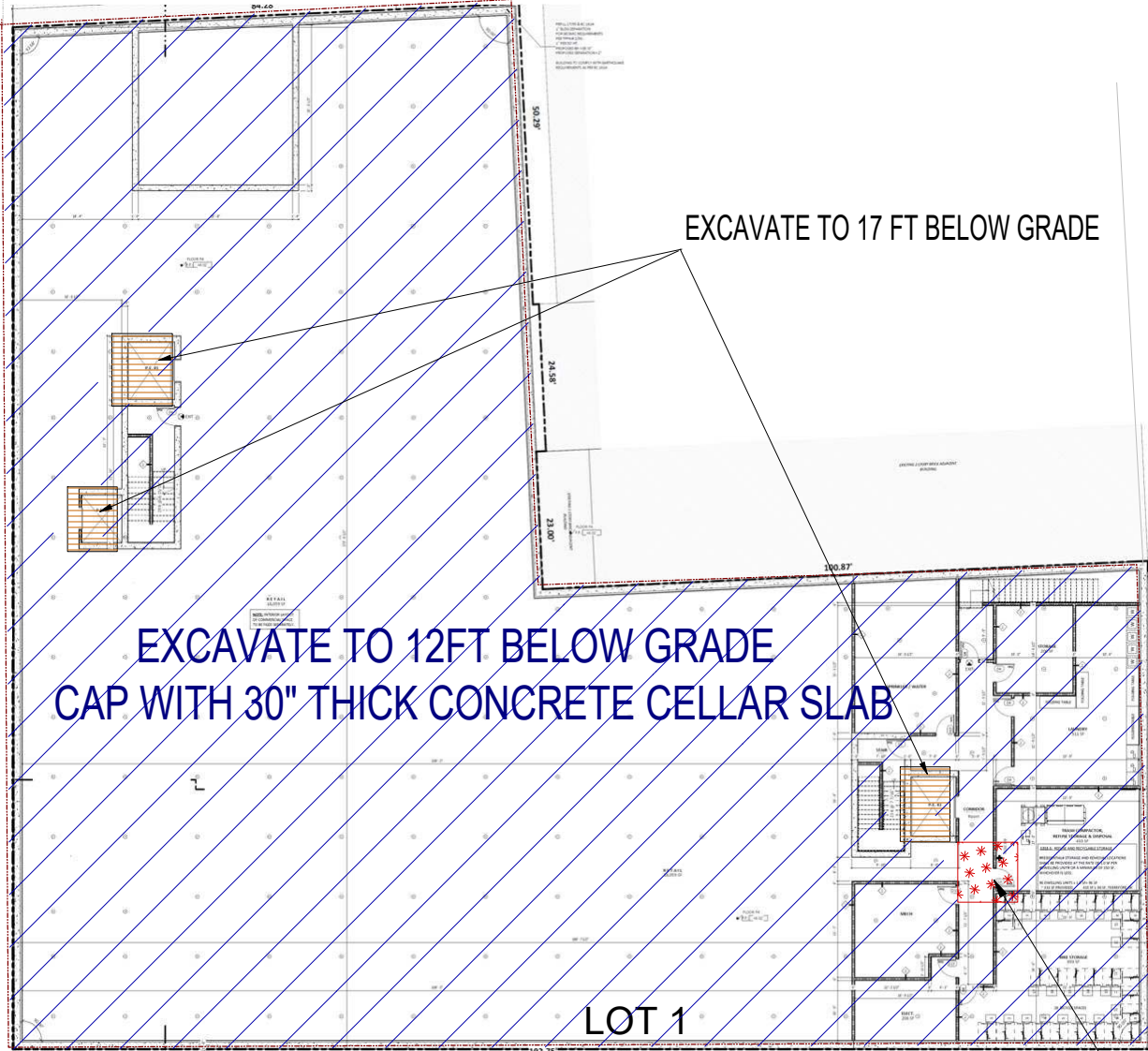
## Soil Disposal and Trucking Log Sheet

[illegible]

**Appendix 10**  
Composite Site Cover

NORTH 3RD STREET

SIDEWALK



LOT 1

SIDEWALK

KENT AVENUE

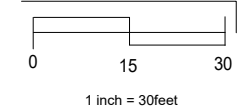
SIDEWALK  
METROPOLITAN AVENUE



Key:



Scale:



10'x10' MERCURY HOT SPOT  
EXCAVATE TO 14 FT BELOW GRADE



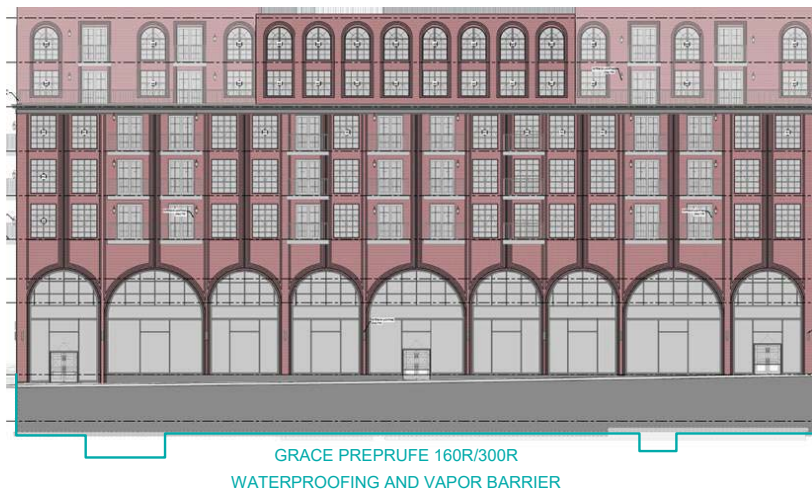
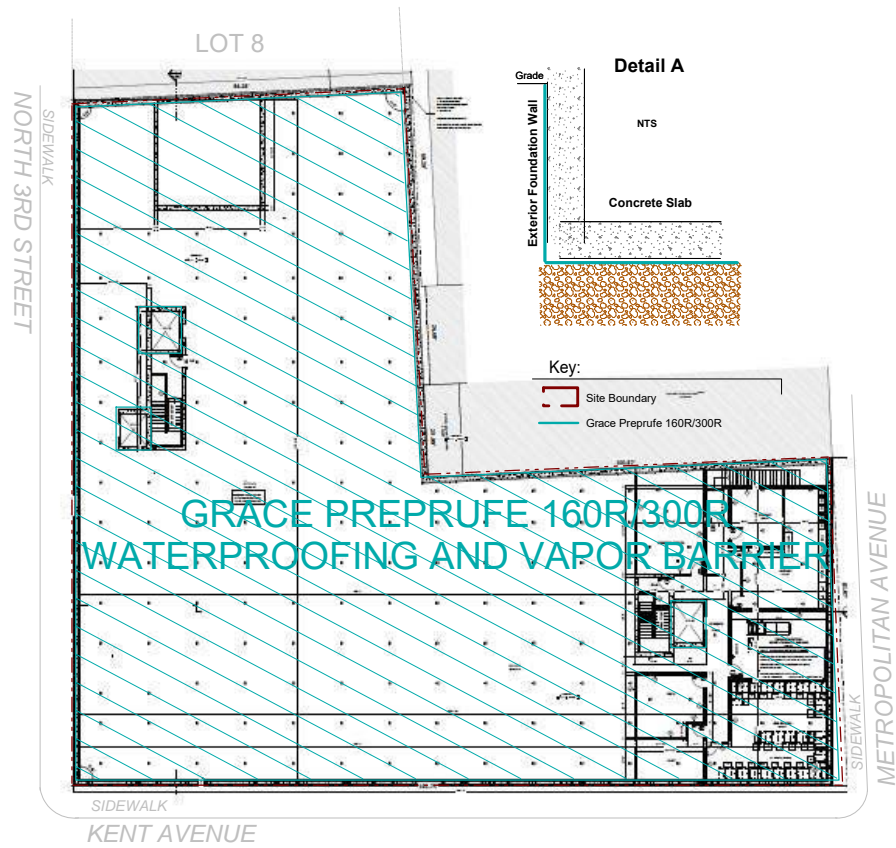
ENVIRONMENTAL BUSINESS CONSULTANTS

Phone 631.504.6000  
Fax 631.924.2870

Figure  
5

Site Name: REDEVELOPMENT PROJECT  
Site Address: 187 KENT AVENUE, BROOKLYN, NY  
Drawing Title: EXCAVATION AND CAPPING PLAN

**Appendix 11**  
Vapor Barrier Plan and Specifications



## PRODUCT INFORMATION

# Preprufe® 300R & 160R

Pre-applied waterproofing membranes that bond integrally to poured concrete for use below slabs or behind basement walls on confined sites.

### Advantages

- Forms a unique continuous adhesive bond to concrete poured against it – prevents water migration and makes it unaffected by ground settlement beneath slabs
- Fully-adhered watertight laps and detailing
- Provides a barrier to water, moisture and gas – physically isolates the structure from the surrounding ground
- BBA Certified for basement Grades 2, 3, & 4 to BS 8102:1990
- Zero permeance to moisture
- Solar reflective – reduced temperature gain
- Simple and quick to install – requiring no priming or fillets
- Can be applied to permanent formwork – allows maximum use of confined sites
- Self protecting – can be trafficked immediately after application and ready for immediate placing of reinforcement
- Unaffected by wet conditions – cannot activate prematurely
- Inherently waterproof, non-reactive system:
  - not reliant on confining pressures or hydration
  - unaffected by freeze/thaw, wet/dry cycling
- Chemical resistant – effective in most types of soils and waters, protects structure from salt or sulphate attack

### Description

Preprufe® 300R & 160R membranes are unique composite sheets comprising a thick HDPE film, an aggressive pressure sensitive adhesive and a weather resistant protective coating.

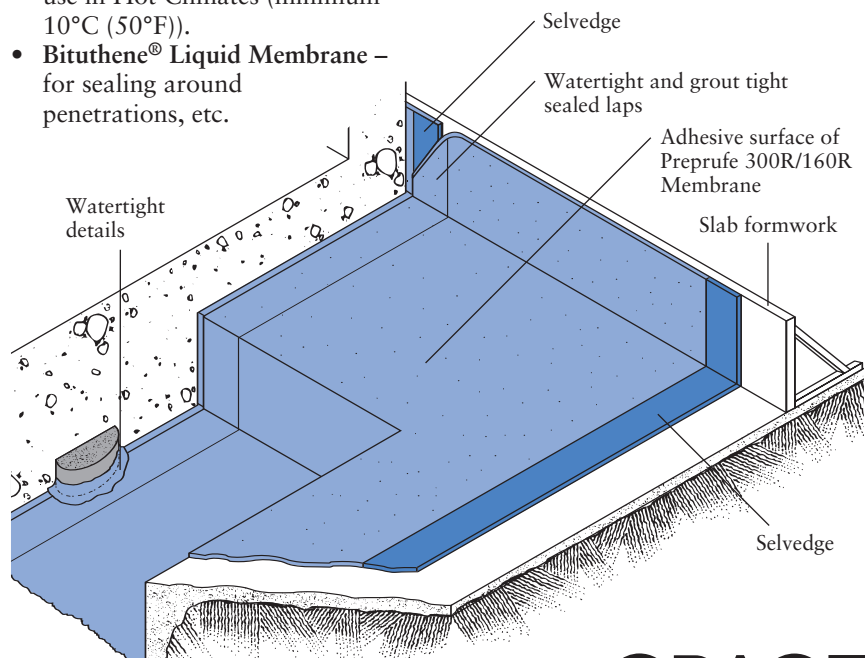
Unlike conventional non-adhering membranes, which are vulnerable to water ingress tracking between the unbonded membrane and structure, the unique Preprufe bond to concrete prevents ingress or migration of water around the structure.

The Preprufe R System includes:

- **Preprufe 300R** – heavy-duty grade for use below slabs and on rafts (i.e. mud slabs). Designed to accept the placing of heavy reinforcement using conventional concrete spacers.
- **Preprufe 160R** – thinner grade for blindside, zero property line applications against soil retention systems.
- **Preprufe Tape LT** – for covering cut edges, roll ends, penetrations and detailing (temperatures between -4°C (25°F) and +30°C (86°F)).
- **Preprufe Tape HC** – as above for use in Hot Climates (minimum 10°C (50°F)).
- **Bituthene® Liquid Membrane** – for sealing around penetrations, etc.

Preprufe 300R & 160R membranes are applied either horizontally to smooth prepared concrete, carton forms or well rolled and compacted sand or crushed stone substrate; or vertically to permanent formwork or adjoining structures. Concrete is then cast directly against the adhesive side of the membranes. The specially developed Preprufe adhesive layers work together to form a continuous and integral seal to the structure.

Preprufe can be returned up the inside face of slab formwork but is not recommended for conventional twin-sided formwork on walls, etc. Use Bituthene self-adhesive membrane or Procor® fluid applied membrane to walls after removal of formwork for a fully bonded system to all structural surfaces.



## Installation

The most current application instructions, detail drawings and technical letters can be viewed at [www.graceconstruction.com](http://www.graceconstruction.com). Technical letters are provided for the following subjects to assist in the installation of Preprufe:

- Chemical Resistance
- Minimizing Concrete Shrinkage and Curling
- Rebar Chairs on Preprufe 300R Membrane
- Removal of Formwork Placed Against Preprufe Membranes
- Winter Lap Sealing and the use of Preprufe Tape LT

For other technical information contact your local Grace representative.

Preprufe 300R & 160R membranes are supplied in rolls 1.2 m (4 ft) wide, with a selvedge on one side to provide self-adhered laps for continuity between rolls. The rolls of Preprufe Membrane and Preprufe Tape are interwound with a disposable plastic release liner which must be removed before placing reinforcement and concrete.

### Substrate Preparation

**All surfaces** – It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and smooth with no gaps or voids greater than 12 mm (0.5 in.). Grout around all penetrations such as utility conduits, etc. for stability.

**Horizontal** – The substrate must be free of loose aggregate and sharp protrusions. Avoid curved or rounded substrates. The surface does not need to be dry, but standing water must be removed.

**Vertical** – Use concrete, plywood, insulation or other approved facing to sheet piling to provide support to the membrane. Board systems such as timber lagging must be close butted to provide support and not more than 12 mm (0.5 in.) out of alignment.

### Membrane Installation

Preprufe can be applied at temperatures of -4°C (25°F) or above. When installing Preprufe in cold or marginal weather conditions <13°C (55°F) the use of Preprufe Tape LT is recommended at all laps and detailing. Preprufe Tape LT should be applied to clean, dry surfaces and the release liner must be removed immediately after application.

#### Horizontal substrates –

Place the membrane HDPE film side to the substrate with the clear plastic release liner facing towards the concrete pour. End laps should be staggered to avoid a build up of layers. Leave plastic release liner in position until overlap procedure is completed.

Accurately position succeeding sheets to overlap the previous sheet 75 mm (3 in.) along the marked selvedge. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liner from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly with a heavy roller. Completely remove the plastic liner to expose the protective coating. Any initial tack will quickly disappear.

Refer to Grace Tech Letters for information on suitable rebar chairs for Preprufe.

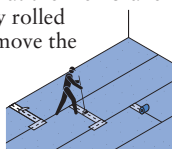
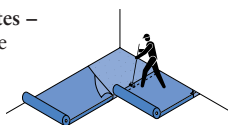
#### Vertical substrates –

Mechanically fasten the membrane vertically using fasteners appropriate to the substrate with the clear plastic release liner facing towards the concrete pour.

The membrane may be installed in any convenient length. Secure the top of the membrane using a batten such as a termination bar or similar 50 mm (2 in.) below the top edge. Fastening can be made through the selvedge so that the membrane lays flat and allows firmly rolled overlaps. Immediately remove the plastic release liner. Any additional fasteners must be covered with a patch of Preprufe Tape.

Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Roll firmly to ensure a watertight seal.

**Roll ends and cut edges** – Overlap all roll ends and cut edges by a minimum 75 mm (3 in.) and ensure the area is clean and free from contamination, wiping with a damp cloth if necessary. Allow to dry and apply Preprufe Tape LT (or HC in hot climates) centered over the lap and roll firmly. Immediately remove printed plastic release liner from the tape.



## Details

Refer to Preprufe Field Application Manual, Section V Application Instructions or visit [www.graceconstruction.com](http://www.graceconstruction.com). This Manual gives comprehensive guidance and standard details for:

- internal and external corners
- penetrations
- tiebacks
- columns
- grade beam pilecaps
- tie-ins
- terminations

### Membrane Repair

Inspect the membrane before installation of reinforcement steel, formwork and final placement of concrete. The membrane can be easily cleaned by jet washing if required. Repair damage by wiping the area with a damp cloth to ensure the area is clean and free from dust, and allow to dry. Repair small punctures (12 mm (0.5 in.) or less) and slices by applying Preprufe Tape centered over the damaged area and roll firmly. Remove the release liner from the tape. Repair holes and large punctures by applying a patch of Preprufe membrane, which extends 150 mm (6 in.) beyond the damaged area. Seal all edges of the patch with Preprufe Tape, remove the release liner from the tape and roll firmly. Any areas of damaged adhesive should be covered with Preprufe Tape. Remove printed plastic release liner from tape. Where exposed selvedge has lost adhesion or laps have not been sealed, ensure the area is clean and dry and cover with fresh Preprufe Tape, rolling firmly. Alternatively, use a hot air gun or similar to activate adhesive and firmly roll lap to achieve continuity.

### Pouring of Concrete

Ensure the plastic release liner is removed from all areas of Preprufe R Membrane and Tape.

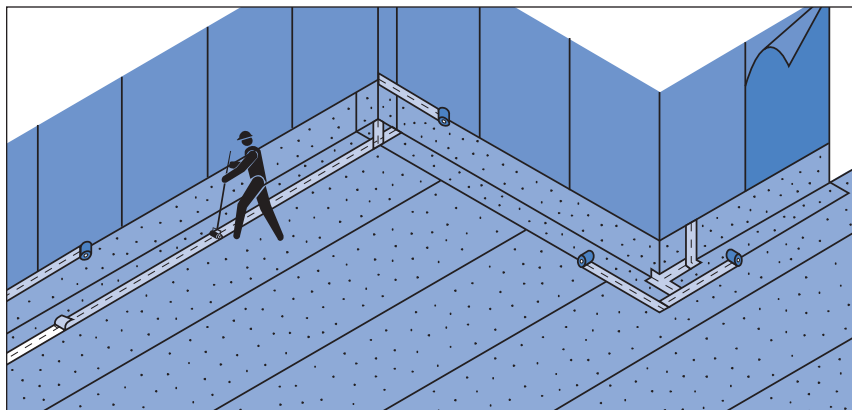
It is recommended that concrete be poured within 56 days (42 days in hot climates) of application of the membrane. Concrete must be placed and compacted carefully to avoid damage to the membrane. Never use a sharp object to consolidate the concrete.

### Removal of Formwork

Preprufe membranes can be applied to removable formwork, such as slab perimeters, elevator and lift pits, etc. Once the concrete is poured the formwork must remain in place until the concrete has gained sufficient compressive strength to develop the surface bond. Preprufe membranes are not recommended for conventional twin-sided wall forming systems.

A minimum concrete compressive strength of 10 N/mm<sup>2</sup> (1500 psi) is recommended prior to stripping formwork supporting Preprufe membranes. Premature stripping may result in displacement of the membrane and/or spalling of the concrete.

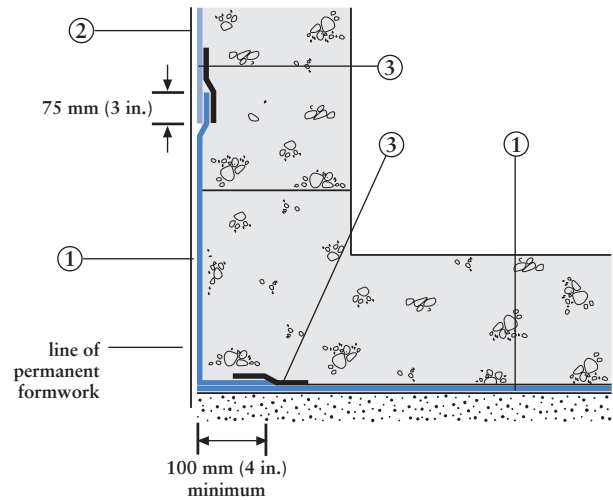
As a guide, to reach the minimum compressive strength stated above, a structural concrete mix with an ultimate strength of 40 N/mm<sup>2</sup> (6000 psi) will typically require a cure time of approximately 6 days at an average ambient temperature of -4°C (25°F), or 2 days at 21°C (70°F).



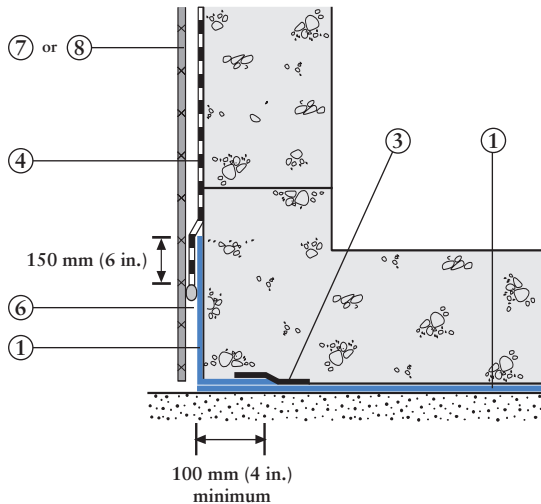
## Detail Drawings

Details shown are typical illustrations and not working details. For a list of the most current details, visit us at [www.graceconstruction.com](http://www.graceconstruction.com). For technical assistance with detailing and problem solving please call toll free at 866-333-3SBM (3726).

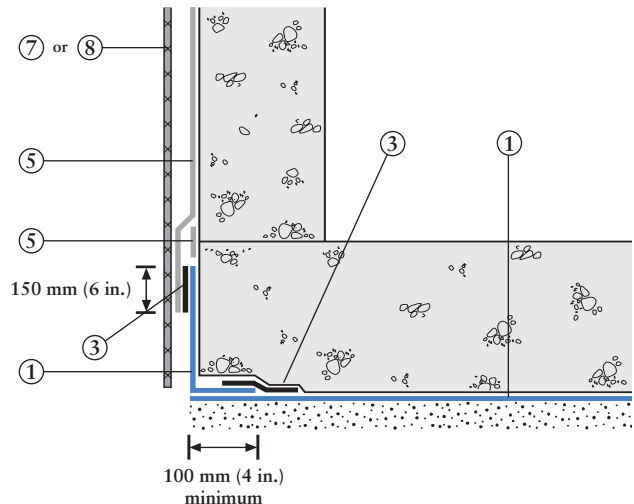
### Wall base detail against permanent shutter



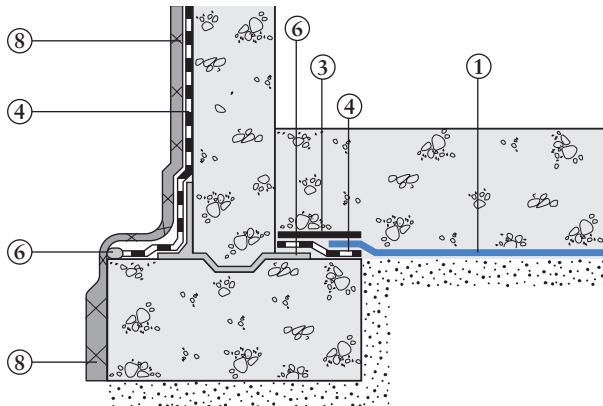
### Bituthene wall base detail (Option 1)



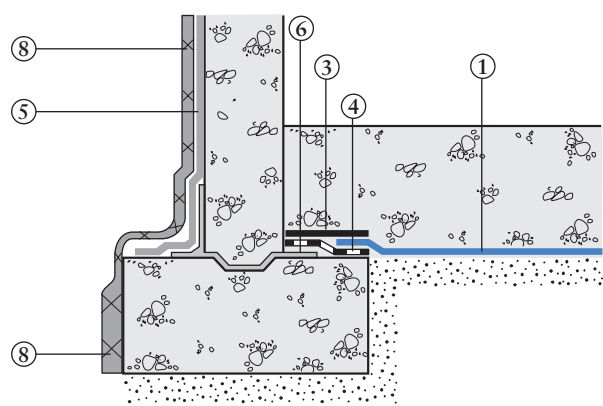
### Procor wall base detail (Option 1)



### Bituthene wall base detail (Option 2)



### Procor wall base detail (Option 2)



1 Preprufe 300R  
2 Preprufe 160R

3 Preprufe Tape  
4 Bituthene

5 Procor  
6 Bituthene Liquid Membrane

7 Protection  
8 Hydroduct®

## Supply

Dimensions (Nominal)	Preprufe 300R Membrane	Preprufe 160R Membrane	Preprufe Tape (LT or HC*)
Thickness	1.2 mm (0.046 in.)	0.8 mm (0.032 in.)	
Roll size	1.2 m x 30 m (4 ft x 98 ft)	1.2 m x 35 m (4 ft x 115 ft)	100 mm x 15 m (4 in. x 49 ft)
Roll area	36 m <sup>2</sup> (392 ft <sup>2</sup> )	42 m <sup>2</sup> (460 ft <sup>2</sup> )	
Roll weight	50 kg (108 lbs)	42 kg (92 lbs)	2 kg (4.3 lbs)
Minimum side/end laps	75 mm (3 in.)	75 mm (3 in.)	75 mm (3 in.)

\*LT denotes Low Temperature (between -4°C (25°F) and +30°C (86°F))

HC denotes Hot Climate (>+10°C (50°F))

### Ancillary Products

Bituthene Liquid Membrane – 5.7 liter (1.5 US gal) or 15.1 liter (4 US gal)

## Physical Properties

Property	Typical Value 300R	Typical Value 160R	Test Method
Color	white	white	
Thickness	1.2 mm (0.046 in.) nominal	0.8 mm (0.032 in.) nominal	ASTM D3767
Low temperature flexibility	Unaffected at -23°C (-10°F)	Unaffected at -23°C (-10°F)	ASTM D1970
Resistance to hydrostatic head, minimum	70 m (231 ft)	70 m (231 ft)	ASTM D5385, modified <sup>1</sup>
Elongation, minimum	300%	300%	ASTM D412, modified <sup>2</sup>
Tensile strength, film, minimum	27.6 MPa (4000 psi)	27.6 MPa (4000 psi)	ASTM D412
Crack cycling at -23°C (-10°F), 100 cycles	Unaffected	Unaffected	ASTM C836
Puncture resistance, minimum	990 N (221 lbs)	445 N (100 lbs)	ASTM E154
Peel adhesion to concrete, minimum	880 N/m (5.0 lbs/in.) width	880 N/m (5.0 lbs/in.) width	ASTM D903, modified <sup>3</sup>
Lap peel adhesion	440 N/m (2.5 lbs/in.) width	440 N/m (2.5 lbs/in.) width	ASTM D1876, modified <sup>4</sup>
Permeance to water vapor Transmission, maximum	0.01 perms (0.6 ng/(Pa × s × m <sup>2</sup> ))	0.01 perms (0.6 ng/(Pa × s × m <sup>2</sup> ))	ASTM E96, method B
Water absorption, maximum	0.5%	0.5%	ASTM D570
Methane permeability	9.1 mls/m <sup>2</sup> /day	N/A	University of London, QMW College <sup>3</sup>
Permeability <sup>5</sup> (hydraulic conductivity)	K=<1.4 × 10 <sup>-11</sup> cm.s <sup>-1</sup>	K=<1.4 × 10 <sup>-11</sup> cm.s <sup>-1</sup>	ASTM D5084-90

### Footnotes:

- Hydrostatic head tests of Preprufe Membranes are performed by casting concrete against the membrane with a lap. Before the concrete cures, a 3 mm (0.125 in.) spacer is inserted perpendicular to the membrane to create a gap. The cured block is placed in a chamber where water is introduced to the membrane surface up to the head indicated.
- Elongation of membrane is run at a rate of 50 mm (2 in.) per minute.
- Concrete is cast against the protective coating surface of the membrane and allowed to properly dry (7 days minimum). Peel adhesion of membrane to concrete is measured at a rate of 50 mm (2 in.) per minute at room temperature.
- The test is conducted 15 minutes after the lap is formed (per Grace published recommendations) and run at a rate of 50 mm (2 in.) per minute at -4°C (25°F).
- Result is lower limit of apparatus. Membrane therefore considered impermeable.

## Specification Clauses

Preprufe 300R or 160R shall be applied with its adhesive face presented to receive fresh concrete to which it will integrally bond. Only Grace Construction Products approved membranes shall be bonded to

Preprufe 300R/160R. All Preprufe 300R/160R system materials shall be supplied by Grace Construction Products, and applied strictly in accordance with their instructions. Specimen performance and formatted clauses are also available.

**NOTE:** Use Preprufe Tape to tie-in Procor with Preprufe.

## Health and Safety

Refer to relevant Material Safety data sheet. Complete rolls should be handled by a minimum of two persons.

**For Technical Assistance call toll free at 866-333-3SBM (3726).**

 Visit our web site at [www.graceconstruction.com](http://www.graceconstruction.com)

W. R. Grace & Co.-Conn. 62 Whittemore Avenue Cambridge, MA 02140

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Construction Products

**Appendix 12**  
Signed RAWP Certification Page

## CERTIFICATION

I, Ariel Czemerinski, am currently a registered Professional Engineer licensed by the State of New York. I performed professional engineering services and had primary direct responsibility for designing the remedial program for the 187 Kent Avenue, Brooklyn site, site number 18CVCP005K. I certify to the following:

- I have reviewed this document, to which my signature and seal are affixed.
- Engineering Controls developed for this remedial action were designed by me or a person under my direct supervision and achieve the goals established in this Remedial Action Work Plan for this site.
- The Engineering Controls to be constructed during this remedial action are accurately reflected in the text and drawings of the Remedial Action Work Plan and are of sufficient detail to enable proper construction.
- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Ariel Czemerinski

Name

076508

NYS PE License Number

Signature

8/18/2017

Date



I, Kimberly Somers, am a qualified Environmental Professional. I will have primary direct responsibility for implementation of the remedial program for the 187 Kent Avenue, Brooklyn, site number 18CVCP005K. I certify to the following:

- This Remedial Action Work Plan (RAWP) has a plan for handling, transport and disposal of soil, fill, fluids and other materials removed from the property in accordance with applicable City, State and Federal laws and regulations. Importation of all soil, fill and other material from off-Site will be in accordance with all applicable City, State and Federal laws and requirements. This RAWP has provisions to control nuisances during the remediation and all invasive work, including dust and odor suppression.

Kimberly Somers, P.G.

QEP Name

QEP Signature

8/17/2017

Date